

1 SITE PHOTOMETRIC PLAN  
1" = 20'-0"

NOTE: All new poles are 25' high.

CONDUIT AND CONDUCTORS		KEYNOTE LEGEND	
KEY VALUE	SIZE AND QUANTITY	KEY VALUE	KEYNOTE TEXT

2021024  
PDP RESUBMITTAL, FEB 23, 2021  
(NO REVISIONS TO THESE SHEETS)

EXTERIOR FIXTURE SCHEDULE										
<b>NOTES:</b>										
1. PROVIDE EMERGENCY BALLAST WITH INTERNAL TEST SWITCH FOR 90 MINUTES OF EMERGENCY OPERATION.										
2. COORDINATE INSTALLATION HEIGHT WITH ARCHITECT.										
3. PROVIDE 25' SQUARE POLE.										
4. FIXTURE SHALL BE RATED FOR OUTDOOR USE.										
P	MANUFACTURER	MODEL NUMBER	DRIVER	FINISH	VOLTAGE	LAMP TYPE	COLOR TEMP	TOTAL WATTAGE	NOTES	EQUIVALENTS
C04	HE WILLIAMS	6DR-TL-L70/840-DIM-UNV-LW-OF-CS-WET/CC-N-F1	DIM	BY ARCH	120	LED	4000	67.8	4	
C04E	HE WILLIAMS	6DR-TL-L70/840-EM/10W-DIM-UNV-LW-OF-CS-WET/CC-N-F1	DIM	BY ARCH	120	LED	4000	67.8	4	
PL01	GARCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-2-208-DD-XXX	DD	BY ARCH	208	LED	4000	206	4, 3	
PL02	GARCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-3-208-DD-XXX	DD	BY ARCH	208	LED	4000	206	4, 3	
PL03	GARCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-4-208-DD-XXX	DD	BY ARCH	208	LED	4000	206	4, 3	
PL03-HIS	GARCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-3-208-DD-HIS-XXX	DD	BY ARCH	208	LED	4000	206	4, 3	
W01	LIGMAN	UVK-30003-37W-T4-W40-XX-120/277V	DIM	BY ARCH	120	LED	4000	37	2, 4	
W01E	LIGMAN	UVK-30003-37W-T4-W40-XX-120/277V-EMR	DIM	BY ARCH	120	LED	4000	37	1,2,4	

SAPP  
DESIGN  
ARCHITECTS

3750 S. Fremont Avenue  
Springfield, Missouri 65804  
417.877.9600

Sapp Design Associates Architects, P.C.  
Missouri State Certificate of Authority #000607

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3659 SOUTH AVENUE  
SPRINGFIELD, MO 65807  
417.708.7025  
WWW.TRUE-MEP.COM

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The personal seal of the registered Architect or Engineer shall be the legal equivalent of his signature whenever & wherever used, and the owner of the seal shall authenticate this sheet and the specification sections pertaining to this sheet. Responsibility shall be disclaimed for all other plans, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural project.

Mid-Continent Public Library

RENOVATIONS TO

LEE'S SUMMIT BRANCH

150 NW OLDHAM PKWY  
LEE'S SUMMIT, MO 64081

Engineer of Record

NOT FOR  
CONSTRUCTION

01/15/2021

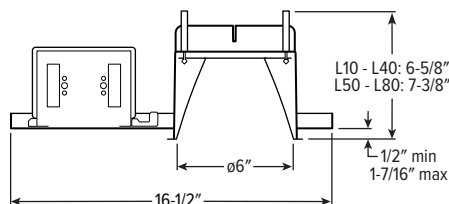
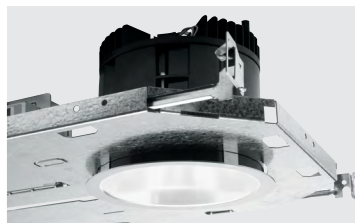
JACOB A NELSON, PE MO PE-2009018758

Revision No.	Description	Date

Project No. 00-000	Date 01/15/2021	Drawn RA
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Drawing No.  
**E102**  
SITE PHOTOMETRIC PLAN

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CATALOG #: \_\_\_\_\_

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

## NEW CONSTRUCTION AND REMODEL

### FEATURES

#### TrimLock®

- Innovative TrimLock reflector retention system ensures trim remains flush with ceiling plane
- Available on QuickShip

### SPECIFICATIONS

- HOUSING** – Die-cast aluminum trim housing with forged aluminum heat sink. Galvanized steel splice compartment with driver mounting plate/enclosure. Swing-out mounting arms field adjust for ceiling thickness from 1/2" – 2-1/4".
- TRIMLOCK** – Innovative TrimLock reflector retention system ensures the trim remains flush with the ceiling plane.
- OPEN REFLECTOR** – Low-iridescent anodized aluminum. Clear semi-specular finish standard.
- LENSED TRIM** – Die-cast aluminum frame with micro-prismatic, tempered glass lens.
- ELECTRICAL** – High-performance Class 2 C.O.B. LED array. Modular quick-connect plug for easy field-connection of LED light assembly to driver. Reported L70>55,000 hours. Reported L90>55,000 hours. Estimated L70 = 200,000 hours.
- MOUNTING** – Recessed. 20 ga. galvanized steel mounting pan for new construction or IC-rated enclosure. Remodel kit option includes receiver bracket hardware. Minimum 24" O.C. marked spacing required for L60 - L80 lumen packages.
- LISTINGS** –
  - cCSAus conforms to UL STD 1598; Certified to CAN/CSA STD C22.2 No. 250.0 for damp locations. LED light assembly conforms to UL 2108 for remote installation.
  - Suitable for wet location under covered ceiling when specified with WET/CC or TD options.
  - ENERGY STAR® certified in select configurations, see [www.energystar.gov](http://www.energystar.gov)
  - IC-rated for direct contact with insulation when specified with I Mounting Type.
  - City of Chicago Environmental Air approved when specified with CP option.
  - Complies with ASTM-E283 when specified with ATH option.
  - RoHS compliant.
  - Title 24 (JA8) compliant in select configurations, see [www.cacertappliances.energy.ca.gov](http://www.cacertappliances.energy.ca.gov).
- WARRANTY** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).



ORDERING EXAMPLE: 6DR - TL - L20/835 - OPTIONS - DIM - UNV - OW - OF - CS - TRIM OPTIONS - N - F1

### HOUSING

SERIES	LUMENS <sup>[1]</sup>	CRI	CCT	OPTIONS	CONTROL <sup>[2]</sup>	VOLTAGE
6DR - TL	L10 1,000lm <sup>[3]</sup>	8 80	27 2700K	SCA_ Sloped ceiling adapter <sup>[5]</sup>	DIM Dimming driver, 0-10V	UNV 120-277V
TrimLock	L15 1,500lm	9 90 <sup>[4]</sup>	30 3000K	ATH Airtight construction	DIM1 1% Dimming driver, 0-10V	347 347V <sup>[6]</sup>
	L20 2,000lm		35 3500K	F Fuse		
	L30 3,000lm		40 4000K	EM/7W 7-watt emergency battery <sup>[7]</sup>		
	L40 4,000lm		50 5000K	EM/10W 10-watt emergency battery <sup>[8]</sup>		
	L50 5,000lm			EM/10W/RTS 10-watt emergency battery with regressed test switch <sup>[9]</sup>		
	L60 6,000lm			CP Chicago plenum (CCEA) <sup>[10]</sup>		
	L70 7,000lm			SDT Stepdown transformer <sup>[11]</sup>		
	L80 8,000lm					

### TRIM<sup>[12]</sup>

TRIM TYPE	DISTRIBUTION <sup>[13]</sup>	FLANGE TYPE	REFLECTOR FINISH	TRIM OPTIONS
O Open reflector	W Wide	OF 1/2" standard flange	Open trim types	MWT Textured white trim flange <sup>[20]</sup>
L Flush lens	65° Open	SF 1/4" mud-in flange <sup>[19]</sup>	CS Clear semi-specular anodize	IP IP65 rated trim <sup>[21]</sup>
R Regressed lens	55° Flush		SG Satin-glow anodize	AD Diffuse acrylic lens <sup>[22]</sup>
A Angled lens <sup>[14]</sup>	55° Regressed		GD Gold anodize	PD Diffuse 1/8" polycarbonate lens <sup>[23]</sup>
S Non-conductive flush lens for shower applications <sup>[15]</sup>	M Medium <sup>[16]</sup>		CG Champagne gold anodize	TD Diffuse polycarbonate lens media at top of open reflector <sup>[24]</sup>
	35° Open		PW Pewter anodize	WET/CC Wet location, covered ceiling listed <sup>[25]</sup>
	35° Flush		SPC Clear specular anodize	AM Anti-microbial <sup>[26]</sup>
	35° Regressed		RG Rose gold anodize	
	N Narrow <sup>[17]</sup>		WH White texture powder coat	
	10° Open		BL Black texture powder coat	
	25° Flush		Len's trim types	
	25° Regressed		CS Clear semi-specular powder coat	
WW Wall wash <sup>[18]</sup>			WH White texture powder coat	
			BL Black texture powder coat	
			MB Black texture splay with white flange <sup>[27]</sup>	

### MOUNTING

#### MOUNTING TYPE<sup>[28]</sup>

- N Open pan for new construction
- I IC-rated enclosure for new construction<sup>[30]</sup>
- R Remodel kit<sup>[31]</sup>

#### MOUNTING HARDWARE<sup>[29]</sup>

- F1 Integral 2-position fixed pan bracket, universal bar hanger included<sup>[32]</sup>
- BA1 Adjustable butterfly pan bracket, bar hanger not included<sup>[33]</sup>
- CA1 Adjustable caterpillar pan bracket, universal bar hanger included<sup>[34]</sup>

### NOTES

- Lumen output based on O trim type, W distribution and CS finish, 3500K/80CRI. Actual lumens may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA.
- See page 4 for ADDITIONAL CONTROL OPTIONS.
- Not available with EM/10W emergency batteries.
- Extended lead times may apply. Consult factory for availability.
- 11-1/2" aperture, specify degrees of slope in 5° increments, 05°-30°. See page 4 for SLOPED CEILING ADAPTOR DETAILS. Not available with ATH option. N Mounting Type only. Not available with WET/CC.
- Not available with EM batteries or DMX controls.
- N and R Mounting Types only.
- N and R Mounting Types only.
- Not available with WET/CC, ATH or IP options. N and R Mounting Types only. See page 5 for EM/10W/RTS DETAILS.
- I Mounting Type required.
- May be required for 347V, see product builder at [hew.com/product-builder](http://hew.com/product-builder).
- Trim ships separately.
- Beam angle based on CS or WH reflector finish. See page 2 for FIXTURE PERFORMANCE DATA.
- Available with WW Distribution only.
- W Distribution, OF Flange Type and WH Reflector Finish only. Standard with AD diffuse acrylic lens. IP and WET/CC options standard.
- Not available with lumen stops L50 and higher when specified with flush or regressed trim types.
- Not available with lumen stops L50 and higher when specified with flush or regressed trim types.
- O and A Trim Types only.
- For use with mud-in plaster construction only, supplied with mud flange installation kit. See page 5 for FLANGE TYPE DETAILS. Not available with ATH or IP options.
- Not available with WH Reflector Finish, L or S Trim Types.
- L and R trim types only.
- Not available with O trim type. W distribution only.
- Not available with O trim type. W distribution only.
- O Trim Type only. WET/CC standard. L50 lumen package max.
- L50 lumen package max with O Trim Type.
- WH and BL Reflector Finishes only. Not available with S Trim Type.
- R Trim Type only. Not available with MWT.
- Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 5 for MOUNTING TYPE DETAILS.
- Additional mounting hardware options available. See page 6 for MOUNTING HARDWARE DETAILS.
- L30 lumen package max.
- Also used in new construction sheetrock ceilings.
- N and I Mounting Types only. I Mounting requires external brackets.
- N Mounting Type only.
- N Mounting Type only.





# 6DR<sup>LED</sup> 6" Downlight – Round

## FIXTURE PERFORMANCE DATA

### OPEN REFLECTOR TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	1014	8.7	116.9
	M	982	8.7	113.2
	N	1003	8.7	115.7
L15	W	1497	13.8	108.6
	M	1495	13.8	108.4
	N	1528	13.8	110.8
L20	W	1988	19.0	104.6
	M	1983	19.1	103.8
	N	2026	19.1	106.1
L30	W	3062	26.9	114.0
	M	3003	26.9	111.8
	N	3000	26.9	111.7
L40	W	4094	36.5	112.2
	M	4016	36.4	110.3
	N	4011	36.4	110.2
L50	W	5014	43.9	114.1
	M	4935	43.9	112.3
	N	5047	43.9	114.9
L60	W	6043	54.0	111.9
	M	5948	54.0	110.1
	N	6083	54.0	112.6
L70	W	7008	67.8	103.3
	M	6898	67.8	101.7
	N	7055	67.8	104.0
L80	W	8018	79.8	100.5
	M	7891	79.8	98.9
	N	8071	79.8	101.2

### FLUSH LENS TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	774	8.7	89.2
	M	910	8.7	104.9
	N	909	8.7	104.8
L15	W	1178	13.8	85.4
	M	1385	13.8	100.4
	N	1384	13.8	100.4
L20	W	1562	19.5	80.1
	M	1837	19.1	96.1
	N	1836	19.5	94.2
L30	W	2335	26.9	86.9
	M	2782	26.9	103.6
	N	2718	26.9	101.2
L40	W	3122	36.5	85.5
	M	3720	36.4	102.2
	N	3635	36.4	99.9
L50	W	3824	43.9	87.0
	M	—	—	—
	N	—	—	—
L60	W	4609	54.0	85.4
	M	—	—	—
	N	—	—	—
L70	W	5345	67.8	78.8
	M	—	—	—
	N	—	—	—
L80	W	6115	79.8	76.7
	M	—	—	—
	N	—	—	—

### REGRESSED LENS TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	716	8.7	82.5
	M	883	8.7	101.7
	N	897	8.7	103.4
L15	W	1090	13.8	79.0
	M	1344	13.8	97.4
	N	1366	13.8	99.1
L20	W	1445	19.5	74.1
	M	1782	19.1	93.3
	N	1812	19.5	92.9
L30	W	2160	26.9	80.4
	M	2699	26.9	100.5
	N	2683	26.9	99.9
L40	W	2889	36.5	79.1
	M	3609	36.4	99.1
	N	3587	36.4	98.6
L50	W	3537	43.9	80.5
	M	—	—	—
	N	—	—	—
L60	W	4264	54.0	79.0
	M	—	—	—
	N	—	—	—
L70	W	4945	67.8	72.9
	M	—	—	—
	N	—	—	—
L80	W	5657	79.8	70.9
	M	—	—	—
	N	—	—	—

### MULTIPLIER TABLES

COLOR TEMPERATURE		
	CCT	CONVERSION FACTOR
80 CRI	2700K	0.92
	3000K	0.98
	3500K	1.00
	4000K	1.01
	5000K	1.02
90 CRI	2700K	0.76
	3000K	0.79
	3500K	0.82
	4000K	0.84
	5000K	0.88

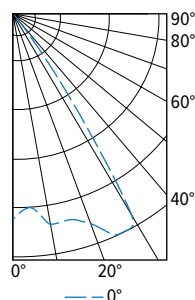
REFLECTOR FINISH		
	CATALOG NUMBER	CONVERSION FACTOR
O TRIM	CS	1.00
	SG <sup>1</sup>	0.92
	GD	0.93
	CG	0.96
	PW	0.86
	SPC	1.02
	RG	0.88
	WH <sup>1</sup>	0.89
	BL <sup>1</sup>	0.47
	WH	1.00
R TRIM	CS	0.98
	BL	0.79

TRIM		
	CATALOG NUMBER	CONVERSION FACTOR
S	S	0.85
	AD	0.85
	PD	0.85
	TD	0.75
	WET/CC <sup>2</sup>	0.85

- Distribution will also be affected, consult factory.
  - Use multiplier when specified with O Trim Type.
- Photometrics tested in accordance with IESNA LM-79. Results shown are based on 25°C ambient temperature.
  - Wattage shown is based on 120V input.
  - Results based on 3500K, 80 CRI, actual lumens may vary +/-5%.
  - Use multiplier tables to calculate additional options.

## PHOTOMETRY

6DR-TL-L20/835-DIM-UNV-OW-OF-CS Report #: 20687; 12/12/18 | Total Luminaire Output: 1988 lumens; 19.0 Watts | Efficacy: 104.6 lm/W | 82.9 CRI; 3457K CCT



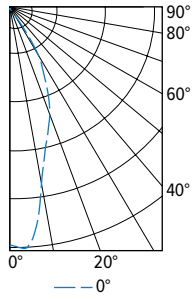
CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	1672	
	5	1579	151
	15	1735	492
	25	1982	917
	35	604	380
	45	46	36
	55	13	12
	65	2	2
	75	0	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1939	98
	0 - 60	1987	100
	0 - 90	1988	100
	0 - 180	1988	100



# 6DR<sup>LED</sup> 6" Downlight – Round

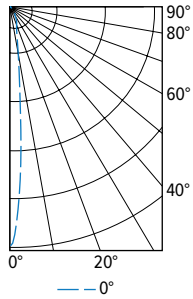
6DR-TL-L20/835-DIM-UNV-OM-OF-CS Report #: 12326812.04; 05/01/18 | Total Luminaire Output: 1983 lumens; 19.1 Watts | Efficacy: 103.8 lm/W | 82.7 CRI; 3579K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
	0	4013	
	5	3972	249
	15	2325	347
	25	1412	68
	35	396	68
	45	46	15
	55	14	5
	65	4	2
	75	1	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1924	97
	0 - 60	1977	100
	0 - 90	1983	100
	0 - 180	1983	100

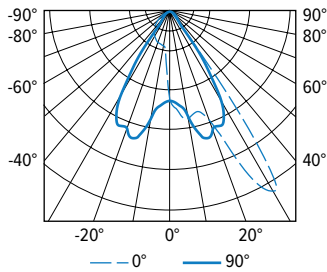
6DR-TL-L20/835-DIM-UNV-ON-OF-CS Report #: 12326812.05; 06/06/18 | Total Luminaire Output: 2026 lumens; 19.1 Watts | Efficacy: 106.1 lm/W | 82.6 CRI; 3578K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
	0	22000	
	5	9830	397
	15	2032	290
	25	1021	214
	35	242	24
	45	13	4
	55	4	1
	65	1	1
	75	0	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	2010	99
	0 - 60	2024	100
	0 - 90	2026	100
	0 - 180	2026	100

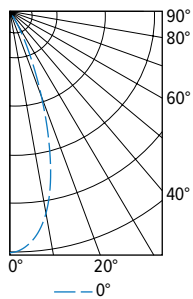
6DR-TL-L20/835-DIM-UNV-OWW-OF-CS Report #: 12326812.06; 06/28/18 | Total Luminaire Output: 1009 lumens; 19.1 Watts | Efficacy: 52.8 lm/W | 82.6 CRI; 3568K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
		0°	45°	90°	135°	180°	
	0	772	772	772	772	772	
	5	873	843	805	494	403	48
	15	891	872	1128	275	292	108
	25	1552	925	1051	240	274	194
	35	539	400	375	206	235	58
	45	43	36	88	166	185	37
	55	21	20	54	116	122	27
	65	16	14	32	70	72	18
	75	7	5	15	39	39	9
	85	0	0	3	10	8	1
	90	0	0	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	804	80
	0 - 60	941	93
	0 - 90	1009	100
	0 - 180	1009	100

6DR-TL-L20/835-DIM-UNV-LM-OF-WH Report #: 12326812.09; 06/05/18 | Total Luminaire Output: 1837 lumens; 19.1 Watts | Efficacy: 96.1 lm/W | 82.6 CRI; 3549K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
	0	4338	
	5	4168	281
	15	2728	354
	25	847	153
	35	222	56
	45	89	31
	55	53	22
	65	32	14
	75	16	7
	85	4	1
	90	0	

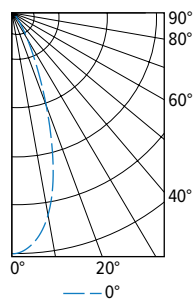
LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1667	91
	0 - 60	1785	97
	0 - 90	1837	100
	0 - 180	1837	100



# 6DR LED

## 6" Downlight – Round

6DR-TL-L20/835-DIM-UNV-RM-OF-WH Report #: 12326812.14; 06/06/18 | Total Luminaire Output: 1782 lumens; 19.1 Watts | Efficacy: 93.3 lm/W | 82.7 CRI; 3546K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
	0	4313	
	5	4131	277
	15	2669	346
	25	846	155
	35	225	55
	45	76	26
	55	41	17
	65	23	10
	75	10	4
	85	3	1
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1648	93
	0 - 60	1746	98
	0 - 90	1782	100
	0 - 180	1782	100

### ADDITIONAL CONTROL OPTIONS

Lumen restrictions apply: L40 max for DMX driver, L40 max for Lutron drivers, L50 max for ELDO drivers, L60 max for DIM LINE driver. R Mounting Type only available with DIM, DIM1, and DIM LINE controls. 347V may require stepdown transformer, see product builder at [hew.com/product-builder](http://hew.com/product-builder).

CATALOG NUMBER	DESCRIPTION
DIM	Dimming driver prewired for 0-10V low voltage applications
DIM1	1% dimming driver prewired for 0-10V low voltage applications
DIM LINE	Line voltage dimming driver (TRIAC and ELV compatible at 120V only)
DMX	0.1% dimming driver for DMX controls
LTE LINE	Lutron Hi-lume 1% 2-wire dimming driver forward phase line voltage controls (120V only)
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver
LDE5	Lutron 5-Series 5% EcoSystem dimming LED driver
VRF/DSR	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF) and sensor-ready driver
VRF/DBI/LDE1	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron Hi-lume 1% EcoSystem dimming LED driver, and digital link interface
VRF/DBI/LDE5	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron 5-Series 5% EcoSystem dimming LED driver, and digital link interface
FCJS/DIM	Lutron Vive PowPak wireless fixture control with dimming driver
FCJS/DIM1	Lutron Vive PowPak wireless fixture control with 1% dimming driver
ELDO SOLOB	EldoLED Solodrive, 0.1% dimming driver for 0-10V controls
ELDO SOLOB DALI	EldoLED Solodrive, 0.1% dimming driver for DALI controls
ELDO ECO1	EldoLED Ecodrive, 1% dimming driver for 0-10V controls
ELDO ECO1 DALI	EldoLED Ecodrive, 1% dimming driver for DALI controls

### TRIMLOCK DETAILS



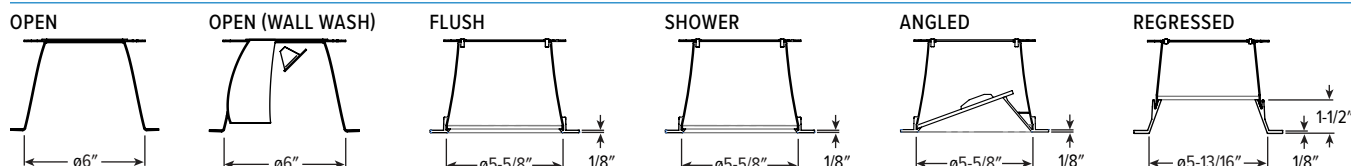
### SLOPED CEILING ADAPTOR DETAILS

LUMENS	A (HEIGHT)						PLENUM HEIGHT
	5°	10°	15°	20°	25°	30°	
L10 - L40	10-11/16"	10-7/8"	10-15/16"	10-7/8"	10-13/16"	10-5/8"	11-1/4"
L50 - L80	11-7/16"	11-9/16"	11-5/8"	11-5/8"	11-1/2"	11-1/4"	12"

15° Shown

Ceiling cutout: ø11-7/8"

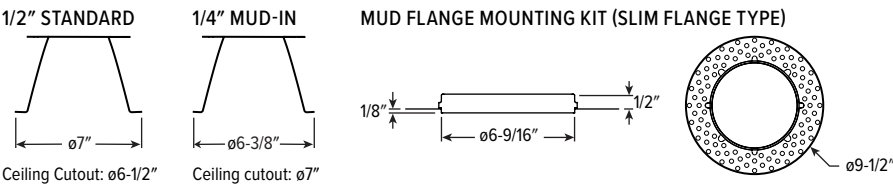
### TRIM TYPE DETAILS



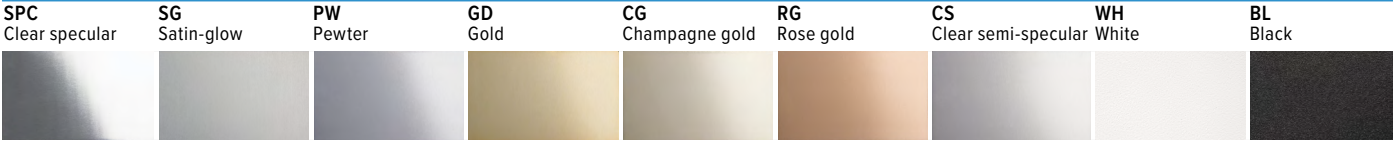
# 6DR LED

## 6" Downlight – Round

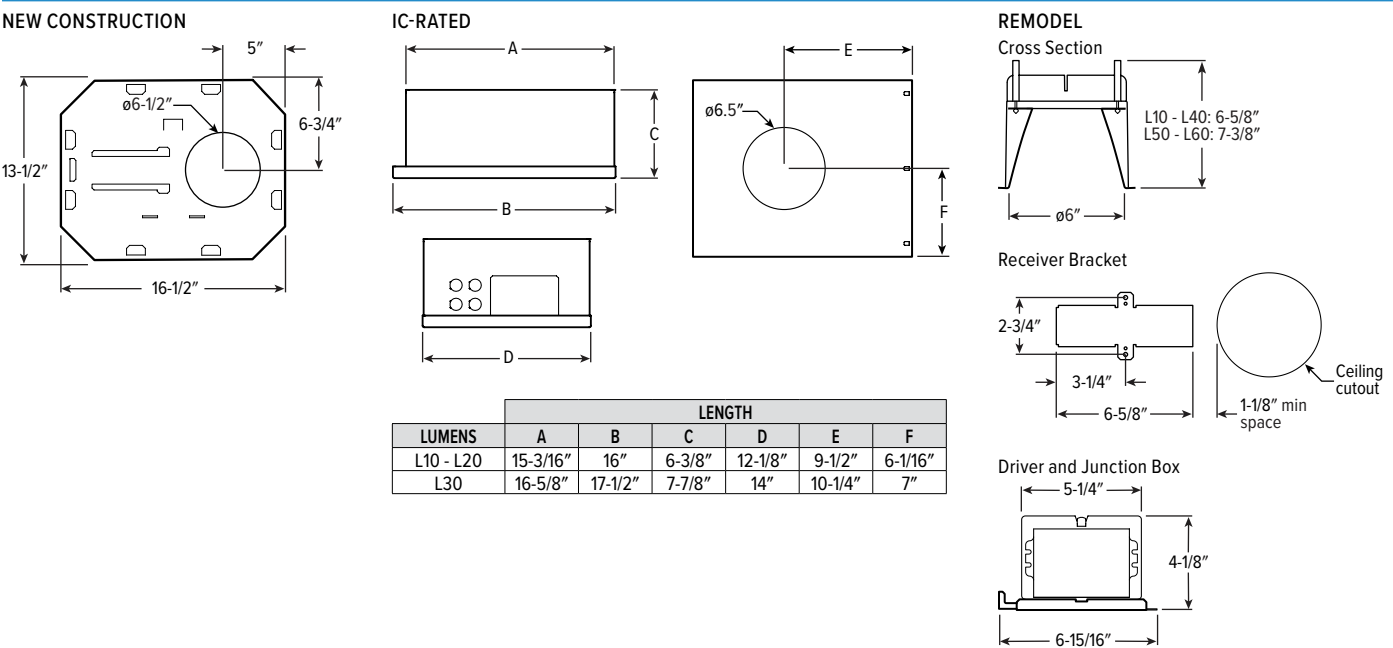
### FLANGE TYPE DETAILS



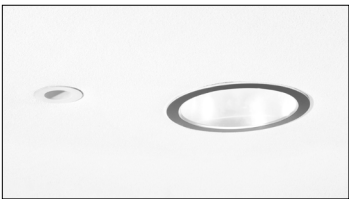
### REFLECTOR FINISH DETAILS



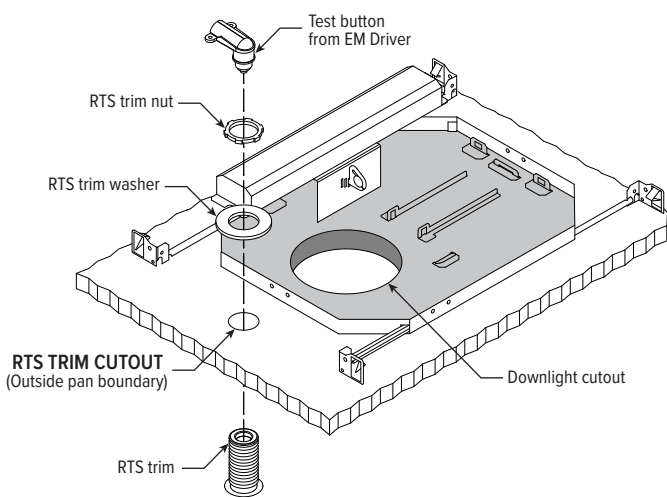
### MOUNTING TYPE DETAILS



### EM/10W/RTS DETAILS



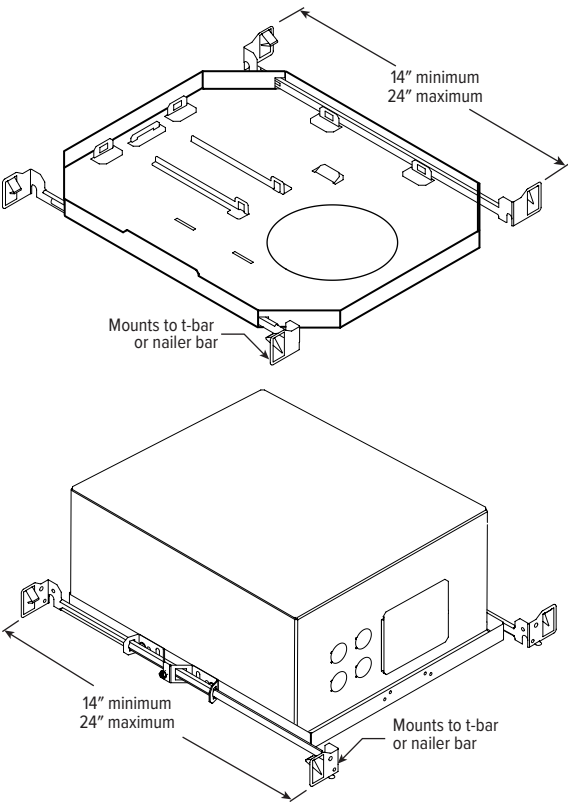
Shown Installed



# 6DR<sup>LED</sup> 6" Downlight – Round

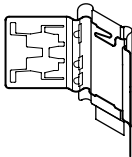
## MOUNTING HARDWARE DETAILS

**F1** Integral 2-position fixed pan bracket, universal bar hanger included

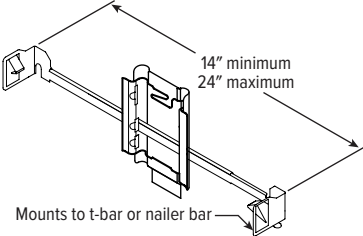


F1 with I Mounting Type

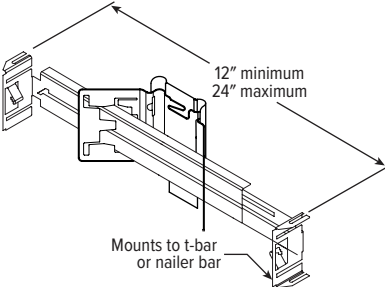
**BA1** Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



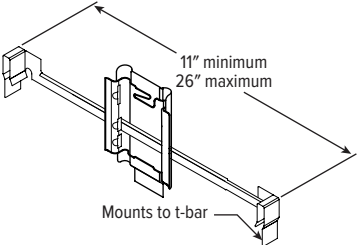
**CA1** Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



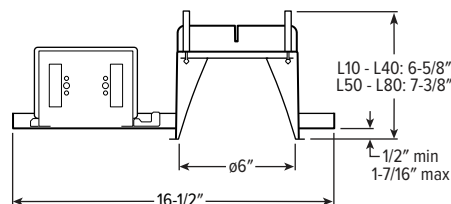
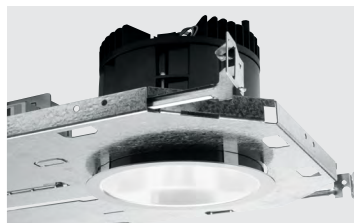
**BA2** Adjustable butterfly pan bracket, heavy-duty universal bar hanger included (N Mounting Type only)



**CA2** Adjustable caterpillar pan bracket, t-bar hanger included (N Mounting Type only)



# 6DR<sup>LED</sup> 6" Downlight – Round



CATALOG #: \_\_\_\_\_

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

## NEW CONSTRUCTION AND REMODEL

### FEATURES

#### TrimLock®

- Innovative TrimLock reflector retention system ensures trim remains flush with ceiling plane
- Available on QuickShip

### SPECIFICATIONS

- HOUSING** – Die-cast aluminum trim housing with forged aluminum heat sink. Galvanized steel splice compartment with driver mounting plate/enclosure. Swing-out mounting arms field adjust for ceiling thickness from 1/2" – 2-1/4".
- TRIMLOCK** – Innovative TrimLock reflector retention system ensures the trim remains flush with the ceiling plane.
- OPEN REFLECTOR** – Low-iridescent anodized aluminum. Clear semi-specular finish standard.
- LENSED TRIM** – Die-cast aluminum frame with micro-prismatic, tempered glass lens.
- ELECTRICAL** – High-performance Class 2 C.O.B. LED array. Modular quick-connect plug for easy field-connection of LED light assembly to driver. Reported L70>55,000 hours. Reported L90>55,000 hours. Estimated L70 = 200,000 hours.
- MOUNTING** – Recessed. 20 ga. galvanized steel mounting pan for new construction or IC-rated enclosure. Remodel kit option includes receiver bracket hardware. Minimum 24" O.C. marked spacing required for L60 - L80 lumen packages.
- LISTINGS** –
  - cCSAus conforms to UL STD 1598; Certified to CAN/CSA STD C22.2 No. 250.0 for damp locations. LED light assembly conforms to UL 2108 for remote installation.
  - Suitable for wet location under covered ceiling when specified with WET/CC or TD options.
  - ENERGY STAR® certified in select configurations, see [www.energystar.gov](http://www.energystar.gov)
  - IC-rated for direct contact with insulation when specified with I Mounting Type.
  - City of Chicago Environmental Air approved when specified with CP option.
  - Complies with ASTM-E283 when specified with ATH option.
  - RoHS compliant.
  - Title 24 (JAB) compliant in select configurations, see [www.cacertappliances.energy.ca.gov](http://www.cacertappliances.energy.ca.gov).
- WARRANTY** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).



ORDERING EXAMPLE: 6DR - TL - L20/835 - OPTIONS - DIM - UNV - OW - OF - CS - TRIM OPTIONS - N - F1

### HOUSING

SERIES	LUMENS <sup>[1]</sup>	CRI	CCT	OPTIONS	CONTROL <sup>[2]</sup>	VOLTAGE
6DR - TL	L10 1,000lm <sup>[3]</sup>	8 80	27 2700K	SCA_ Sloped ceiling adapter <sup>[5]</sup>	DIM Dimming driver, 0-10V	UNV 120-277V
TrimLock	L15 1,500lm	9 90 <sup>[4]</sup>	30 3000K	ATH Airtight construction	DIM1 1% Dimming driver, 0-10V	347 347V <sup>[6]</sup>
	L20 2,000lm		35 3500K	F Fuse		
	L30 3,000lm		40 4000K	EM/7W 7-watt emergency battery <sup>[7]</sup>		
	L40 4,000lm		50 5000K	EM/10W 10-watt emergency battery <sup>[8]</sup>		
	L50 5,000lm			EM/10W/RTS 10-watt emergency battery with regressed test switch <sup>[9]</sup>		
	L60 6,000lm			CP Chicago plenum (CCEA) <sup>[10]</sup>		
	L70 7,000lm			SDT Stepdown transformer <sup>[11]</sup>		
	L80 8,000lm					

### TRIM<sup>[12]</sup>

TRIM TYPE	DISTRIBUTION <sup>[13]</sup>	FLANGE TYPE	REFLECTOR FINISH	TRIM OPTIONS
O Open reflector	W Wide	OF 1/2" standard flange	Open trim types	MWT Textured white trim flange <sup>[20]</sup>
L Flush lens	65° Open	SF 1/4" mud-in flange <sup>[19]</sup>	CS Clear semi-specular anodize	IP IP65 rated trim <sup>[21]</sup>
R Regressed lens	55° Flush		SG Satin-glow anodize	AD Diffuse acrylic lens <sup>[22]</sup>
A Angled lens <sup>[14]</sup>	55° Regressed		GD Gold anodize	PD Diffuse 1/8" polycarbonate lens <sup>[23]</sup>
S Non-conductive flush lens for shower applications <sup>[15]</sup>	M Medium <sup>[16]</sup>		CG Champagne gold anodize	TD Diffuse polycarbonate lens media at top of open reflector <sup>[24]</sup>
	35° Open		PW Pewter anodize	WET/CC Wet location, covered ceiling listed <sup>[25]</sup>
	35° Flush		SPC Clear specular anodize	AM Anti-microbial <sup>[26]</sup>
	35° Regressed		RG Rose gold anodize	
	N Narrow <sup>[17]</sup>		WH White texture powder coat	
	10° Open		BL Black texture powder coat	
	25° Flush			
	25° Regressed			
WW Wall wash <sup>[18]</sup>				
			Lens trim types	
			CS Clear semi-specular powder coat	
			WH White texture powder coat	
			BL Black texture powder coat	
			MB Black texture splay with white flange <sup>[27]</sup>	

### MOUNTING

#### MOUNTING TYPE<sup>[28]</sup>

- N Open pan for new construction
- I IC-rated enclosure for new construction<sup>[30]</sup>
- R Remodel kit<sup>[31]</sup>

#### MOUNTING HARDWARE<sup>[29]</sup>

- F1 Integral 2-position fixed pan bracket, universal bar hanger included<sup>[32]</sup>
- BA1 Adjustable butterfly pan bracket, bar hanger not included<sup>[33]</sup>
- CA1 Adjustable caterpillar pan bracket, universal bar hanger included<sup>[34]</sup>

### NOTES

- Lumen output based on O trim type, W distribution and CS finish, 3500K/80CRI. Actual lumens may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA.
- See page 4 for ADDITIONAL CONTROL OPTIONS.
- Not available with EM/10W emergency batteries.
- Extended lead times may apply. Consult factory for availability.
- 11-1/2" aperture, specify degrees of slope in 5° increments, 05°-30°. See page 4 for SLOPED CEILING ADAPTOR DETAILS. Not available with ATH option. N Mounting Type only. Not available with WET/CC.
- Not available with EM batteries or DMX controls.
- N and R Mounting Types only.
- N and R Mounting Types only.
- Not available with WET/CC, ATH or IP options. N and R Mounting Types only. See page 5 for EM/10W/RTS DETAILS.
- I Mounting Type required.
- May be required for 347V, see product builder at [hew.com/product-builder](http://hew.com/product-builder).
- Trim ships separately.
- Beam angle based on CS or WH reflector finish. See page 2 for FIXTURE PERFORMANCE DATA.
- Available with WW Distribution only.
- W Distribution, OF Flange Type and WH Reflector Finish only. Standard with AD diffuse acrylic lens. IP and WET/CC options standard.
- Not available with lumen stops L50 and higher when specified with flush or regressed trim types.
- Not available with lumen stops L50 and higher when specified with flush or regressed trim types.
- O and A Trim Types only.
- For use with mud-in plaster construction only, supplied with mud flange installation kit. See page 5 for FLANGE TYPE DETAILS. Not available with ATH or IP options.
- Not available with WH Reflector Finish, L or S Trim Types.
- L and R trim types only.
- Not available with O trim type. W distribution only.
- Not available with O trim type. W distribution only.
- O Trim Type only. WET/CC standard. L50 lumen package max.
- L50 lumen package max with O Trim Type.
- WH and BL Reflector Finishes only. Not available with S Trim Type.
- R Trim Type only. Not available with MWT.
- Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 5 for MOUNTING TYPE DETAILS.
- Additional mounting hardware options available. See page 6 for MOUNTING HARDWARE DETAILS.
- L30 lumen package max.
- Also used in new construction sheetrock ceilings.
- N and I Mounting Types only. I Mounting requires external brackets.
- N Mounting Type only.
- N Mounting Type only.





# 6DR<sup>LED</sup> 6" Downlight – Round

## FIXTURE PERFORMANCE DATA

### OPEN REFLECTOR TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	1014	8.7	116.9
	M	982	8.7	113.2
	N	1003	8.7	115.7
L15	W	1497	13.8	108.6
	M	1495	13.8	108.4
	N	1528	13.8	110.8
L20	W	1988	19.0	104.6
	M	1983	19.1	103.8
	N	2026	19.1	106.1
L30	W	3062	26.9	114.0
	M	3003	26.9	111.8
	N	3000	26.9	111.7
L40	W	4094	36.5	112.2
	M	4016	36.4	110.3
	N	4011	36.4	110.2
L50	W	5014	43.9	114.1
	M	4935	43.9	112.3
	N	5047	43.9	114.9
L60	W	6043	54.0	111.9
	M	5948	54.0	110.1
	N	6083	54.0	112.6
L70	W	7008	67.8	103.3
	M	6898	67.8	101.7
	N	7055	67.8	104.0
L80	W	8018	79.8	100.5
	M	7891	79.8	98.9
	N	8071	79.8	101.2

### FLUSH LENS TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	774	8.7	89.2
	M	910	8.7	104.9
	N	909	8.7	104.8
L15	W	1178	13.8	85.4
	M	1385	13.8	100.4
	N	1384	13.8	100.4
L20	W	1562	19.5	80.1
	M	1837	19.1	96.1
	N	1836	19.5	94.2
L30	W	2335	26.9	86.9
	M	2782	26.9	103.6
	N	2718	26.9	101.2
L40	W	3122	36.5	85.5
	M	3720	36.4	102.2
	N	3635	36.4	99.9
L50	W	3824	43.9	87.0
	M	—	—	—
	N	—	—	—
L60	W	4609	54.0	85.4
	M	—	—	—
	N	—	—	—
L70	W	5345	67.8	78.8
	M	—	—	—
	N	—	—	—
L80	W	6115	79.8	76.7
	M	—	—	—
	N	—	—	—

### REGRESSED LENS TRIM TYPE

	DIST.	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L10	W	716	8.7	82.5
	M	883	8.7	101.7
	N	897	8.7	103.4
L15	W	1090	13.8	79.0
	M	1344	13.8	97.4
	N	1366	13.8	99.1
L20	W	1445	19.5	74.1
	M	1782	19.1	93.3
	N	1812	19.5	92.9
L30	W	2160	26.9	80.4
	M	2699	26.9	100.5
	N	2683	26.9	99.9
L40	W	2889	36.5	79.1
	M	3609	36.4	99.1
	N	3587	36.4	98.6
L50	W	3537	43.9	80.5
	M	—	—	—
	N	—	—	—
L60	W	4264	54.0	79.0
	M	—	—	—
	N	—	—	—
L70	W	4945	67.8	72.9
	M	—	—	—
	N	—	—	—
L80	W	5657	79.8	70.9
	M	—	—	—
	N	—	—	—

### MULTIPLIER TABLES

COLOR TEMPERATURE		
CCT	CONVERSION FACTOR	
80 CRI	2700K	0.92
	3000K	0.98
	3500K	1.00
	4000K	1.01
	5000K	1.02
90 CRI	2700K	0.76
	3000K	0.79
	3500K	0.82
	4000K	0.84
	5000K	0.88

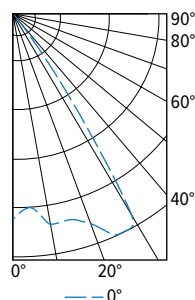
	REFLECTOR FINISH	
	CATALOG NUMBER	CONVERSION FACTOR
O TRIM	CS	1.00
	SG <sup>1</sup>	0.92
	GD	0.93
	CG	0.96
	PW	0.86
	SPC	1.02
	RG	0.88
	WH <sup>1</sup>	0.89
	BL <sup>1</sup>	0.47
R TRIM	WH	1.00
	CS	0.98
	BL	0.79

TRIM	
CATALOG NUMBER	CONVERSION FACTOR
S	0.85
AD	0.85
PD	0.85
TD	0.75
WET/CC <sup>2</sup>	0.85

- Distribution will also be affected, consult factory.
  - Use multiplier when specified with O Trim Type.
- Photometrics tested in accordance with IESNA LM-79. Results shown are based on 25°C ambient temperature.
  - Wattage shown is based on 120V input.
  - Results based on 3500K, 80 CRI, actual lumens may vary +/-5%.
  - Use multiplier tables to calculate additional options.

## PHOTOMETRY

6DR-TL-L20/835-DIM-UNV-OW-OF-CS Report #: 20687; 12/12/18 | Total Luminaire Output: 1988 lumens; 19.0 Watts | Efficacy: 104.6 lm/W | 82.9 CRI; 3457K CCT



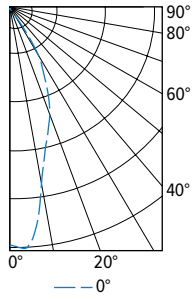
CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	1672	
	5	1579	151
	15	1735	492
	25	1982	917
	35	604	380
	45	46	36
	55	13	12
	65	2	2
	75	0	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1939	98
	0 - 60	1987	100
	0 - 90	1988	100
	0 - 180	1988	100



# 6DR<sup>LED</sup> 6" Downlight – Round

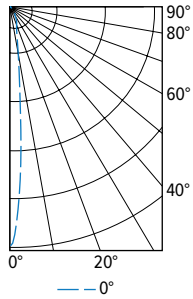
6DR-TL-L20/835-DIM-UNV-OM-OF-CS Report #: 12326812.04; 05/01/18 | Total Luminaire Output: 1983 lumens; 19.1 Watts | Efficacy: 103.8 lm/W | 82.7 CRI; 3579K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	4013	
	5	3972	249
	15	2325	347
	25	1412	68
	35	396	68
	45	46	15
	55	14	5
	65	4	2
	75	1	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1924	97
	0 - 60	1977	100
	0 - 90	1983	100
	0 - 180	1983	100

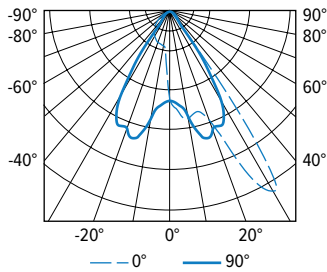
6DR-TL-L20/835-DIM-UNV-ON-OF-CS Report #: 12326812.05; 06/06/18 | Total Luminaire Output: 2026 lumens; 19.1 Watts | Efficacy: 106.1 lm/W | 82.6 CRI; 3578K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	22000	
	5	9830	397
	15	2032	290
	25	1021	214
	35	242	24
	45	13	4
	55	4	1
	65	1	1
	75	0	0
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	2010	99
	0 - 60	2024	100
	0 - 90	2026	100
	0 - 180	2026	100

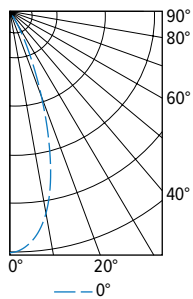
6DR-TL-L20/835-DIM-UNV-OWW-OF-CS Report #: 12326812.06; 06/28/18 | Total Luminaire Output: 1009 lumens; 19.1 Watts | Efficacy: 52.8 lm/W | 82.6 CRI; 3568K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
		0°	45°	90°	135°	180°	
	0	772	772	772	772	772	
	5	873	843	805	494	403	48
	15	891	872	1128	275	292	108
	25	1552	925	1051	240	274	194
	35	539	400	375	206	235	58
	45	43	36	88	166	185	37
	55	21	20	54	116	122	27
	65	16	14	32	70	72	18
	75	7	5	15	39	39	9
	85	0	0	3	10	8	1
	90	0	0	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	804	80
	0 - 60	941	93
	0 - 90	1009	100
	0 - 180	1009	100

6DR-TL-L20/835-DIM-UNV-LM-OF-WH Report #: 12326812.09; 06/05/18 | Total Luminaire Output: 1837 lumens; 19.1 Watts | Efficacy: 96.1 lm/W | 82.6 CRI; 3549K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	4338	
	5	4168	281
	15	2728	354
	25	847	153
	35	222	56
	45	89	31
	55	53	22
	65	32	14
	75	16	7
	85	4	1
	90	0	

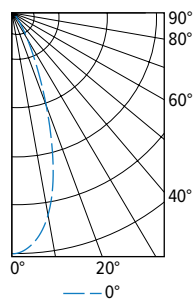
LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1667	91
	0 - 60	1785	97
	0 - 90	1837	100
	0 - 180	1837	100



# 6DR LED

## 6" Downlight – Round

6DR-TL-L20/835-DIM-UNV-RM-OF-WH Report #: 12326812.14; 06/06/18 | Total Luminaire Output: 1782 lumens; 19.1 Watts | Efficacy: 93.3 lm/W | 82.7 CRI; 3546K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
	0	4313	
	5	4131	277
	15	2669	346
	25	846	155
	35	225	55
	45	76	26
	55	41	17
	65	23	10
	75	10	4
	85	3	1
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1648	93
	0 - 60	1746	98
	0 - 90	1782	100
	0 - 180	1782	100

### ADDITIONAL CONTROL OPTIONS

Lumen restrictions apply: L40 max for DMX driver, L40 max for Lutron drivers, L50 max for ELDO drivers, L60 max for DIM LINE driver. R Mounting Type only available with DIM, DIM1, and DIM LINE controls. 347V may require stepdown transformer, see product builder at [hew.com/product-builder](http://hew.com/product-builder).

CATALOG NUMBER	DESCRIPTION
DIM	Dimming driver prewired for 0-10V low voltage applications
DIM1	1% dimming driver prewired for 0-10V low voltage applications
DIM LINE	Line voltage dimming driver (TRIAC and ELV compatible at 120V only)
DMX	0.1% dimming driver for DMX controls
LTE LINE	Lutron Hi-lume 1% 2-wire dimming driver forward phase line voltage controls (120V only)
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver
LDE5	Lutron 5-Series 5% EcoSystem dimming LED driver
VRF/DSR	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF) and sensor-ready driver
VRF/DBI/LDE1	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron Hi-lume 1% EcoSystem dimming LED driver, and digital link interface
VRF/DBI/LDE5	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron 5-Series 5% EcoSystem dimming LED driver, and digital link interface
FCJS/DIM	Lutron Vive PowPak wireless fixture control with dimming driver
FCJS/DIM1	Lutron Vive PowPak wireless fixture control with 1% dimming driver
ELDO SOLOB	EldoLED Solodrive, 0.1% dimming driver for 0-10V controls
ELDO SOLOB DALI	EldoLED Solodrive, 0.1% dimming driver for DALI controls
ELDO ECO1	EldoLED Ecodrive, 1% dimming driver for 0-10V controls
ELDO ECO1 DALI	EldoLED Ecodrive, 1% dimming driver for DALI controls

### TRIMLOCK DETAILS



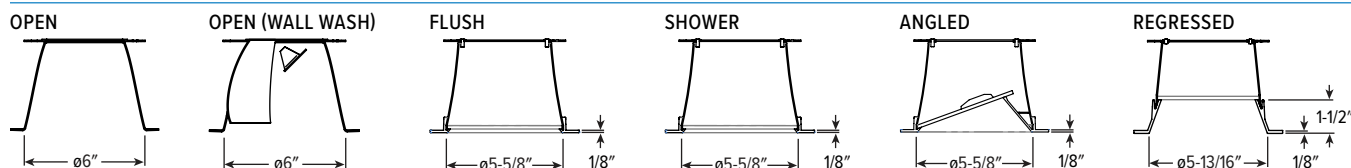
### SLOPED CEILING ADAPTOR DETAILS

LUMENS	A (HEIGHT)						PLENUM HEIGHT
	5°	10°	15°	20°	25°	30°	
L10 - L40	10-11/16"	10-7/8"	10-15/16"	10-7/8"	10-13/16"	10-5/8"	11-1/4"
L50 - L80	11-7/16"	11-9/16"	11-5/8"	11-5/8"	11-1/2"	11-1/4"	12"

15° Shown

Diagram of a sloped ceiling adaptor. It shows a cross-section of the adaptor with a 15° angle. The ceiling cutout is labeled as 11-7/8".

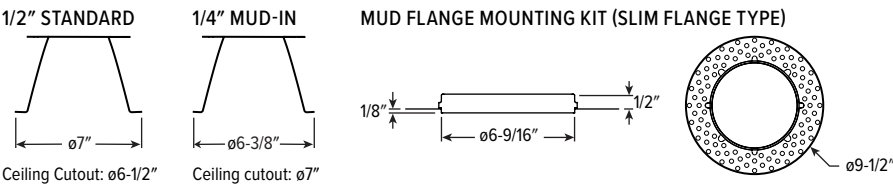
### TRIM TYPE DETAILS



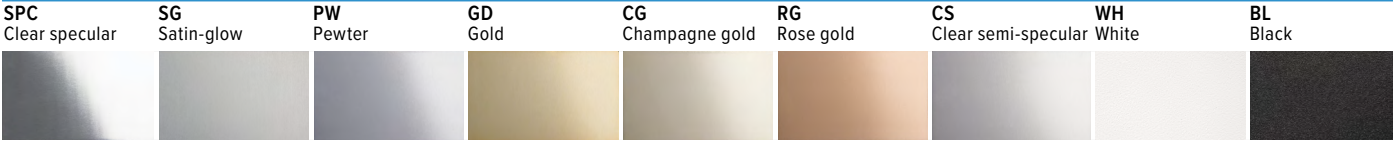
# 6DR LED

## 6" Downlight – Round

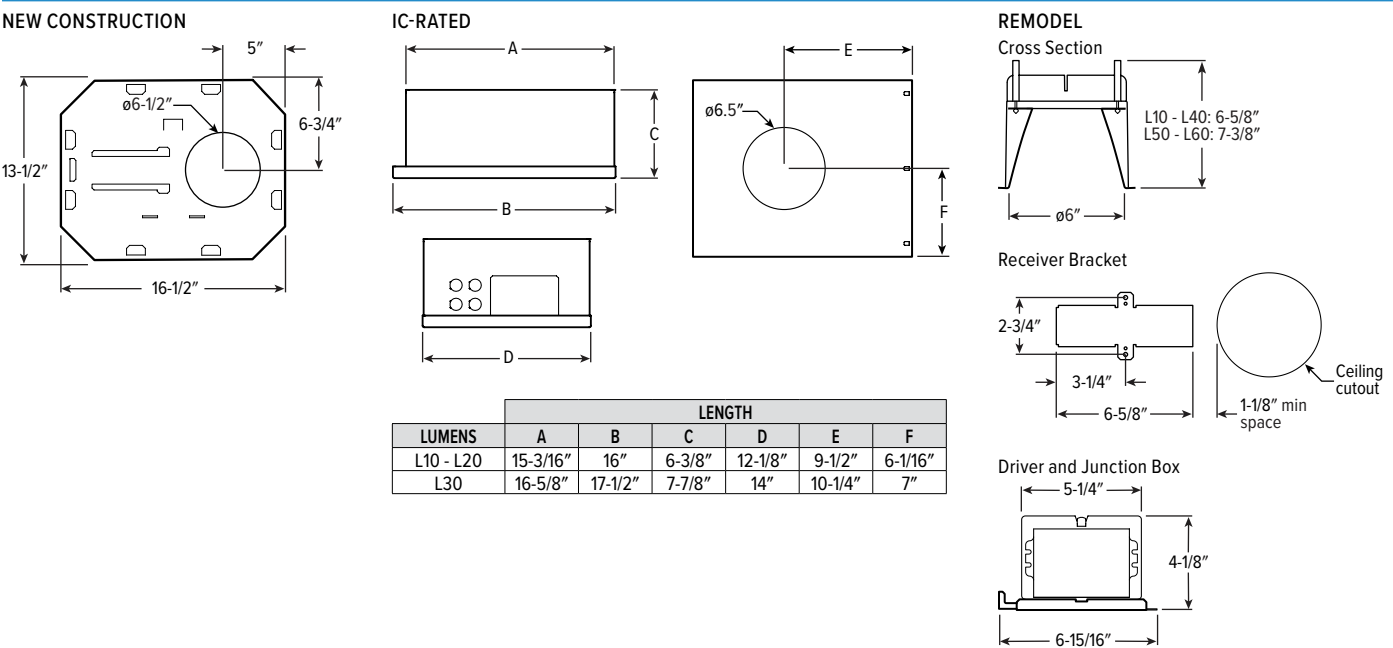
### FLANGE TYPE DETAILS



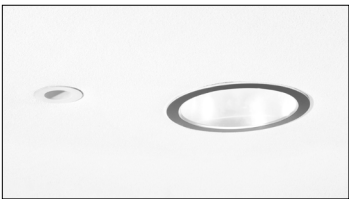
### REFLECTOR FINISH DETAILS



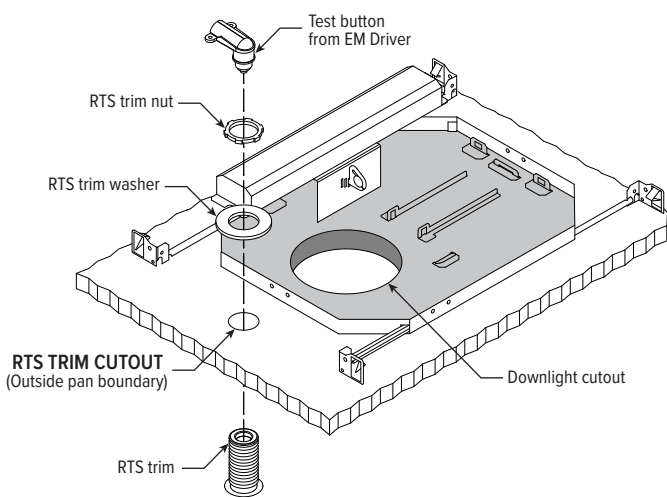
### MOUNTING TYPE DETAILS



### EM/10W/RTS DETAILS



Shown Installed

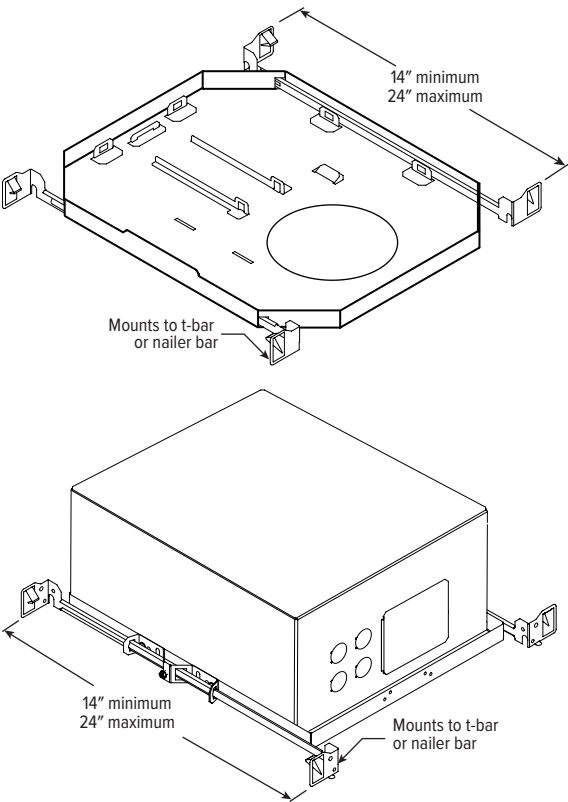




# 6DR<sup>LED</sup> 6" Downlight – Round

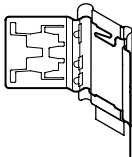
## MOUNTING HARDWARE DETAILS

**F1** Integral 2-position fixed pan bracket, universal bar hanger included

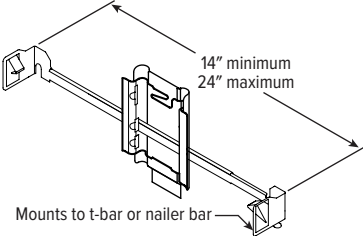


F1 with I Mounting Type

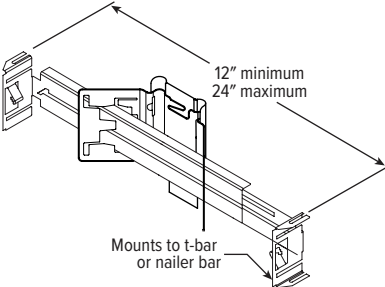
**BA1** Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



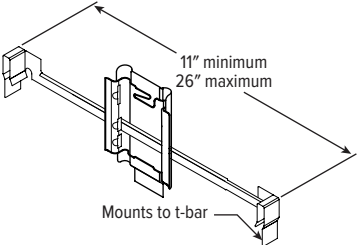
**CA1** Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



**BA2** Adjustable butterfly pan bracket, heavy-duty universal bar hanger included (N Mounting Type only)



**CA2** Adjustable caterpillar pan bracket, t-bar hanger included (N Mounting Type only)





Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 27,800 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings. Includes Service Tag, our innovative way to provide assistance throughout the life of the product.

Project:	
Location:	
Cat.No:	
Type:	
Lamps:	Qty:
Notes:	

PL01	GARDCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-2-208-DD-XXX
PL02	GARDCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-3-208-DD-XXX
PL03	GARDCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-4-208-DD-XXX
PL03-HIS	GARDCO SIGNIFY	ECF-S-64L-1A-NW-G2-XX-3-208-DD-HIS-XXX

## Ordering guide

example: ECF-S-64L-900-NW-G2-AR-5-120-HIS-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage	Options					Finish
							Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire	
<b>ECF-S</b>												
ECF-S EcoForm site and area, small	32L 32 LEDs (2 modules)	365 365mA	<b>WW-G2</b> Warm White 3000K, 70 CRI Generation 2  <b>NW-G2</b> Neutral White 4000K, 70 CRI Generation 2  <b>CW-G2</b> Cool White 5000K, 70 CRI Generation 2	<b>AR</b> Arm Mount (standard) <sup>2</sup>  <i>The following mounting kits must be ordered separately (See accessories)</i>  <b>SF</b> Slip Fitter Mount <sup>3</sup> (fits to 2 3/8" O.D. tenon)  <b>WS</b> Wall mount with surface conduit rear entry permitted  <b>RAM</b> Retrofit arm mount kit <sup>2</sup>	<b>Type 2</b>  2 Type 2 <b>2-90</b> Rotated left 90°  <b>2-270</b> Rotated right 270°  <b>Type 3</b>  3 Type 3 <b>3-90</b> Rotated left 90°  <b>3-270</b> Rotated right 270°  <b>Type 4</b>  4 Type 4 <b>4-90</b> Rotated left 90°  <b>4-270</b> Rotated right 270°  <b>Type 5</b>  5 Type 5 <b>5W</b> Type 5W  <b>AFR</b> Auto Front Row <b>AFR-90</b> Auto Front Row, Rotated left 90° <b>AFR-270</b> Auto Front Row, Rotated right 270°	<b>120</b> 120V <b>208</b> 208V <b>240</b> 240V <b>277</b> 277V <b>347</b> 347V <b>480</b> 480V <b>UNV</b> 120-277V (50/60Hz) <b>HVU</b> 347-480V (50/60Hz)	<b>DD</b> 0-10V External dimming (by others) <sup>4</sup> <b>DCC</b> Dual Circuit Control <sup>4,5,6</sup> <b>FAWS</b> Field Adjustable Wattage Selector <sup>4,5</sup> <b>SW</b> Interface module for SiteWise <sup>4,6,7</sup> <b>LLC</b> Integral wireless module <sup>4,6,8,17</sup> <b>BL</b> Bi-level functionality <sup>4,17</sup>  <b>DynaDimmer:</b> Automatic Profile Dimming <b>CS50</b> Safety 50% Dimming, 7 hours <sup>4,8</sup> <b>CM50</b> Median 50% Dimming, 8 hours <sup>4,8</sup> <b>CS30</b> Safety 30% Dimming, 7 hours <sup>4,8</sup> <b>CM30</b> Median 30% Dimming, 8 hours <sup>4,8</sup>	<b>IMRI3</b> Integral with #3 lens <sup>15</sup>  <b>IMRI7</b> Integral with #7 lens <sup>16</sup>	<b>PCB</b> Photocontrol Button <sup>8,9</sup> <b>TLRD5</b> Twist Lock Receptacle 5 Pin <sup>10</sup> <b>TLRD7</b> Twist Lock Receptacle 7 Pin <sup>10</sup> <b>TLRPC</b> Twist Lock Receptacle w/ Photocell <sup>9,11</sup>	<b>Fusing</b> <b>F1</b> Single (120, 277, 347VAC) <sup>9</sup> <b>F2</b> Double (208, 240, 480VAC) <sup>9</sup> <b>Pole Mount Fusing</b> <b>FP1</b> Single (120, 277, 347VAC) <sup>9</sup> <b>FP2</b> Double (208, 240, 480VAC) <sup>9</sup> <b>FP3</b> Canadian Double Pull (208, 240, 480VAC) <sup>9</sup> <b>Surge Protection</b> (10kA standard) <b>SP2</b> Increased 20kA	Square Pole Adapter included in standard product <b>TB</b> Terminal Block <sup>12</sup> <b>RPA</b> Round Pole Adapter (fits to 3"-3.9" O.D. pole) <sup>13</sup> <b>HIS</b> Internal Housing Side Shield <sup>14</sup>	<b>Textured</b> <b>BK</b> Black <b>WH</b> White <b>BZ</b> Bronze <b>DGY</b> Dark Gray <b>MGY</b> Medium Gray  <b>Customer specified</b> <b>RAL</b> Specify optional color or RAL (ex: RAL7024) <b>CC</b> Custom color (Must supply color chip for required factory quote)

1. BL-IMRI3/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
2. Mounts to a 4" round pole with adapter included for square poles.
3. Limited to a maximum of 45 degrees aiming above horizontal.
4. Not available with other dimming control options.
5. Not available with motion sensor.
6. Not available with photocontrol.
7. Available only in 120 or 277V.

8. Not available in 347 or 480V
9. Must specify input voltage.
10. Dimming will not be connected to NEMA receptacle if ordering with other control options.
11. Not available in 480V. Order photocell separately with TLRD5/7.
12. Not available with DCC.
13. Not available with SF and WS. RPAs provided with black finish standard.

14. HIS not available with Type 5 and 5W optics.
15. Not available with DD, DCC, and FAWS dimming control options.
16. Not available with DD, DCC, FAWS and LLC dimming control options.
17. Must specify a motion sensor lens.

# ECF-S EcoForm small

## Area luminaire

EcoForm Accessories (ordered separately, field installed)

### Shielding Accessories

#### House Side shield

Standard optic orientation:

- HIS-32-H<sup>18</sup> Internal House Side Shield for 32 LEDs (2 modules)
- HIS-48-H<sup>18</sup> Internal House Side Shield for 48 LEDs (3 modules)
- HIS-64-H<sup>18</sup> Internal House Side Shield for 64 LEDs (4 modules)

Optic at 90 or 270 orientation:

- HIS-32-V<sup>18</sup> Internal House Side Shield for 32 LEDs (2 modules)
- HIS-48-V<sup>18</sup> Internal House Side Shield for 48 LEDs (3 modules)
- HIS-64-V<sup>18</sup> Internal House Side Shield for 64 LEDs (4 modules)

18. Not available with Type 5 or 5W optics

### Luminaire Accessories

- ECF-BD-G2 Bird deterrent
- ECF-RAM-G2-(F) Retrofit Arm mount kit
- ECF-SF-G2-(F) Slip Fitter Mount (fits to 2 3/8" O.D. tenon)
- ECF-WS-G2-(F) Wall mount with surface conduit rear entry permitted

**EcoForm PTF2**  
(pole top fitter fits 23/8-21/2" OD x 4" depth tenon)

- PTF2-ECF-S/L-1-90-(F) 1 luminaire at 90°
- PTF2-ECF-S/L-2-90-(F) 2 luminaires at 90°
- PTF2-ECF-S/L-2-180-(F) 2 luminaires at 180°
- PTF2-ECF-S/L-3-90-(F) 3 luminaires at 90°
- PTF2-ECF-S/L-4-90-(F) 4 luminaires at 90°
- PTF2-ECF-S/L-3-120-(F) 3 luminaires at 120°

(F) = Specify finish

**EcoForm PTF3**  
(pole top fitter fits 3-31/2" OD x 6" depth tenon)

- PTF3-ECF-S/L-1-90-(F) 1 luminaire at 90°
- PTF3-ECF-S/L-2-90-(F) 2 luminaires at 90°
- PTF3-ECF-S/L-2-180-(F) 2 luminaires at 180°
- PTF3-ECF-S/L-3-90-(F) 3 luminaires at 90°
- PTF3-ECF-S/L-4-90-(F) 4 luminaires at 90°
- PTF3-ECF-S/L-3-120-(F) 3 luminaires at 120°

**EcoForm PTF4**  
(pole top fitter fits 31/2-4" OD x 6" depth tenon)

- PTF4-ECF-S/L-1-90-(F) 1 luminaire at 90°
- PTF4-ECF-S/L-2-90-(F) 2 luminaires at 90°
- PTF4-ECF-S/L-2-180-(F) 2 luminaires at 180°
- PTF4-ECF-S/L-3-90-(F) 3 luminaires at 90°
- PTF4-ECF-S/L-4-90-(F) 4 luminaires at 90°
- PTF4-ECF-S/L-3-120-(F) 3 luminaires at 120°

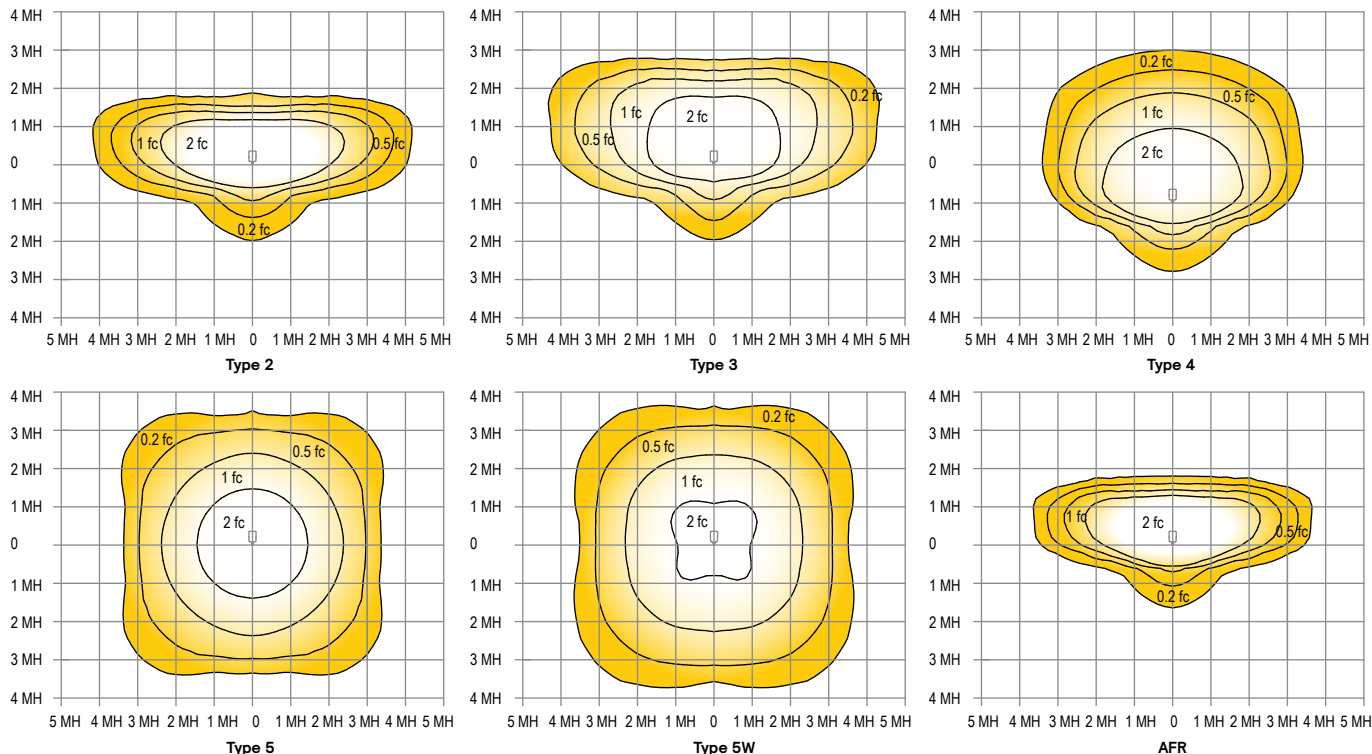
### Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1200 mA	>100,000 hours	>60,000 hours	>88%

### Optical distribution

Based on configuration ECF-S-48L-1A-NW-G2 (159W) mounted at 20ft.



# ECF-S EcoForm small

## Area luminaire

### 3000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-WW-G2-x	32	365	3000	40	5,508	B1-U0-G1	138	5,428	B1-U0-G2	136	5,637	B1-U0-G2	141
ECF-S-32L-530-WW-G2-x	32	530	3000	56	7,159	B2-U0-G2	129	7,055	B1-U0-G2	127	7,327	B1-U0-G2	132
ECF-S-32L-700-WW-G2-x	32	700	3000	73	9,234	B2-U0-G2	127	9,034	B2-U0-G2	124	9,452	B2-U0-G2	130
ECF-S-32L-1A-WW-G2-x	32	1050	3000	106	13,001	B3-U0-G2	123	12,719	B2-U0-G2	120	13,306	B2-U0-G3	126
ECF-S-32L-1.2A-WW-G2-x	32	1200	3000	122	14,421	B3-U0-G3	119	14,108	B2-U0-G3	116	14,760	B2-U0-G3	121
ECF-S-48L-900-WW-G2-x	48	900	3000	135	17,115	B3-U0-G3	127	16,744	B3-U0-G3	124	17,518	B2-U0-G3	130
ECF-S-48L-1A-WW-G2-x	48	1050	3000	159	19,381	B3-U0-G3	122	18,960	B3-U0-G3	119	19,836	B3-U0-G4	125
ECF-S-48L-1.2A-WW-G2-x	48	1200	3000	183	21,515	B3-U0-G3	118	21,048	B3-U0-G4	115	22,020	B3-U0-G4	121
ECF-S-64L-900-WW-G2-x	64	900	3000	178	22,652	B3-U0-G3	127	22,161	B3-U0-G4	125	23,185	B3-U0-G4	130
ECF-S-64L-1A-WW-G2-x	64	1050	3000	206	25,520	B3-U0-G3	124	24,966	B3-U0-G4	121	26,120	B3-U0-G4	127

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type AFR			Type 5			Type 5W		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-WW-G2-x	32	365	3000	40	5,706	B2-U0-G1	143	5,790	B3-U0-G1	145	5,604	B3-U0-G1	140
ECF-S-32L-530-WW-G2-x	32	530	3000	56	7,417	B2-U0-G1	133	7,526	B3-U0-G2	135	7,284	B3-U0-G2	131
ECF-S-32L-700-WW-G2-x	32	700	3000	73	9,567	B2-U0-G2	131	9,707	B4-U0-G2	133	9,395	B4-U0-G2	129
ECF-S-32L-1A-WW-G2-x	32	1050	3000	106	13,467	B3-U0-G2	128	13,665	B4-U0-G2	129	13,227	B4-U0-G2	125
ECF-S-32L-1.2A-WW-G2-x	32	1200	3000	122	14,939	B3-U0-G2	123	15,158	B4-U0-G2	125	14,671	B4-U0-G2	121
ECF-S-48L-900-WW-G2-x	48	900	3000	135	17,731	B3-U0-G2	131	17,990	B4-U0-G2	133	17,413	B5-U0-G3	129
ECF-S-48L-1A-WW-G2-x	48	1050	3000	159	20,076	B3-U0-G2	127	20,372	B5-U0-G3	128	19,717	B5-U0-G3	124
ECF-S-48L-1.2A-WW-G2-x	48	1200	3000	183	22,288	B3-U0-G2	122	22,616	B5-U0-G3	124	21,888	B5-U0-G3	120
ECF-S-64L-900-WW-G2-x	64	900	3000	178	23,465	B3-U0-G2	132	23,810	B5-U0-G3	134	23,045	B5-U0-G3	130
ECF-S-64L-1A-WW-G2-x	64	1050	3000	206	26,437	B4-U0-G3	128	26,150	B5-U0-G3	127	25,964	B5-U0-G4	126

### 4000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-NW-G2-x	32	365	4000	40	5,798	B1-U0-G1	145	5,713	B1-U0-G2	143	5,934	B1-U0-G2	148
ECF-S-32L-530-NW-G2-x	32	530	4000	56	7,536	B2-U0-G2	135	7,426	B1-U0-G2	133	7,713	B1-U0-G2	138
ECF-S-32L-700-NW-G2-x	32	700	4000	73	9,720	B2-U0-G2	133	9,509	B2-U0-G2	130	9,949	B2-U0-G2	136
ECF-S-32L-1A-NW-G2-x	32	1050	4000	106	13,685	B3-U0-G2	130	13,388	B2-U0-G3	127	14,006	B2-U0-G3	133
ECF-S-32L-1.2A-NW-G2-x	32	1200	4000	122	15,180	B3-U0-G3	125	14,851	B2-U0-G3	122	15,537	B2-U0-G3	128
ECF-S-48L-900-NW-G2-x	48	900	4000	135	18,016	B3-U0-G3	133	17,625	B3-U0-G3	130	18,440	B3-U0-G3	136
ECF-S-48L-1A-NW-G2-x	48	1050	4000	159	20,401	B3-U0-G3	129	19,958	B3-U0-G4	126	20,880	B3-U0-G4	132
ECF-S-48L-1.2A-NW-G2-x	48	1200	4000	183	22,647	B3-U0-G3	124	22,156	B3-U0-G4	121	23,179	B3-U0-G4	127
ECF-S-64L-900-NW-G2-x	64	900	4000	178	23,844	B3-U0-G3	134	23,327	B3-U0-G4	131	24,405	B3-U0-G4	137
ECF-S-64L-1A-NW-G2-x	64	1050	4000	206	26,863	B3-U0-G3	130	26,280	B3-U0-G4	128	27,495	B3-U0-G4	134

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type AFR			Type 5			Type 5W		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-NW-G2-x	32	365	4000	40	6,006	B2-U0-G1	150	6,094	B3-U0-G1	152	5,898	B3-U0-G2	147
ECF-S-32L-530-NW-G2-x	32	530	4000	56	7,807	B2-U0-G1	140	7,922	B3-U0-G2	142	7,667	B3-U0-G2	138
ECF-S-32L-700-NW-G2-x	32	700	4000	73	10,070	B2-U0-G2	138	10,218	B4-U0-G2	140	9,889	B4-U0-G2	136
ECF-S-32L-1A-NW-G2-x	32	1050	4000	106	14,176	B3-U0-G2	134	14,384	B4-U0-G2	136	13,923	B4-U0-G2	132
ECF-S-32L-1.2A-NW-G2-x	32	1200	4000	122	15,725	B3-U0-G2	129	15,956	B4-U0-G2	131	15,443	B4-U0-G2	127
ECF-S-48L-900-NW-G2-x	48	900	4000	135	18,664	B3-U0-G2	138	18,937	B4-U0-G3	140	18,329	B5-U0-G3	136
ECF-S-48L-1A-NW-G2-x	48	1050	4000	159	21,133	B3-U0-G2	133	21,444	B5-U0-G3	135	20,755	B5-U0-G3	131
ECF-S-48L-1.2A-NW-G2-x	48	1200	4000	183	23,461	B3-U0-G2	128	23,806	B5-U0-G3	130	23,040	B5-U0-G3	126
ECF-S-64L-900-NW-G2-x	64	900	4000	178	24,700	B3-U0-G2	139	25,063	B5-U0-G3	141	24,258	B5-U0-G4	136
ECF-S-64L-1A-NW-G2-x	64	1050	4000	206	27,828	B4-U0-G3	135	27,526	B5-U0-G3	134	27,330	B5-U0-G4	133



# ECF-S EcoForm small

## Area luminaire

### 5000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-CW-G2-x	32	365	5000	40	5,798	B1-U0-G1	145	5,713	B1-U0-G2	143	5,934	B1-U0-G2	148
ECF-S-32L-530-CW-G2-x	32	530	5000	56	75,36	B2-U0-G2	135	7,426	B1-U0-G2	133	7,713	B1-U0-G2	138
ECF-S-32L-700-CW-G2-x	32	700	5000	73	9,720	B2-U0-G2	133	9,509	B2-U0-G2	130	9,949	B2-U0-G2	136
ECF-S-32L-1A-CW-G2-x	32	1050	5000	106	13,685	B3-U0-G2	130	13,388	B2-U0-G3	127	14,006	B2-U0-G3	133
ECF-S-32L-1.2A-CW-G2-x	32	1200	5000	122	15,180	B3-U0-G3	125	14,851	B2-U0-G3	122	15,537	B2-U0-G3	128
ECF-S-48L-900-CW-G2-x	48	900	5000	135	18,016	B3-U0-G3	133	17,625	B3-U0-G3	130	18,440	B3-U0-G3	136
ECF-S-48L-1A-CW-G2-x	48	1050	5000	159	20,401	B3-U0-G3	129	19,958	B3-U0-G4	126	20,880	B3-U0-G4	132
ECF-S-48L-1.2A-CW-G2-x	48	1200	5000	183	22,647	B3-U0-G3	124	22,156	B3-U0-G4	121	23,179	B3-U0-G4	127
ECF-S-64L-900-CW-G2-x	64	900	5000	178	23,844	B3-U0-G3	134	23,327	B3-U0-G4	131	24,405	B3-U0-G4	137
ECF-S-64L-1A-CW-G2-x	64	1050	5000	206	26,863	B3-U0-G3	130	26,280	B3-U0-G4	128	27,495	B3-U0-G4	134

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type AFR			Type 5			Type 5W		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
ECF-S-32L-365-CW-G2-x	32	365	5000	40	6,006	B2-U0-G1	150	6,094	B3-U0-G1	152	5,898	B3-U0-G2	147
ECF-S-32L-530-CW-G2-x	32	530	5000	56	7,807	B2-U0-G1	140	7,922	B3-U0-G2	142	7,667	B3-U0-G2	138
ECF-S-32L-700-CW-G2-x	32	700	5000	73	10,070	B2-U0-G2	138	10,218	B4-U0-G2	140	9,889	B4-U0-G2	136
ECF-S-32L-1A-CW-G2-x	32	1050	5000	106	14,176	B3-U0-G2	134	14,384	B4-U0-G2	136	13,923	B4-U0-G2	132
ECF-S-32L-1.2A-CW-G2-x	32	1200	5000	122	15,725	B3-U0-G2	129	15,956	B4-U0-G2	131	15,443	B4-U0-G2	127
ECF-S-48L-900-CW-G2-x	48	900	5000	135	18,664	B3-U0-G2	138	18,937	B4-U0-G3	140	18,329	B5-U0-G3	136
ECF-S-48L-1A-CW-G2-x	48	1050	5000	159	21,133	B3-U0-G2	133	21,444	B5-U0-G3	135	20,755	B5-U0-G3	131
ECF-S-48L-1.2A-CW-G2-x	48	1200	5000	183	23,461	B3-U0-G2	128	23,806	B5-U0-G3	130	23,040	B5-U0-G3	126
ECF-S-64L-900-CW-G2-x	64	900	5000	178	24700	B3-U0-G2	139	25063	B5-U0-G3	141	24258	B5-U0-G4	136
ECF-S-64L-1A-CW-G2-x	64	1050	5000	206	27828	B4-U0-G3	135	27526	B5-U0-G3	134	27330	B5-U0-G4	133

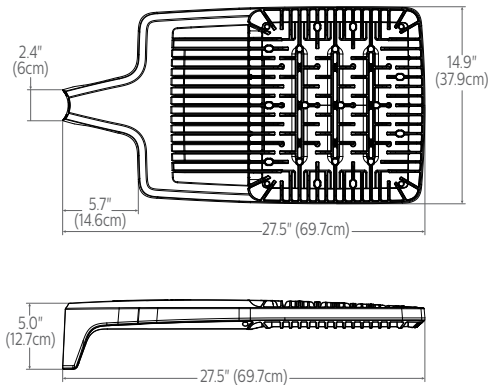
# ECF-S EcoForm small

## Area lumineuse

### Dimensions

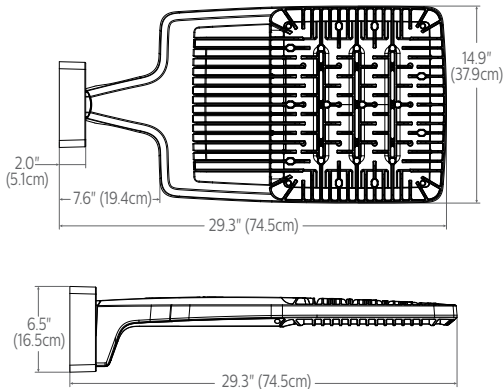
#### Standard Arm (AR)

Weight: 22 Lbs (9.9 Kg) EPA: 0.21ft² (.019m²)



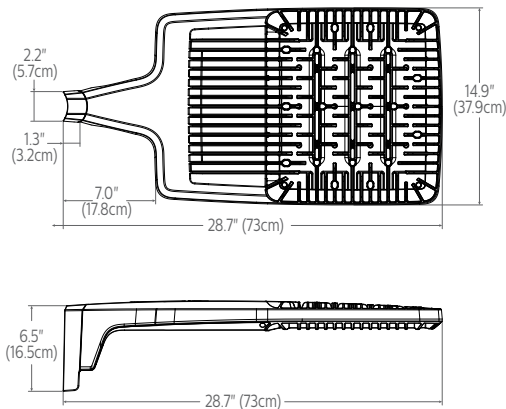
#### Wall (WS)

Weight: 27 Lbs. (12. 2Kg) EPA: 0.27ft² (.025m²)



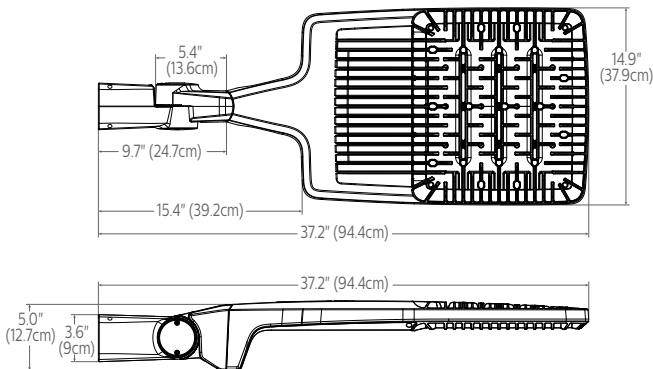
#### Retrofit Arm (RAM)

Weight: 24 Lbs (10.9 Kg) EPA: 0.24ft² (.022m²)

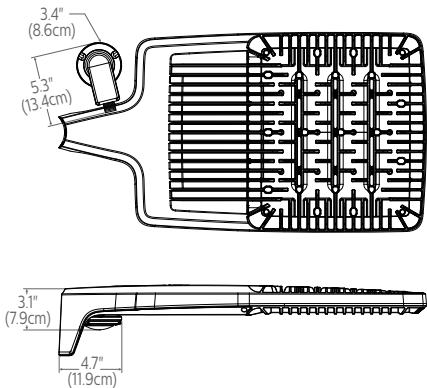


#### Slip fitter (SF)

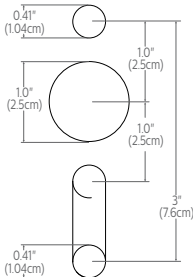
Weight: 27 Lbs (12.2 Kg) EPA: 0.33ft² (.031m²)



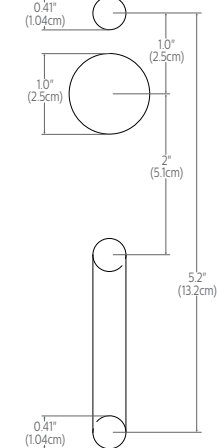
#### Outboard IMR-HVU sensor



#### Standard Arm (AR) drill pattern



#### Retrofit Arm (RAM) drill pattern



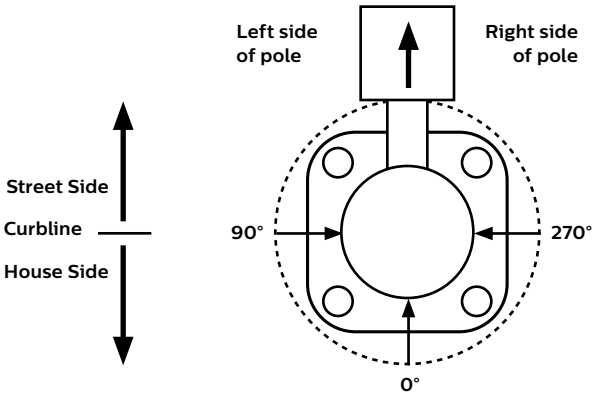
# ECF-S EcoForm small

## Area luminaire

### Optical Orientation Information

#### Standard Optic Position

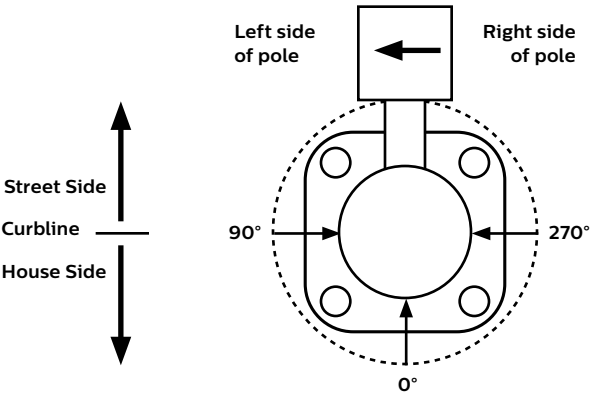
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

#### Optic Rotated Left (90°) Optic Position

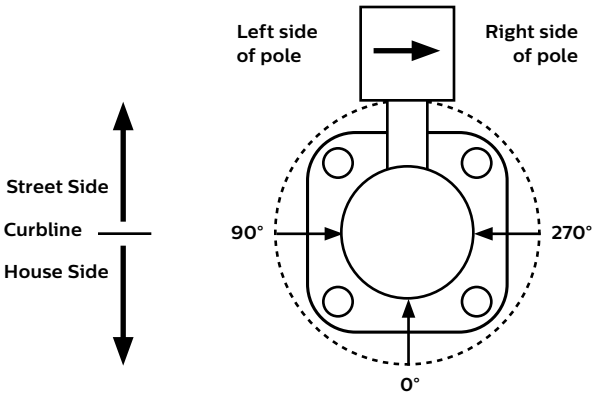
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

#### Optic Rotated Right (270°) Optic Position

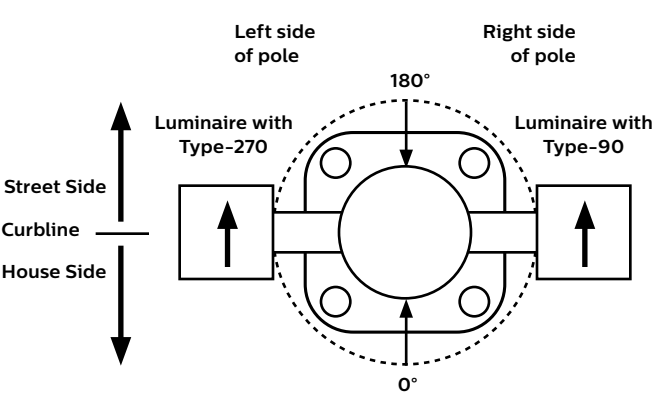
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

#### Twin Luminaire Assemblies with Type-90/Type-270 Rotated Optical Systems

Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Luminaires with Optic Rotated Right (270°) are installed on the LEFT Side of Pole

Luminaires with Optic Rotated Left (90°) are installed on the RIGHT Side of Pole

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

# ECF-S EcoForm small

## Area luminaire

### Specifications

#### Housing

One-piece die cast aluminum housing with integral arm and separate, self-retained hinged, one-piece die cast door frame. Luminaire housing rated to IP66, tested in accordance to Section 9 of IEC 60598-1.

#### Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

#### Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3, and 4 modules or 32, 48, and 64 LEDs. Module is RoHS compliant. Color temperatures: 3000K +/-125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### Energy saving benefits

System efficacy up to 133 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

#### Optical systems

Type 2, 3, 4, 5, 5W, and AFR distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, 4, and AFR distributions. Types 2, 3, 4, and AFR when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

#### Mounting

Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles. EcoForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are slipfitter and wall mounting accessories. Note that only fixed mounts (AR, RAM, WS) are required to meet IDA compliance. SF mounting will not meet IDA.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Dual Circuit Control (DCC):** Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.

**SiteWise (SW):** SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at [philips.com/sitewise](http://philips.com/sitewise).

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM – 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM – 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

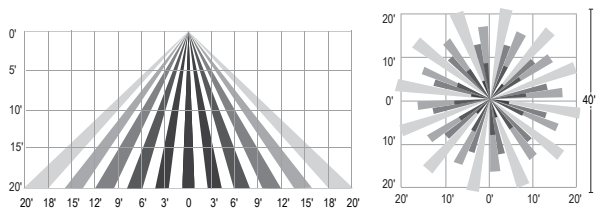
**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

**Note:** Typical value accuracy +/- 5%

**Wireless system (LLC):** Optional wireless controller integral to luminaire ready to be connected to a Limelight system (sold by others). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely. Based on a high-density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution. Equipped with motion response with #3 lens for 8-25' mounting heights. Also available with remote pod accessory where pod is mounted separate from luminaire to pole or wall.

LLC wireless controller with #3 lens



#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).



# ECF-S EcoForm small

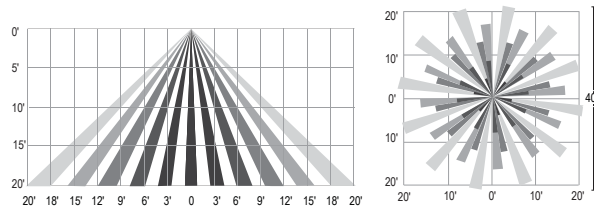
## Area luminaire

### Specifications

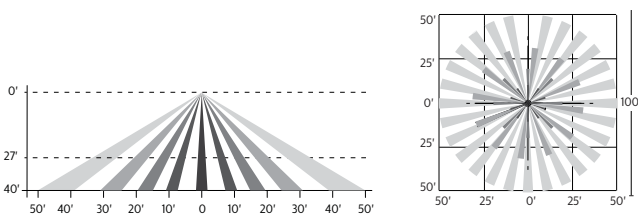
**Infrared Motion Response with Other Controls:** When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI3/IMRI7):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire or remote mount controller with #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens



### Electrical

**Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC):** Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5 or TLRD7), photocell or shorting cap is not included. TLRPC is shipped standard with 5 pin.

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

### Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most EcoForm configurations are qualified under Premium and Standard DesignLights Consortium® categories. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

### Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the APP and register your product right away. For more details visit: [signify.com](https://signify.com)

### Warranty

EcoForm luminaires feature a 5-year limited warranty. See [signify.com/warranties](https://signify.com/warranties) for complete details and exclusions.



# UVK-30003

## Vekter 2 Large Surface

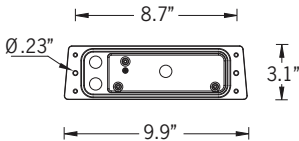
microVOS  
TECHNOLOGY

LIGMAN  
LIGHTING USA



37w LED 5073 Lumens  
IP65 • Suitable For Wet Locations  
IK08 • Impact Resistant (Vandal Resistant)  
Weight 10.8 lbs

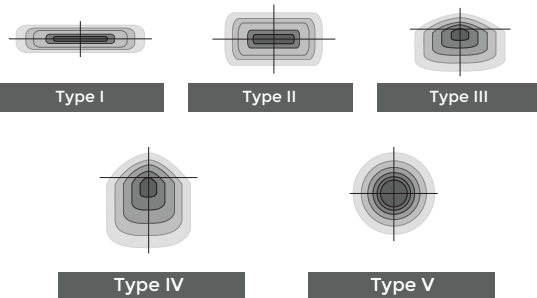
10.2" 9.4"



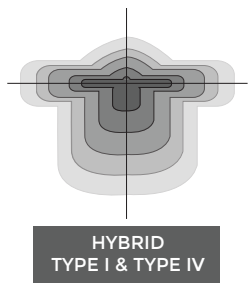
### Mounting Detail

microVOS  
TECHNOLOGY

Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



The variable optic system allows for the designer to create hybrid distributions for precise lighting requirements.



### Construction

#### Aluminum

Less than 0.1% copper content - Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

#### Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

#### Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

#### Thermal management

LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermal below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

#### Surge Suppression

Standard 10kv surge suppressor provided with all fixtures.

#### BUC Rating

B3 - U0 - G0

#### Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

#### Paint

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

#### Inspired by Nature Finishes

The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

#### The Coating Process

After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

#### Added Benefits

- Resistance to salt-acid room, accelerated aging
- Boiling water, lime and condensed water resistant
- Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
- Super durable (UV resistant)
- TGIC free (non-toxic)

#### Hardware

Provided Hardware is Marine grade 316 Stainless steel.

#### Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

#### Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

#### Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

#### Lumen - Maintenance Life

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

### Flexible wall-mounted floodlighting and area luminaires. Sleek, angular, technical and powerful professional lighting solutions.

A wedge shaped range of small profile wall mounted luminaires, with no visible external hardware for use in uplight or downlight applications. This product is provided with a range of high powered LEDs with a selection of optics.

The Vekter is unique as it is available with Type II, III, IV & V light distribution options that facilitates wider spacing and even light distribution between the light fixtures. Wide spacings of up to 40' on center can be achieved using a type II optic with uniformity that complies to path of egress requirements. This provides higher energy saving and reduced installation costs. The Vekter can be manufactured using different type beam optics to achieve custom distribution, e.g using type II and type IV optics inside the same luminaire.

Integral electronic control gear is housed in a special waterproof box that can be detached from the optical chamber for easy installation. Mounting plate for 3" and 4" junction box is provided with the fixture. Matching surface mount conduit boxes are available as an option.

The Vekter is suitable for lighting footpaths, building facades, building entrances and parking areas around buildings.

This luminaire can be mounted in downward or upward positions.

### Additional Options (Consult Factory For Pricing)



SCDT  
Surface Conduit Decorative Trim



# UVK-30003

Vekter 2 Large Surface



PROJECT					DATE	
QUANTITY		TYPE		NOTE		

ORDERING EXAMPLE || UVK - 30003 - 37w - T2 - W30 - 02 - 120/277v - Options

UVK-30003					
	LAMP	BEAM	LED COLOR	FINISH COLOR	VOLTAGE
	37w LED 5073 Lumens	T1 - Type I Distribution T2 - Type II Distribution T3 - Type III Distribution T4 - Type IV Distribution M - Medium 32° W - Wide 52° VW - Very Wide 65° EW - Extra Wide 108°	W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	120/277v Other - Specify

ADDITIONAL OPTIONS		

- NAT - Natatorium Rated

DIM - 0-10v Dimming

SCDT - Surface Conduit Decorative Trim

OCC - Occupancy Sensor
- F - Frosted Lens

EMR - Remote Emergency Pack

AMB - Turtle Friendly Amber LED

RPA - Round Pole Adapter

INSPIRED BY NATURE FINISHES

SW01 - OAK FINISH

SW02 - WALNUT FINISH

SW03- PINE FINISH

DF - DOUGLAS FIR FINISH

CW - CHERRY WOOD FINISH

NW - NATIONAL WALNUT FINISH

SU01 - CONCRETE FINISH

SU02 - SOFTSCAPE FINISH

SU03 - STONE FINISH

SU04 - CORTEN FINISH

THERE IS AN ADDITIONAL COST FOR THESE FINISHES

