

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: P562870

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562870
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-LD4-2STD-35-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6123.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

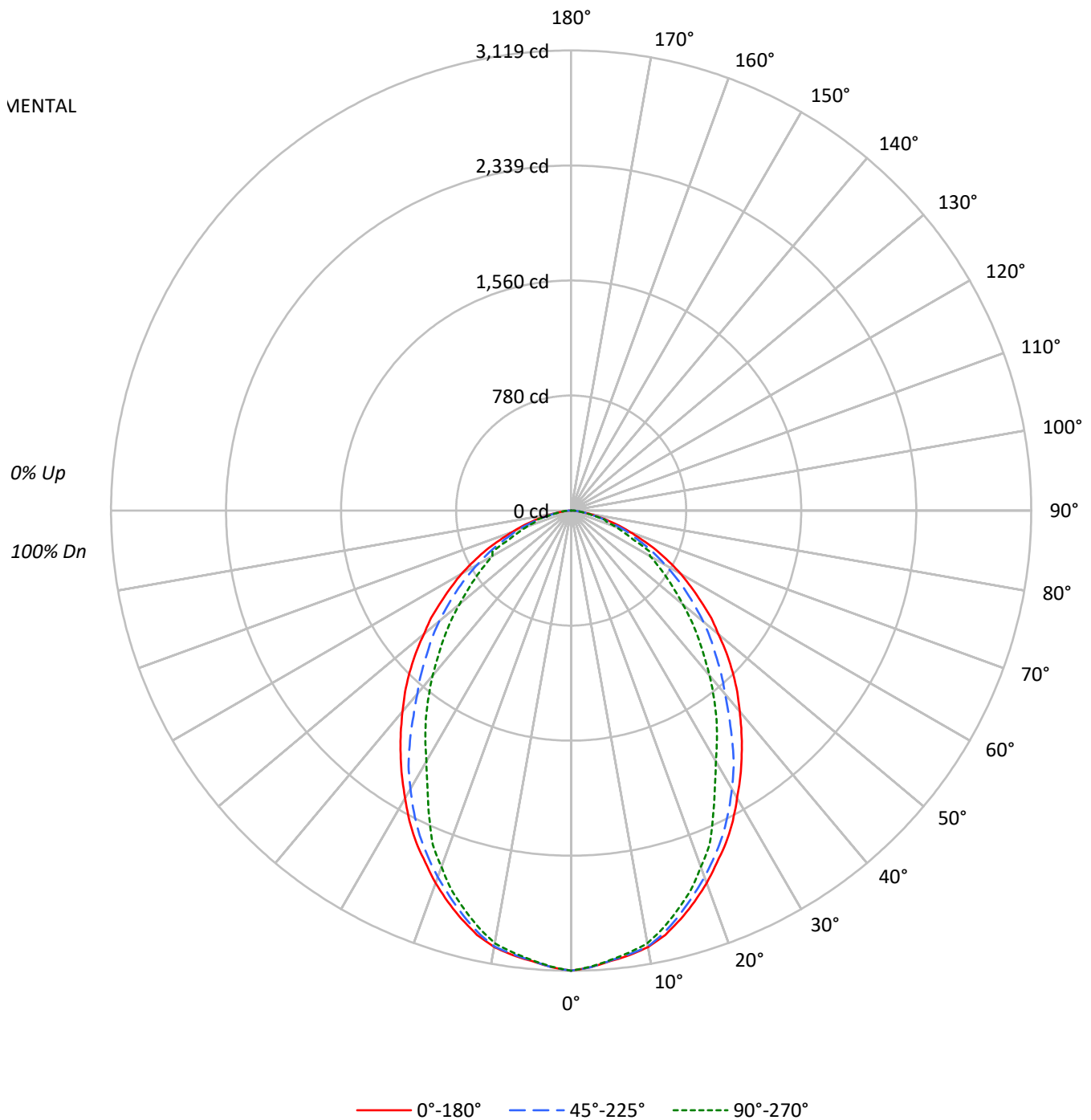
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4197	4197	4197
5°	4140	4135	4130
10°	4104	4099	4069
15°	3993	3953	3898
20°	3846	3784	3681
25°	3688	3608	3383
30°	3496	3384	3047
35°	3311	3127	2819
40°	3122	2850	2565
45°	2943	2635	2319
50°	2725	2445	2068
55°	2521	2216	1852
60°	2309	1979	1659
65°	2032	1734	1469
70°	1674	1518	1248
75°	1331	1162	1219
80°	894	838	783
85°	557	668	780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2943 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.3	4.7
10°-20°	796.8	13.0
20°-30°	1103.1	18.0
30°-40°	1176.2	19.2
40°-50°	1073.1	17.5
50°-60°	840.7	13.7
60°-70°	547.9	8.9
70°-80°	242.8	4.0
80°-90°	52.1	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°	2190.2	35.8
0°-40°	3366.5	55.0
0°-60°	5280.2	86.2
0°-90°	6123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6123.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3119	3119	3119	3119	3119	
5°	3065	3061	3061	3058	3058	291
15°	2867	2867	2838	2809	2798	806
25°	2484	2470	2430	2344	2279	1141
35°	2016	2001	1904	1760	1716	1260
45°	1547	1514	1385	1269	1219	1192
55°	1074	1042	945	833	790	964
65°	638	602	544	555	462	629
75°	256	238	224	213	234	274
85°	36	40	43	47	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3119.0	3119.0	3119.0	3119.0	3119.0
2.5°	3097.3	3097.3	3097.3	3093.7	3093.7
5°	3064.9	3061.3	3061.3	3057.7	3057.7
7.5°	3039.6	3036.0	3032.4	3028.8	3021.6
10°	3003.6	3003.6	3000.0	2982.0	2978.4
12.5°	2945.9	2942.3	2927.9	2902.6	2895.4
15°	2866.6	2866.6	2837.7	2808.9	2798.1
17.5°	2780.0	2776.4	2740.4	2711.5	2697.1
20°	2686.3	2679.1	2643.0	2596.1	2570.9
22.5°	2581.7	2581.7	2538.4	2477.2	2451.9
25°	2484.4	2469.9	2430.3	2343.7	2278.8
27.5°	2372.6	2350.9	2307.7	2185.1	2109.4
30°	2250.0	2239.2	2177.9	2019.2	1961.5
32.5°	2134.6	2116.6	2051.7	1885.8	1838.9
35°	2015.6	2001.2	1903.8	1759.6	1716.3
37.5°	1896.6	1878.6	1756.0	1640.6	1586.5
40°	1777.6	1756.0	1622.6	1518.0	1460.3
42.5°	1665.9	1637.0	1507.2	1395.4	1330.5
45°	1546.9	1514.4	1384.6	1269.2	1218.7
47.5°	1427.9	1399.0	1280.0	1161.1	1103.4
50°	1301.7	1276.4	1168.3	1049.3	988.0
52.5°	1197.1	1157.4	1052.9	933.9	883.4
55°	1074.5	1042.1	944.7	832.9	789.7
57.5°	962.7	930.3	840.1	735.6	699.5
60°	858.2	811.3	735.6	645.4	616.6
62.5°	742.8	706.7	641.8	566.1	602.2
65°	638.2	602.2	544.5	555.3	461.5
67.5°	522.8	504.8	454.3	403.8	389.4
70°	425.5	403.8	385.8	331.7	317.3
72.5°	338.9	317.3	292.1	263.2	252.4
75°	256.0	238.0	223.6	212.7	234.4
77.5°	176.7	169.5	158.7	147.8	144.2
80°	115.4	111.8	108.2	104.6	101.0
82.5°	68.5	68.5	68.5	68.5	68.5
85°	36.1	39.7	43.3	46.9	50.5
87.5°	21.6	21.6	25.2	28.8	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)