

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: P562743

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562743
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-LD4-2LO-40-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

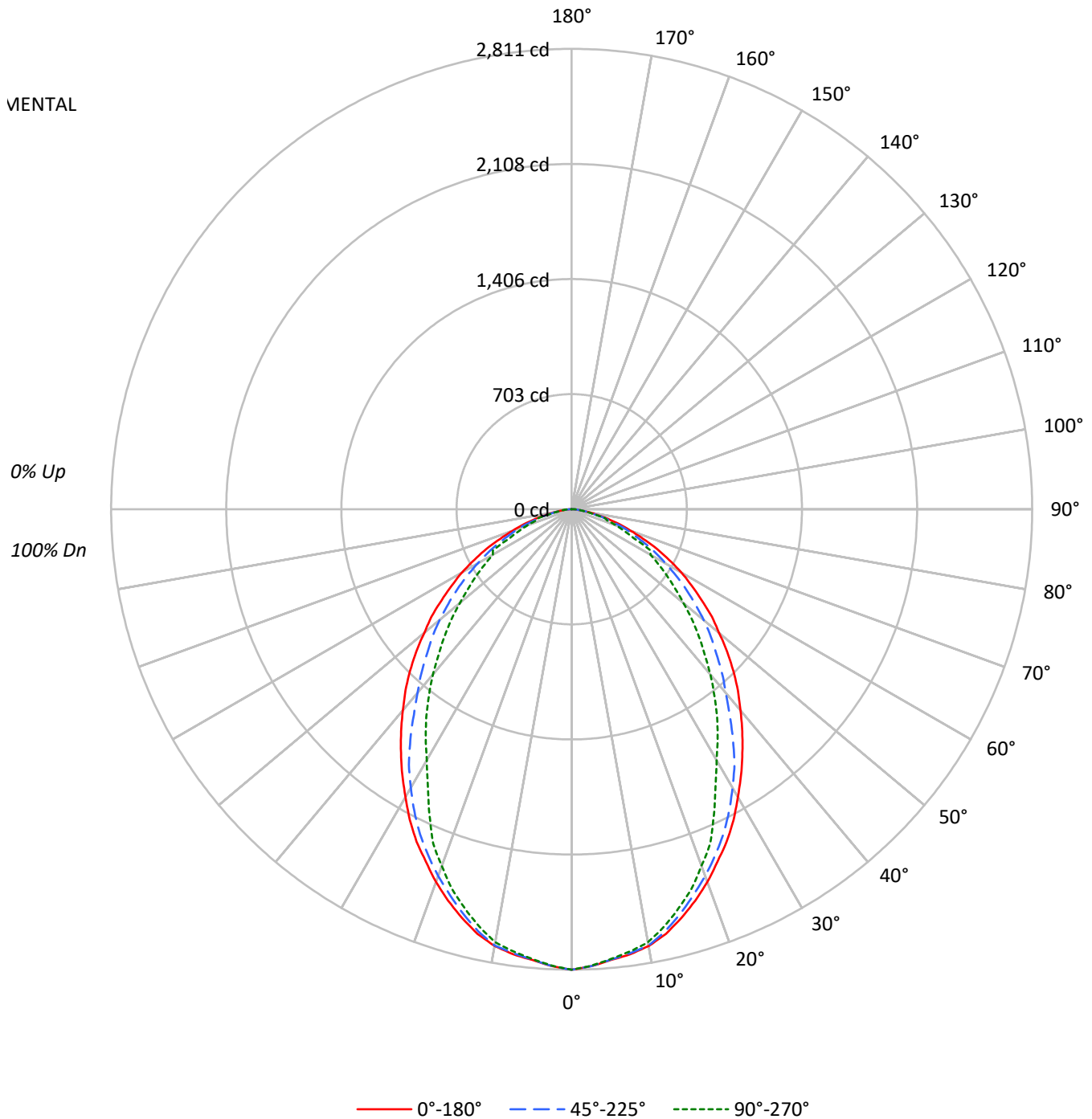
Lumens per Lamp: N/A
Luminaire Lumens: 5519.0 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3783	3783	3783
5°	3731	3727	3722
10°	3699	3694	3668
15°	3599	3563	3513
20°	3467	3411	3318
25°	3324	3252	3049
30°	3151	3050	2747
35°	2984	2819	2541
40°	2814	2569	2312
45°	2653	2375	2090
50°	2456	2204	1864
55°	2272	1997	1670
60°	2081	1784	1496
65°	1832	1563	1324
70°	1509	1368	1125
75°	1200	1048	1098
80°	806	755	705
85°	502	602	702

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2653 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.7	4.7
10°-20°	718.2	13.0
20°-30°	994.3	18.0
30°-40°	1060.2	19.2
40°-50°	967.2	17.5
50°-60°	757.7	13.7
60°-70°	493.9	8.9
70°-80°	218.8	4.0
80°-90°	47.0	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°	1974.2	35.8
0°-40°	3034.4	55.0
0°-60°	4759.4	86.2
0°-90°	5519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2811	2811	2811	2811	2811	
5°	2763	2759	2759	2756	2756	262
15°	2584	2584	2558	2532	2522	726
25°	2239	2226	2190	2112	2054	1028
35°	1817	1804	1716	1586	1547	1136
45°	1394	1365	1248	1144	1098	1074
55°	968	939	852	751	712	869
65°	575	543	491	500	416	567
75°	231	214	202	192	211	247
85°	32	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°	2811.3	2811.3	2811.3	2811.3	2811.3
2.5°	2791.8	2791.8	2791.8	2788.6	2788.6
5°	2762.6	2759.3	2759.3	2756.1	2756.1
7.5°	2739.8	2736.6	2733.3	2730.1	2723.6
10°	2707.3	2707.3	2704.1	2687.8	2684.6
12.5°	2655.3	2652.1	2639.1	2616.3	2609.8
15°	2583.8	2583.8	2557.8	2531.8	2522.0
17.5°	2505.8	2502.5	2470.0	2444.0	2431.0
20°	2421.3	2414.8	2382.3	2340.0	2317.3
22.5°	2327.0	2327.0	2288.0	2232.8	2210.0
25°	2239.3	2226.3	2190.5	2112.5	2054.0
27.5°	2138.5	2119.0	2080.0	1969.5	1901.3
30°	2028.0	2018.3	1963.0	1820.0	1768.0
32.5°	1924.0	1907.8	1849.3	1699.8	1657.5
35°	1816.8	1803.8	1716.0	1586.0	1547.0
37.5°	1709.5	1693.3	1582.8	1478.8	1430.0
40°	1602.3	1582.8	1462.5	1368.3	1316.3
42.5°	1501.5	1475.5	1358.5	1257.8	1199.3
45°	1394.3	1365.0	1248.0	1144.0	1098.5
47.5°	1287.0	1261.0	1153.8	1046.5	994.5
50°	1173.3	1150.5	1053.0	945.8	890.5
52.5°	1079.0	1043.3	949.0	841.8	796.3
55°	968.5	939.3	851.5	750.8	711.8
57.5°	867.8	838.5	757.3	663.0	630.5
60°	773.5	731.3	663.0	581.8	555.8
62.5°	669.5	637.0	578.5	510.3	542.8
65°	575.3	542.8	490.8	500.5	416.0
67.5°	471.3	455.0	409.5	364.0	351.0
70°	383.5	364.0	347.8	299.0	286.0
72.5°	305.5	286.0	263.3	237.3	227.5
75°	230.8	214.5	201.5	191.8	211.3
77.5°	159.3	152.8	143.0	133.3	130.0
80°	104.0	100.8	97.5	94.3	91.0
82.5°	61.8	61.8	61.8	61.8	61.8
85°	32.5	35.8	39.0	42.3	45.5
87.5°	19.5	19.5	22.8	26.0	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)