

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: P563468

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563468
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-24-4-LD4-3STD-35-UNV-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9225.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

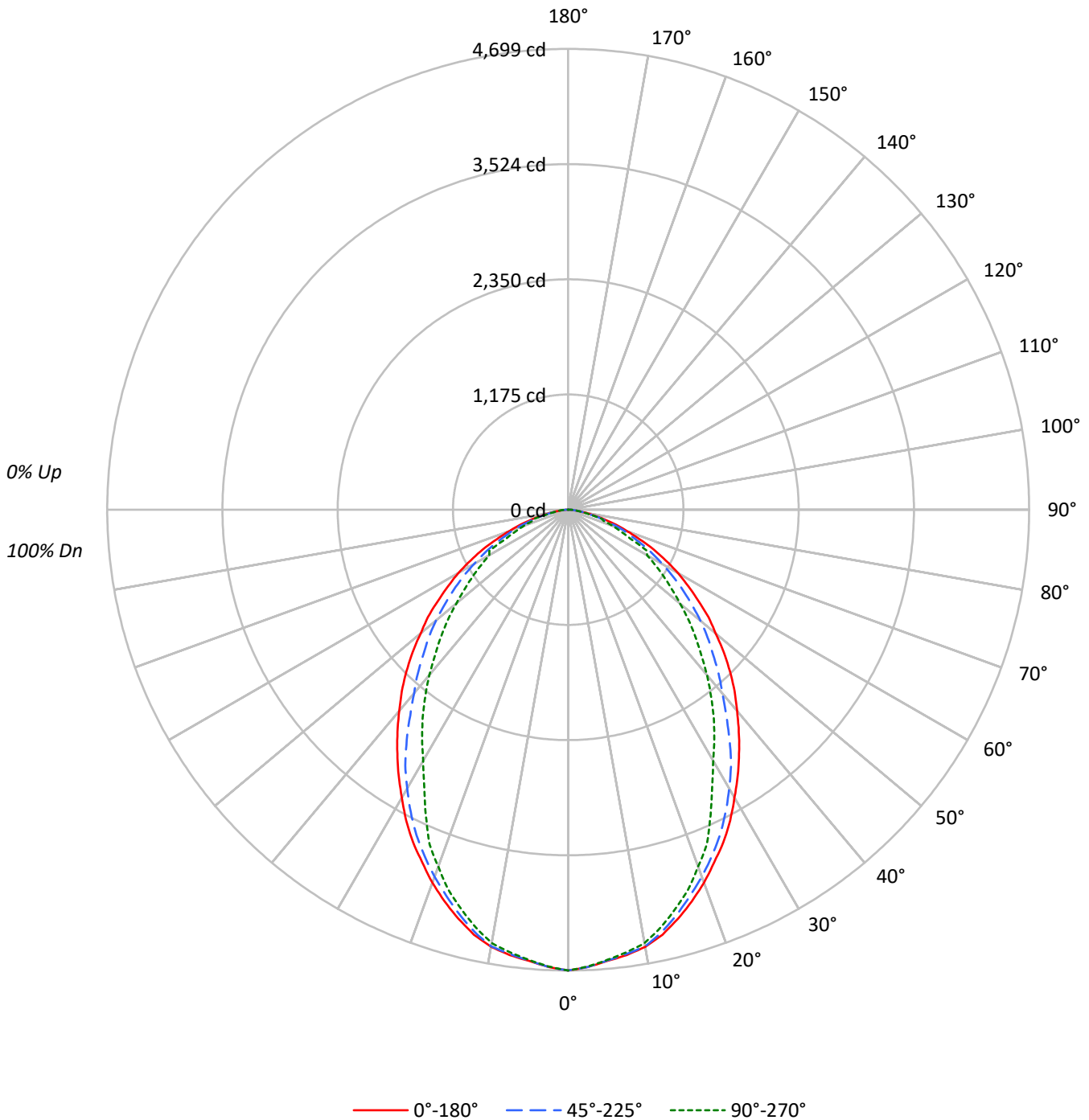
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6323	6323	6323
5°	6237	6229	6222
10°	6183	6175	6131
15°	6016	5955	5872
20°	5795	5702	5546
25°	5557	5436	5097
30°	5267	5098	4591
35°	4988	4711	4247
40°	4704	4294	3864
45°	4434	3969	3494
50°	4105	3684	3116
55°	3798	3339	2791
60°	3479	2982	2500
65°	3061	2612	2214
70°	2522	2287	1881
75°	2005	1751	1836
80°	1347	1263	1179
85°	838	1007	1175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4434 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.4	4.7
10°-20°	1200.5	13.0
20°-30°	1662.0	18.0
30°-40°	1772.1	19.2
40°-50°	1616.7	17.5
50°-60°	1266.6	13.7
60°-70°	825.5	8.9
70°-80°	365.7	4.0
80°-90°	78.5	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°	3299.9	35.8
0°-40°	5072.0	55.0
0°-60°	7955.3	86.2
0°-90°	9225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4699	4699	4699	4699	4699	
5°	4618	4612	4612	4607	4607	438
15°	4319	4319	4275	4232	4216	1214
25°	3743	3721	3662	3531	3433	1718
35°	3037	3015	2868	2651	2586	1899
45°	2330	2282	2086	1912	1836	1795
55°	1619	1570	1423	1255	1190	1452
65°	962	907	820	837	695	948
75°	386	358	337	320	353	413
85°	54	60	65	71	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4699.1	4699.1	4699.1	4699.1	4699.1
2.5°	4666.5	4666.5	4666.5	4661.1	4661.1
5°	4617.6	4612.2	4612.2	4606.7	4606.7
7.5°	4579.6	4574.1	4568.7	4563.3	4552.4
10°	4525.3	4525.3	4519.8	4492.7	4487.2
12.5°	4438.3	4432.9	4411.2	4373.1	4362.3
15°	4318.8	4318.8	4275.4	4231.9	4215.6
17.5°	4188.4	4183.0	4128.7	4085.2	4063.5
20°	4047.2	4036.3	3982.0	3911.4	3873.4
22.5°	3889.7	3889.7	3824.5	3732.1	3694.1
25°	3743.0	3721.2	3661.5	3531.1	3433.3
27.5°	3574.6	3542.0	3476.8	3292.1	3178.0
30°	3389.9	3373.6	3281.2	3042.2	2955.3
32.5°	3216.0	3188.9	3091.1	2841.2	2770.6
35°	3036.8	3015.0	2868.3	2651.0	2585.9
37.5°	2857.5	2830.3	2645.6	2471.8	2390.3
40°	2678.2	2645.6	2444.6	2287.1	2200.2
42.5°	2509.8	2466.3	2270.8	2102.4	2004.6
45°	2330.5	2281.6	2086.1	1912.2	1836.2
47.5°	2151.3	2107.8	1928.5	1749.3	1662.3
50°	1961.1	1923.1	1760.1	1580.9	1488.5
52.5°	1803.6	1743.8	1586.3	1407.0	1331.0
55°	1618.9	1570.0	1423.3	1254.9	1189.7
57.5°	1450.5	1401.6	1265.8	1108.2	1053.9
60°	1292.9	1222.3	1108.2	972.4	929.0
62.5°	1119.1	1064.8	967.0	852.9	907.2
65°	961.5	907.2	820.3	836.6	695.4
67.5°	787.7	760.5	684.5	608.4	586.7
70°	641.0	608.4	581.3	499.8	478.1
72.5°	510.7	478.1	440.0	396.6	380.3
75°	385.7	358.5	336.8	320.5	353.1
77.5°	266.2	255.3	239.0	222.7	217.3
80°	173.8	168.4	163.0	157.5	152.1
82.5°	103.2	103.2	103.2	103.2	103.2
85°	54.3	59.8	65.2	70.6	76.1
87.5°	32.6	32.6	38.0	43.5	48.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)