

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P560488

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560488
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2LO-40-UNV-93-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1636.0 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

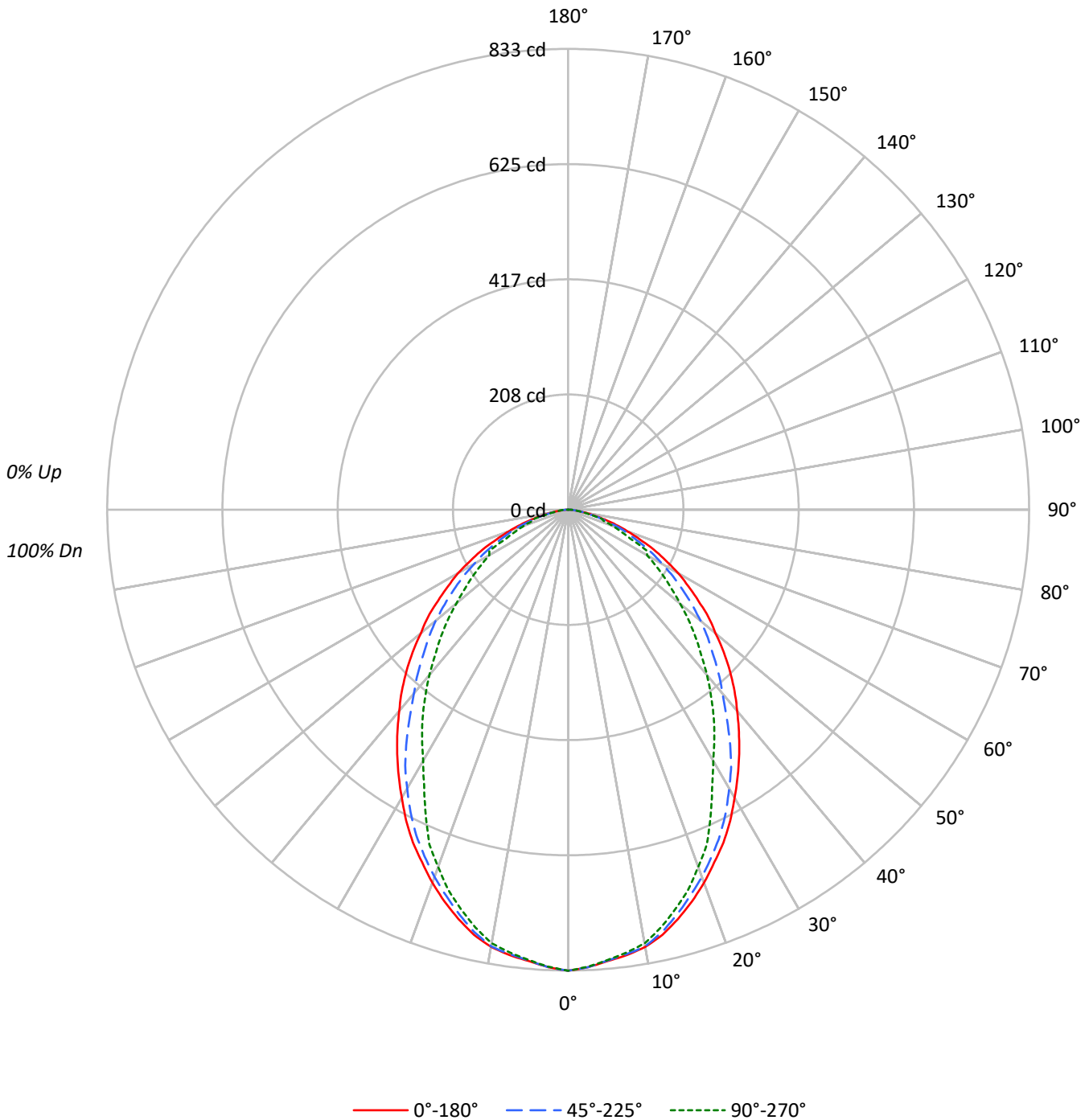
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4485	4485	4485
5°	4424	4419	4414
10°	4386	4381	4349
15°	4267	4225	4165
20°	4111	4045	3934
25°	3942	3856	3616
30°	3736	3616	3257
35°	3539	3342	3013
40°	3337	3046	2741
45°	3146	2816	2478
50°	2912	2613	2210
55°	2694	2368	1980
60°	2468	2115	1773
65°	2171	1853	1570
70°	1789	1622	1334
75°	1422	1241	1302
80°	955	896	837
85°	593	716	834

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3146 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	4.7
10°-20°	212.9	13.0
20°-30°	294.7	18.0
30°-40°	314.3	19.2
40°-50°	286.7	17.5
50°-60°	224.6	13.7
60°-70°	146.4	8.9
70°-80°	64.9	4.0
80°-90°	13.9	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	585.2	35.8
0°-40°	899.5	55.0
0°-60°	1410.8	86.2
0°-90°	1636.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1636.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	819	818	818	817	817	78
15°	766	766	758	750	748	215
25°	664	660	649	626	609	305
35°	539	535	509	470	459	337
45°	413	405	370	339	326	318
55°	287	278	252	222	211	258
65°	170	161	146	148	123	168
75°	68	64	60	57	63	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	833.4	833.4	833.4	833.4	833.4
2.5°	827.6	827.6	827.6	826.6	826.6
5°	818.9	817.9	817.9	817.0	817.0
7.5°	812.2	811.2	810.2	809.3	807.3
10°	802.5	802.5	801.6	796.7	795.8
12.5°	787.1	786.1	782.3	775.6	773.6
15°	765.9	765.9	758.2	750.5	747.6
17.5°	742.8	741.8	732.2	724.5	720.6
20°	717.7	715.8	706.2	693.7	686.9
22.5°	689.8	689.8	678.2	661.9	655.1
25°	663.8	659.9	649.3	626.2	608.9
27.5°	633.9	628.1	616.6	583.8	563.6
30°	601.2	598.3	581.9	539.5	524.1
32.5°	570.3	565.5	548.2	503.9	491.3
35°	538.6	534.7	508.7	470.1	458.6
37.5°	506.8	501.9	469.2	438.4	423.9
40°	475.0	469.2	433.5	405.6	390.2
42.5°	445.1	437.4	402.7	372.8	355.5
45°	413.3	404.6	370.0	339.1	325.6
47.5°	381.5	373.8	342.0	310.2	294.8
50°	347.8	341.0	312.1	280.4	264.0
52.5°	319.9	309.3	281.3	249.5	236.0
55°	287.1	278.4	252.4	222.5	211.0
57.5°	257.2	248.6	224.5	196.5	186.9
60°	229.3	216.8	196.5	172.5	164.7
62.5°	198.5	188.8	171.5	151.3	160.9
65°	170.5	160.9	145.5	148.4	123.3
67.5°	139.7	134.9	121.4	107.9	104.0
70°	113.7	107.9	103.1	88.6	84.8
72.5°	90.6	84.8	78.0	70.3	67.4
75°	68.4	63.6	59.7	56.8	62.6
77.5°	47.2	45.3	42.4	39.5	38.5
80°	30.8	29.9	28.9	27.9	27.0
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.6	10.6	11.6	12.5	13.5
87.5°	5.8	5.8	6.7	7.7	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)