

FLUXWERX®

SPECIFICATION DATA

PORTAL RECESSED 5.5" (TC1-R05)

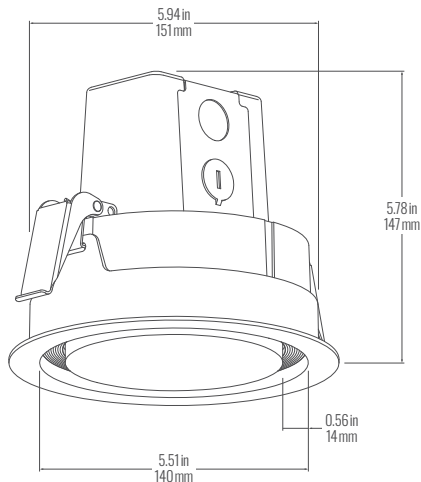


CATALOG

PROJECT

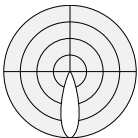
NOTES

DIMENSIONS

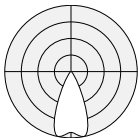


BEAM ANGLES

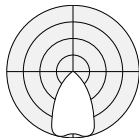
Narrow Beam (30°)



Medium Beam (45°)



Wide Beam (65°)



PERFORMANCE FOCUS

5.5" Medium Beam, 80 CRI 4000 K

Energy (W)		Light (lm)	Efficacy (lm/W)	Certified
A	9 W	1300	138	ENERGY STAR TITLE 24 JA8 (90 CRI)
B	12 W	1750	139	
C	16 W	2350	142	
D	21 W	3000	137	
Color Matching (SDCM)		Lumen Maintenance (hr)		
		L80 per TM21	L70 Estimate	
< 2		> 72,000	> 120,000	

Nominal values, refer to back pages for full performance data.

FEATURES

- Portal reimagines directional and general area illumination. Proprietary optics deliver exceptional lighting control from a minimalist aesthetic.
- To support your design vision, both 5.5" & 9" sizes are available in six mounting variants – Recessed, Semi-Recessed, Semi-Recessed Adjustable, Surface, Surface Adjustable & Pendant.
- Light outputs range from 1200 lm (5.5") to 4100 lm (9") with efficacies exceeding 150 lm/W.
- Flexible lighting schemes are enabled by beam angles of 30°, 45° & 65°, as well as 20 | 80 and 50 | 50 direct/indirect pendant distributions.
- White, Metallic Silver & Black powdercoat finishes (plus RAL colors) can be combined to augment the ceiling design.
- 80 and 90 CRI LEDs are available in four CCTs – 2700 K, 3000 K, 3500 K, 4000 K.

Declare.



SPECIFICATION DATA
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ORDER GUIDE

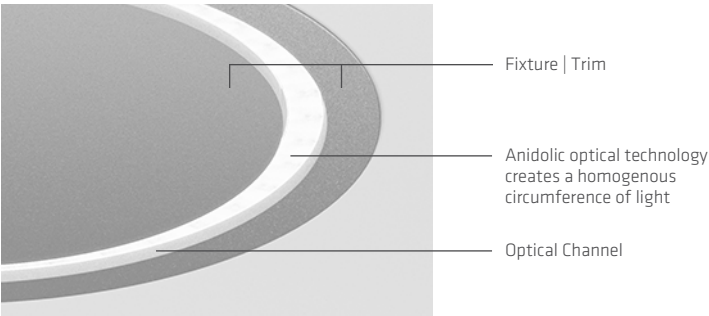
1	2	3	4	5	6	7	8	9	10	11	12	OPTIONS	CONTROLS
TC1	–	R	05										

1	FAMILY	2	VERSION	3	SIZE	4	CEILING TYPE	5	HOUSING / TRIM	
TC1	Portal	—	R	Recessed	► 05	5.5"	D	Drywall	K1	Trim Flange
					09	9"	G	Grid	K2	Drywall Trimless
							R	Remote Driver	L1	Shallow Housing – Trim Flange ¹
									L2	Shallow Housing – Drywall Trimless ¹
									¹ For 5.5", detached driver. 9" always shallow.	

6	FINISH	7	BEAM SPREAD	8	CRI	9	CCT	10	ENERGY ²
FIXTURE / TRIM FINISH		OPTIC CHANNEL FINISH		N1 Narrow (30°)		27 2700 K		A 9 W	
B	Black Powdercoat	B	Black Powdercoat	M1 Medium (45°)		30 3000 K		B 12 W	
S	Metallic Silver Powdercoat	S	Metallic Silver Powdercoat	W1 Wide (65°)		35 3500 K		C 16 W	
W	White Powdercoat	W	White Powdercoat			40 4000 K		D 21 W	
C	Custom Color (RAL)	C	Custom Color (RAL)						
									² Nominal input power. Add 4 W for BP and 2 W for 347V.

11	DRIVER	12	VOLTAGE	OPTIONS	CONTROLS	
F1	Non-Dim	M	120–277 V	B Battery Pack ⁶	TYPE & LOCATION ⁸	BRAND & PROTOCOL ⁸
F2	0–10 V Dim 3%	1	120 V ⁴	C Chicago Plenum	R Remote Sensor / Controller on Ceiling	N1 Acuity nLight Wired ⁹
F4	Line Voltage Dim (Fwd/Rev) 3% 120 V	2	277 V ⁴	F 6' Flex Whip		N2 Acuity nLight Air r10 ⁹
E1	eldoLED ECO 0–10 V Dim 1%	3	347 V ⁵	H Emergency Switch (GTD) ⁷	V Controller on Driver / Plenum Side	N3 Acuity nLight Air RPP20 ⁹
E2	eldoLED SOLO 0–10 V Dim 0.1%					E1 Enlighted Smart Sensor ¹⁰
E3	eldoLED ECO DALI-2 DT6 Dim 1%					L1 Lutron Athena Wireless
E4	eldoLED SOLO DALI-2 DT6 Dim 0.1%					M1 Legrand Wattstopper PLUS
L1	Lutron Hi-Lume 1% EcoSystem (LDE1)					V1 Leviton Intellect Wireless
L3	Lutron Hi-Lume Premier 0.1% EcoSystem (PEQO) ³					
³ Max Energy C (16 W).		⁴ Fixed voltage only for (F4) Line Dim Driver or nLight controls.		⁶ BP: Detached & prewired with Trim & Trimless (K1, K2).	⁸ Controls selection may be limited by version, protocol or other features – see Controls page.	
		⁵ 347 V: Remote with transformer.		⁷ GTD not compatible with (F4) Line Dim driver.	⁹ nLight: Controller (V) only. ¹⁰ Enlighted: Sensor/Controller (R) only.	

PRODUCT DETAILS



FINISHES

All finishes high temperature powder coated. Fixture with trim shown.



BLACK FIXTURE / TRIM
BLACK OPTIC CHANNEL



SILVER FIXTURE / TRIM
SILVER OPTIC CHANNEL



WHITE FIXTURE / TRIM
WHITE OPTIC CHANNEL



BLACK FIXTURE / TRIM
WHITE OPTIC CHANNEL



SILVER FIXTURE / TRIM
BLACK OPTIC CHANNEL



WHITE FIXTURE / TRIM
BLACK OPTIC CHANNEL

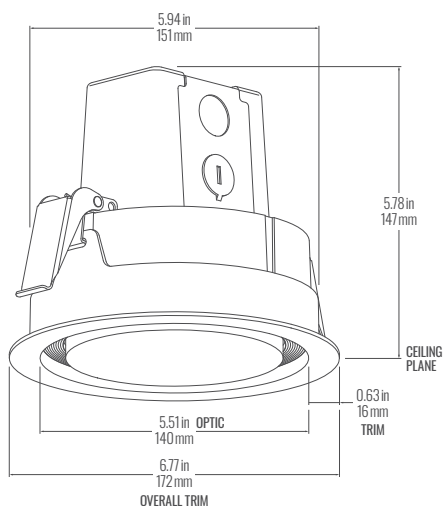


PORTAL RECESSED 5.5" (TC1-R05)

CEILING INTEGRATION – HOUSING

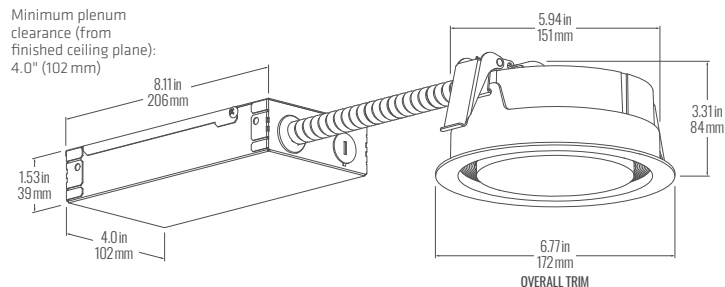
TRIM FLANGE (GRID & DRYWALL)

Cutout diameter:
6.0" (152 mm)
Minimum plenum
clearance (from
finished ceiling plane):
7.0" (178 mm)
Ceiling thickness:
0.5"-1.5"
(e.g. acoustic tile,
GWB, wood)

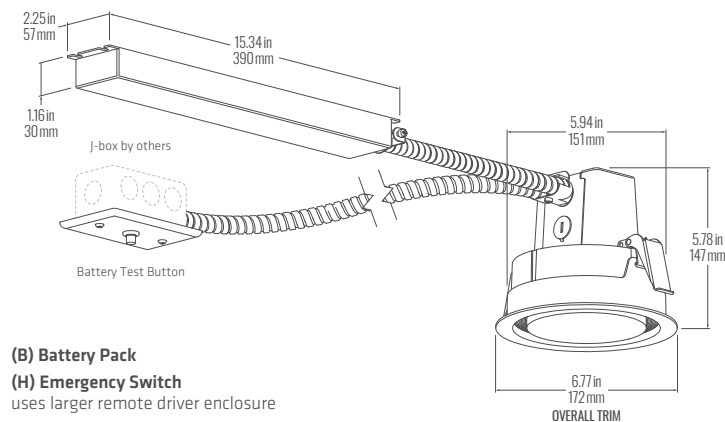


(K1) Internal driver

Minimum plenum
clearance (from
finished ceiling plane):
4.0" (102 mm)



(L1) Shallow or (3) 3/4" V



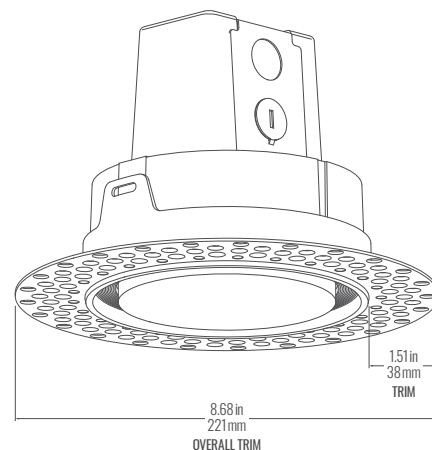
(B) Battery Pack

(H) Emergency Switch

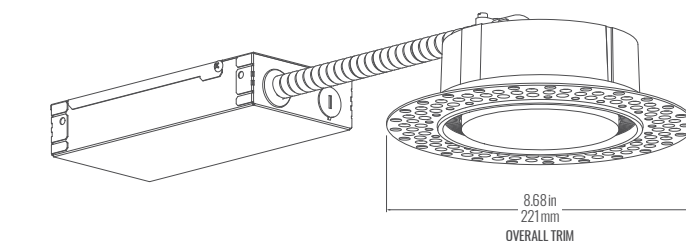
uses larger remote driver enclosure

DRYWALL TRIMLESS (MUD-IN)

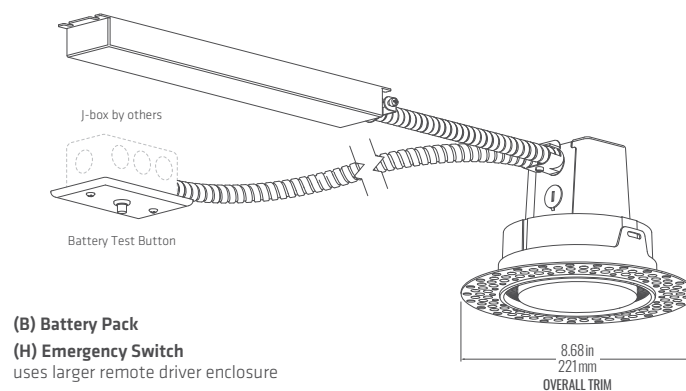
Cutout diameter:
6.0" (152 mm)



(K2) Internal driver



(L2) Shallow or (3) 3/4" V



(B) Battery Pack

(H) Emergency Switch

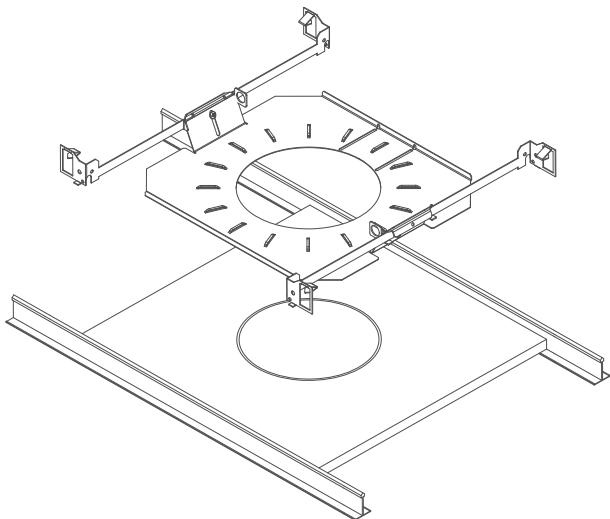
uses larger remote driver enclosure

SPECIFICATION DATA
PORTAL RECESSED 5.5" (TC1-R05)

CEILING INTEGRATION – ROUGH-IN FRAME

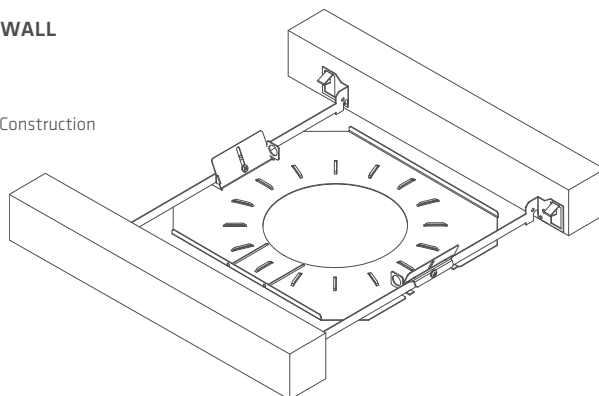
Rough-in frame included with fixture.

GRID CEILING

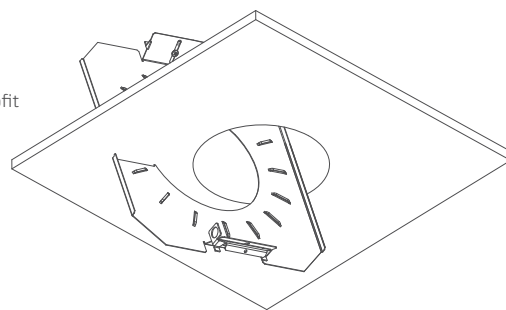


DRYWALL

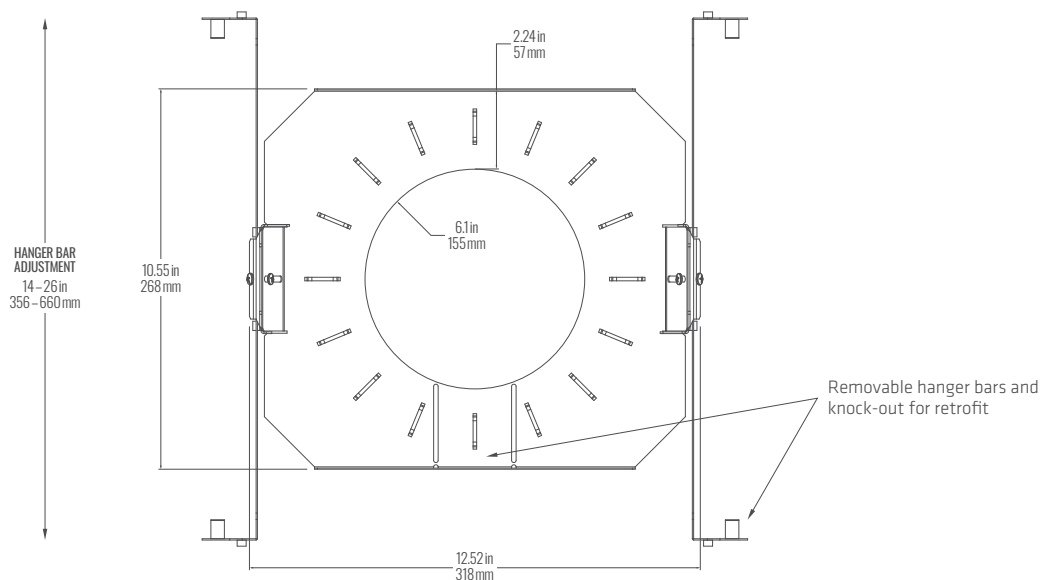
New Construction



Retrofit



FRAME DIMENSIONS

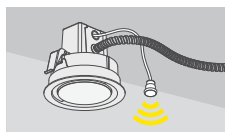


CONTROLS & SENSORS

LUMINAIRE INTEGRATION



V
Controller,
Enclosure/Plenum Side

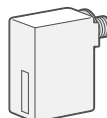


R
Sensor,
Remote/on Ceiling

(N1) Acuity
nLight Wired



nLight wired, digital network.
Model: nPS-80-EZ or nPS-80-EZ-ER
(with H – Emergency Switching)

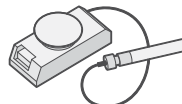


VN1 nLight Wired Controller, Remote Enclosure

(N2, N3) Acuity
nLight Air



Acuity nLight wireless network
interfaces.
Models: rIO, rPP20

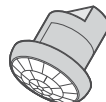


VN2 nLight rIO Controller, Remote Enclosure
VN3 nLight rPP20 Controller, Remote Enclosure

(E1) Siemens
Enlighted



Siemens Enlighted wireless smart
sensor-controllers.
Model: SU-5E-CL

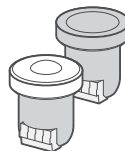


RE1 Enlighted Smart Sensor, Remote/on Ceiling

(L1) Lutron
Athena



Lutron Athena wireless smart
controllers & sensors.
Models: A-WN-D01-RF, A-WN-D01-OCC
For YL1 and SL1:
Default Athena color to match fixture/canopy color
Canopy Athena
WH WH
SV BK
BK BK
For VL1 and RL1: default WH

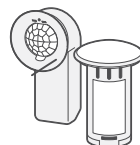


VL1 Athena Controller, Enclosure/Plenum Side
RL1 Athena Sensor, Remote/on Ceiling

(M1) Legrand
Wattstopper
PLUS



Wattstopper PLUS wireless smart
controllers & sensors.
Models: ZBHA-CLM, EN-CLM-PIR

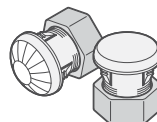


VM1 Wattstopper PLUS Control Module,
Enclosure/Plenum Side
RM1 SensiLUM Sensor, Remote/on Ceiling

(V1) Leviton
Intellect



Leviton Intellect wireless smart
controllers & sensors.
Models: ZL0x0, ZL0xS



VV1 Intellect Controller, Enclosure/Plenum Side
RV1 Intellect Sensor, Remote/on Ceiling

Ask us about...

Pass & Seymour®

EATON

DISTECH
CONTROLS

CRESTRON

CASAMBI

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Due to continuous product improvements, specifications and dimensions are subject to change without notice.

Certain options have limited compatibility with some other product selections. Consult www.fluxwerx.com for most current technical information.

SPECIFICATION DATA
PORTAL RECESSED 5.5" (TC1-R05)

NOTES

CONSTRUCTION

- Architectural grade aluminum and 22 ga. steel housings
- Trim flange and drywall trimless housings suitable for new build or retrofit in grid or GWB ceilings
- White, metallic silver or black textured powdercoat standard finishes

OPTICAL

- Circular anidolic optical structures
- Precision molded high transmittance clear acrylic lenses
- Long life LED system designed for typical TM21 lumen maintenance \geq L80 @ 72,000 h
- Available in 2700 K, 3000 K, 3500 K, 4000 K with CRI \geq 80 and R9 \geq 0, or CRI \geq 90 and R9 \geq 50, all with color accurate binning \leq 2 SDCM

ELECTRICAL

- Integral high efficiency drivers for 50–60 Hz, 120–277 V or 347 V
- Power Factor: > 0.87 (Drivers F1, F2, E1-E4) > 0.70 (Driver L1, Energy B-E)
- Total Harmonic Distortion: $< 20\%$ (Drivers F1, F2, E1-E4)
- Dim level: Standard 3%, optional 1% or 0.1%
- Optional flex whip: 6' prewired
- Surge Protection: Meets ANSI C82.1 spec and ANSI/IEEE C62.41
- Inrush Current: Meets NEMA 410

EMERGENCY

- Optional Battery Pack delivers 10 W Class 2 rated output for 90 min. See Family Performance for estimated emergency output
- Optional GTD (Generator Transfer Switch), 120–277 V, disables 0–10 V control during emergency for full light output

WIRE GAUGE

- Recommended low voltage wire gauge (AWG) for minimal losses over distance when REMOTE mounting:
30 ft | 18 ga
50 ft | 14 ga
80 ft | 12 ga

ENVIRONMENTAL & CARE

- Designed for use in dry or damp indoor locations with ambient temperatures of 0–30°C (32–86°F)
- The luminaire may be damaged by chemicals such as chlorine, solvents, ammonia, alcohol or sulfur in the area of operation or in cleaning products. Damage from contaminants is not covered under warranty.
- Not suitable for natatorium environments, e.g. swimming pools, hot tubs and saunas.
- Clean only by wiping with a slightly water-damp, soft, clean cloth.

WEIGHT

- Maximum 6.2 lbs (2.8 kg) with driver only
- Maximum 9.8 lbs (4.4 kg) with battery pack or 347 V transformer

WARRANTY

- 5 year limited warranty on all components and workmanship



INDEPENDENT TESTING


- IESNA LM79
- IESNA LM80 (LED @ 12,000 h)

APPROVALS

- UL Listed (USA + Canada)
- CCEA Chicago Plenum
- IC Rated
- Energy Star
- Title 24 JA8-2019 (90 CRI versions)
- Living Building Challenge (LBC) Declared

DRIVERS + EMERGENCY

STANDARD DRIVER OPTIONS	
OPTOTRONIC® ADVANCE 	F1 Non-Dim F2 0–10 V Dim 3% F4 Line Voltage Dim 3% (Forward/Reverse) 120 V
eldoLED®	E1 eldoLED ECO 0–10 V Dim 1% E2 eldoLED SOLO 0–10 V Dim 0.1% E3 eldoLED ECO DALI-2 DT6 Dim 1% E4 eldoLED SOLO DALI-2 DT6 Dim 0.1%
	L1 Lutron Hi-Lume 1% EcoSystem (LDE1) L3 Lutron Hi-Lume Premier 0.1% EcoSystem (PEQ0)

EMERGENCY OPTIONS	
	B Battery Pack Bodine BSL310 (10 W) H Emergency Switching Functional Devices ESRB Emergency Lighting Relay

Driver and emergency selection may be limited by product or version.
For further options, contact Fluxwerx.

SPECIFICATION DATA
PORTAL RECESSED 5.5" (TC1-R05)

FAMILY PERFORMANCE

COLOR

80 CRI	4000 K	3500 K	3000 K	2700 K
Color Rendering (CRI)	83	82	82	83
Red Index (R9)	5	3	3	5
Fidelity (TM-30 R _f)	84	83	84	86
Gamut (TM-30 R _g)	93	96	94	95
Color Matching (SDCM)	< 2			

90 CRI	4000 K	3500 K	3000 K	2700 K
Color Rendering (CRI)	93	93	93	93
Red Index (R9)	59	57	57	57
Fidelity (TM-30 R _f)	90	89	90	91
Gamut (TM-30 R _g)	97	99	97	97
Color Matching (SDCM)	< 2			

Typical colorimetry values.



LUMEN MAINTENANCE

	A 9 W	B 12 W	C 16 W	D 21 W
L80 per TM-21 (hr)	> 72,000			
L70 Estimate (hr)	> 120,000			

OUTPUT MULTIPLIERS

MULTIPLIER	Applies To		
90 CRI	0.86	All 80 CRI	
Battery Pack	0.95	Energy B (12 W)	

OPTIC CHANNEL FINISH	Narrow Beam	Medium Beam	Wide Beam
Black	0.94	0.94	0.92
Metallic Silver	0.94	0.94	0.92

For 90 CRI, emergency BP or non-white fixtures, use multipliers to scale published Light (lm), Efficacy (lm/W), Intensity (Cd), Luminance (Cd/m²) and IES files.

VERSION PERFORMANCE

W1 – 5.5" Wide Beam, White Optic Channel, 80 CRI

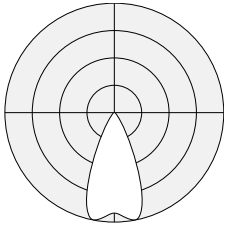
CONFIGURATION			LIGHT & POWER				VISUAL COMFORT			LIGHT DISTRIBUTION
CCT	ENERGY (NOM.)		LIGHT (lm)	POWER (W)	EFFICACY (lm/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	MAX LUMINANCE 45-90° (Cd/m²)	UGR (4H x 8H)	
TC1-R05-W1840 4000 K	A	9 W	1266	9.64	131.3	1,002	201	>10,000	16.0	<p>Portal Recessed 5.5" Wide Beam</p>
	B	12 W	1679	12.64	132.8	1,329	266	>10,000	17.0	
	C	16 W	2247	16.56	135.7	1,778	357	>10,000	18.0	
	D	21 W	2865	21.89	130.9	2,268	455	>10,000	18.8	
TC1-R05-W1835 3500 K	A	9 W	1249	9.64	129.6	989	198	>10,000	15.9	
	B	12 W	1657	12.64	131.1	1,312	263	>10,000	16.9	
	C	16 W	2217	16.56	133.8	1,755	352	>10,000	17.9	
	D	21 W	2827	21.85	129.4	2,238	449	>10,000	18.8	
TC1-R05-W1830 3000 K	A	9 W	1205	9.64	125.0	954	191	>10,000	15.8	
	B	12 W	1598	12.64	126.5	1,265	254	>10,000	16.8	
	C	16 W	2139	16.56	129.1	1,693	339	>10,000	17.8	
	D	21 W	2727	21.85	124.8	2,159	433	>10,000	18.7	
TC1-R05-W1827 2700 K	A	9 W	1153	9.64	119.6	912	183	>10,000	15.7	
	B	12 W	1529	12.64	121.0	1,210	243	>10,000	16.6	
	C	16 W	2046	16.56	123.5	1,619	325	>10,000	17.7	
	D	21 W	2587	21.40	120.9	2,048	411	>10,000	18.5	

Beam Angle 66°

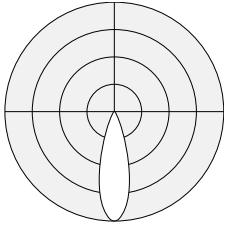
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PORTAL RECESSED 5.5" (TC1-R05)

VERSION PERFORMANCE

M1 – 5.5" Medium Beam, White Optic Channel, 80 CRI

CONFIGURATION			LIGHT & POWER				VISUAL COMFORT			LIGHT DISTRIBUTION
CCT	ENERGY (NOM.)		LIGHT (lm)	POWER (W)	EFFICACY (lm/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	MAX LUMINANCE 45-90° (Cd/m²)	UGR (4H x 8H)	
TC1-R05-M1840 4000 K	A	9 W	1325	9.64	137.5	2,054	54	5,000	14.0	 Portal Recessed 5.5" Medium Beam
	B	12 W	1758	12.64	139.1	2,725	72	6,630	15.0	
	C	16 W	2352	16.56	142.1	3,645	96	8,860	16.0	
	D	21 W	3000	21.84	137.3	4,648	122	>10,000	16.9	
TC1-R05-M1835 3500 K	A	9 W	1308	9.64	135.7	2,027	53	4,930	14.0	
	B	12 W	1735	12.64	137.3	2,689	71	6,540	15.0	
	C	16 W	2321	16.56	140.2	3,597	95	8,750	16.0	
	D	21 W	2960	21.84	135.5	4,587	121	>10,000	16.8	
TC1-R05-M1830 3000 K	A	9 W	1262	9.64	130.9	1,955	52	4,760	13.8	
	B	12 W	1674	12.64	132.4	2,594	68	6,310	14.8	
	C	16 W	2239	16.56	135.2	3,470	91	8,440	15.8	
	D	21 W	2855	21.84	130.7	4,425	116	>10,000	16.7	
TC1-R05-M1827 2700 K	A	9 W	1207	9.64	125.2	1,870	49	4,550	13.7	
	B	12 W	1601	12.64	126.7	2,481	65	6,030	14.7	
	C	16 W	2142	16.56	129.4	3,320	87	8,080	15.7	
	D	21 W	2731	21.84	125.1	4,233	111	>10,000	16.5	

N1 – 5.5" Narrow Beam, White Optic Channel, 80 CRI

CONFIGURATION			LIGHT & POWER				VISUAL COMFORT			LIGHT DISTRIBUTION
CCT	ENERGY (NOM.)		LIGHT (lm)	POWER (W)	EFFICACY (lm/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	MAX LUMINANCE 45-90° (Cd/m²)	UGR (4H x 8H)	
TC1-R05-N1840 4000 K	A	9 W	1319	9.64	136.9	4,052	40	3,710	12.3	 Portal Recessed 5.5" Narrow Beam
	B	12 W	1750	12.64	138.4	5,376	53	4,930	13.3	
	C	16 W	2341	16.56	141.4	7,193	71	6,600	14.3	
	D	21 W	2985	21.87	136.5	9,172	91	8,410	15.2	
TC1-R05-N1835 3500 K	A	9 W	1302	9.64	135.0	3,999	40	3,670	12.3	
	B	12 W	1727	12.64	136.6	5,305	53	4,860	13.3	
	C	16 W	2310	16.56	139.5	7,098	70	6,510	14.3	
	D	21 W	2946	21.87	134.7	9,050	90	8,300	15.1	
TC1-R05-N1830 3000 K	A	9 W	1256	9.64	130.3	3,857	38	3,540	12.2	
	B	12 W	1666	12.64	131.8	5,117	51	4,690	13.2	
	C	16 W	2229	16.56	134.6	6,847	68	6,270	14.2	
	D	21 W	2842	21.87	129.9	8,731	87	8,000	15.0	
TC1-R05-N1827 2700 K	A	9 W	1201	9.64	124.6	3,690	37	3,380	12.0	
	B	12 W	1593	12.64	126.1	4,895	49	4,490	13.0	
	C	16 W	2132	16.56	128.7	6,550	65	6,010	14.0	
	D	21 W	2719	21.87	124.3	8,352	83	7,660	14.9	

Photometry Reports: 13694183.01 – 08
Due to continuous product improvements, specifications and dimensions are subject to change without notice.
laboratory per IES LM-79, ANSI 78.377. Remaining values scaled from baseline data. Output and power may vary by up to 5%.