

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: P561712

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561712
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-12-4-LD4-2STD-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5558.0 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

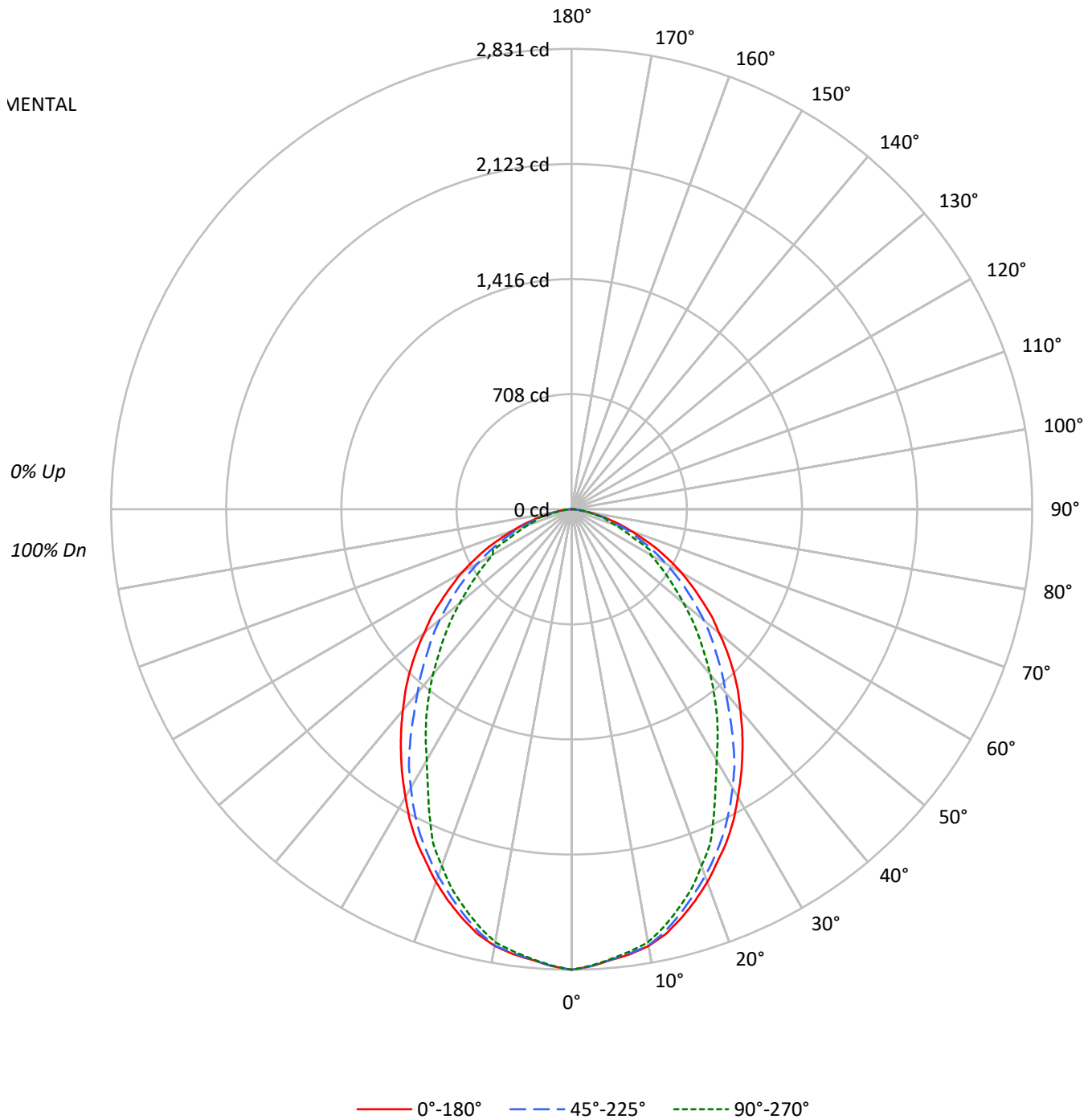
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7619	7619	7619
5°	7515	7506	7497
10°	7450	7441	7387
15°	7249	7176	7076
20°	6983	6870	6683
25°	6696	6550	6142
30°	6346	6143	5533
35°	6010	5677	5118
40°	5668	5174	4657
45°	5343	4783	4210
50°	4947	4440	3754
55°	4576	4023	3363
60°	4193	3594	3012
65°	3689	3147	2667
70°	3039	2755	2266
75°	2416	2110	2211
80°	1623	1522	1420
85°	1010	1213	1414

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5343 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.5	4.7
10°-20°	723.3	13.0
20°-30°	1001.3	18.0
30°-40°	1067.7	19.2
40°-50°	974.1	17.5
50°-60°	763.1	13.7
60°-70°	497.3	8.9
70°-80°	220.3	4.0
80°-90°	47.3	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°	1988.1	35.8
0°-40°	3055.8	55.0
0°-60°	4793.0	86.2
0°-90°	5558.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5558.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2831	2831	2831	2831	2831	
5°	2782	2779	2779	2776	2776	264
15°	2602	2602	2576	2550	2540	732
25°	2255	2242	2206	2128	2069	1035
35°	1830	1816	1728	1597	1558	1144
45°	1404	1375	1257	1152	1106	1082
55°	975	946	858	756	717	875
65°	579	547	494	504	419	571
75°	232	216	203	193	213	249
85°	33	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2831.2	2831.2	2831.2	2831.2	2831.2
2.5°	2811.5	2811.5	2811.5	2808.3	2808.3
5°	2782.1	2778.8	2778.8	2775.5	2775.5
7.5°	2759.2	2755.9	2752.6	2749.3	2742.8
10°	2726.4	2726.4	2723.2	2706.8	2703.5
12.5°	2674.1	2670.8	2657.7	2634.8	2628.2
15°	2602.1	2602.1	2575.9	2549.7	2539.9
17.5°	2523.5	2520.2	2487.5	2461.3	2448.2
20°	2438.4	2431.9	2399.1	2356.6	2333.7
22.5°	2343.5	2343.5	2304.2	2248.6	2225.7
25°	2255.1	2242.0	2206.0	2127.5	2068.6
27.5°	2153.7	2134.0	2094.7	1983.5	1914.7
30°	2042.4	2032.6	1976.9	1832.9	1780.5
32.5°	1937.6	1921.3	1862.4	1711.8	1669.2
35°	1829.6	1816.5	1728.2	1597.2	1558.0
37.5°	1721.6	1705.2	1594.0	1489.2	1440.1
40°	1613.6	1594.0	1472.9	1377.9	1325.6
42.5°	1512.1	1486.0	1368.1	1266.7	1207.7
45°	1404.1	1374.7	1256.8	1152.1	1106.3
47.5°	1296.1	1269.9	1161.9	1053.9	1001.5
50°	1181.6	1158.7	1060.5	952.5	896.8
52.5°	1086.6	1050.6	955.7	847.7	801.9
55°	975.4	945.9	857.5	756.1	716.8
57.5°	873.9	844.4	762.6	667.7	635.0
60°	779.0	736.4	667.7	585.9	559.7
62.5°	674.2	641.5	582.6	513.9	546.6
65°	579.3	546.6	494.2	504.0	418.9
67.5°	474.6	458.2	412.4	366.6	353.5
70°	386.2	366.6	350.2	301.1	288.0
72.5°	307.7	288.0	265.1	238.9	229.1
75°	232.4	216.0	202.9	193.1	212.7
77.5°	160.4	153.8	144.0	134.2	130.9
80°	104.7	101.5	98.2	94.9	91.6
82.5°	62.2	62.2	62.2	62.2	62.2
85°	32.7	36.0	39.3	42.5	45.8
87.5°	19.6	19.6	22.9	26.2	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)