

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: P563625

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563625
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-50-UNV-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10174.0 lumens
Efficiency: N/A
Efficacy: 101.8 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

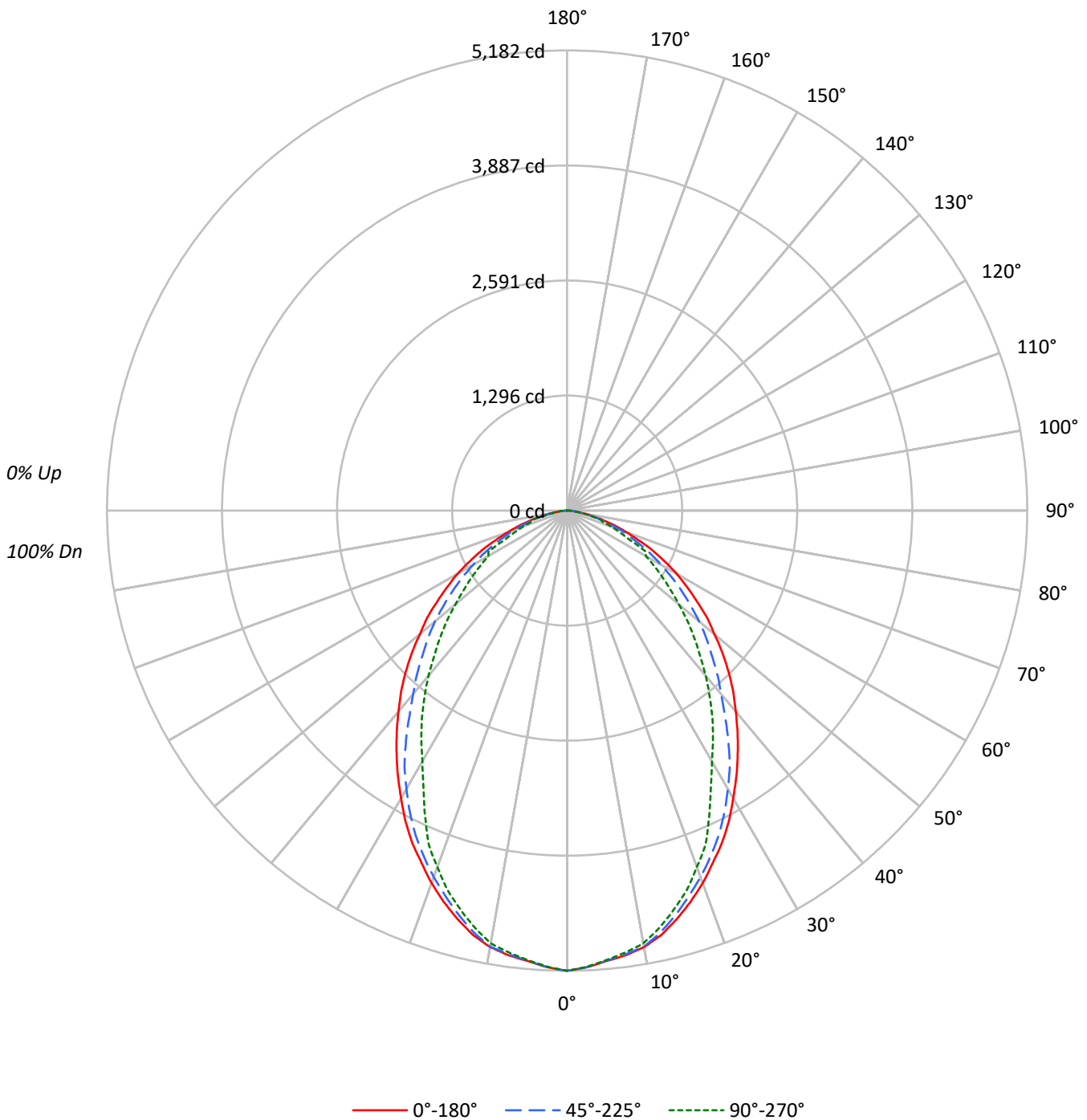
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6973	6973	6973
5°	6878	6870	6862
10°	6819	6810	6761
15°	6635	6568	6476
20°	6391	6288	6117
25°	6128	5995	5621
30°	5808	5622	5064
35°	5501	5196	4684
40°	5188	4735	4262
45°	4891	4378	3853
50°	4527	4063	3436
55°	4188	3682	3078
60°	3837	3289	2757
65°	3376	2880	2442
70°	2781	2522	2074
75°	2211	1931	2024
80°	1485	1392	1300
85°	925	1110	1295

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4891 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	482.4	4.7
10°-20°	1324.0	13.0
20°-30°	1832.9	18.0
30°-40°	1954.5	19.2
40°-50°	1783.0	17.5
50°-60°	1396.9	13.7
60°-70°	910.4	8.9
70°-80°	403.3	4.0
80°-90°	86.6	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°	3639.3	35.8
0°-40°	5593.8	55.0
0°-60°	8773.7	86.2
0°-90°	10174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5182	5182	5182	5182	5182	
5°	5093	5087	5087	5081	5081	483
15°	4763	4763	4715	4667	4649	1339
25°	4128	4104	4038	3894	3786	1895
35°	3349	3325	3163	2924	2852	2094
45°	2570	2516	2301	2109	2025	1980
55°	1785	1732	1570	1384	1312	1601
65°	1060	1001	905	923	767	1045
75°	425	395	372	354	389	456
85°	60	66	72	78	84	83
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5182.5	5182.5	5182.5	5182.5	5182.5
2.5°	5146.6	5146.6	5146.6	5140.6	5140.6
5°	5092.6	5086.6	5086.6	5080.6	5080.6
7.5°	5050.7	5044.7	5038.7	5032.7	5020.7
10°	4990.8	4990.8	4984.8	4954.8	4948.8
12.5°	4894.9	4888.9	4865.0	4823.0	4811.0
15°	4763.1	4763.1	4715.2	4667.2	4649.3
17.5°	4619.3	4613.3	4553.4	4505.5	4481.5
20°	4463.5	4451.6	4391.6	4313.8	4271.8
22.5°	4289.8	4289.8	4217.9	4116.0	4074.1
25°	4128.0	4104.1	4038.2	3894.4	3786.5
27.5°	3942.3	3906.3	3834.5	3630.7	3504.9
30°	3738.6	3720.6	3618.8	3355.1	3259.3
32.5°	3546.9	3516.9	3409.1	3133.5	3055.6
35°	3349.2	3325.2	3163.4	2923.8	2851.9
37.5°	3151.4	3121.5	2917.8	2726.1	2636.2
40°	2953.7	2917.8	2696.1	2522.3	2426.5
42.5°	2768.0	2720.1	2504.4	2318.6	2210.8
45°	2570.3	2516.4	2300.7	2108.9	2025.1
47.5°	2372.6	2324.6	2126.9	1929.2	1833.3
50°	2162.9	2120.9	1941.2	1743.5	1641.6
52.5°	1989.1	1923.2	1749.5	1551.8	1467.9
55°	1785.4	1731.5	1569.7	1384.0	1312.1
57.5°	1599.7	1545.8	1396.0	1222.2	1162.3
60°	1425.9	1348.0	1222.2	1072.4	1024.5
62.5°	1234.2	1174.3	1066.5	940.6	1000.6
65°	1060.5	1000.6	904.7	922.7	766.9
67.5°	868.7	838.8	754.9	671.0	647.1
70°	707.0	671.0	641.1	551.2	527.2
72.5°	563.2	527.2	485.3	437.4	419.4
75°	425.4	395.4	371.5	353.5	389.4
77.5°	293.6	281.6	263.6	245.6	239.7
80°	191.7	185.7	179.7	173.7	167.8
82.5°	113.8	113.8	113.8	113.8	113.8
85°	59.9	65.9	71.9	77.9	83.9
87.5°	35.9	35.9	41.9	47.9	53.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)