

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: P590428

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590428
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3HI-35-UNV-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6862.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

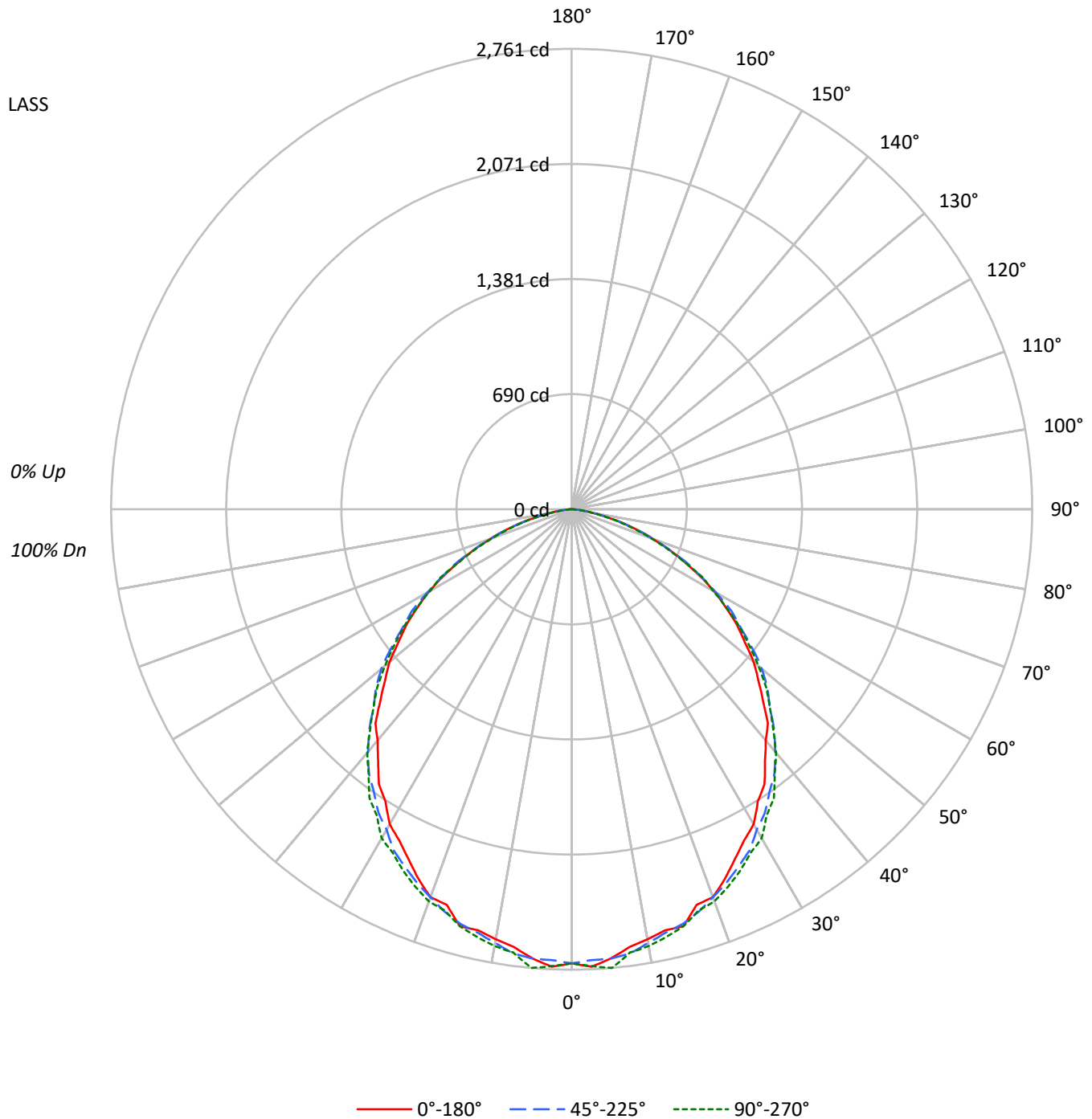
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7327	7327	7327
5°	7302	7305	7459
10°	7154	7217	7268
15°	7211	7172	7212
20°	7089	7089	7165
25°	6871	7021	7099
30°	6777	6896	7079
35°	6617	6790	6943
40°	6360	6666	6695
45°	6167	6387	6396
50°	5965	6234	6115
55°	5683	5794	5753
60°	5315	5367	5271
65°	4739	4860	4705
70°	4066	4080	3966
75°	3220	3213	3089
80°	2157	2097	2016
85°	1173	1161	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6551 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.1	3.7
10°-20°	725.8	10.6
20°-30°	1087.5	15.8
30°-40°	1288.9	18.8
40°-50°	1291.2	18.8
50°-60°	1096.1	16.0
60°-70°	739.0	10.8
70°-80°	324.7	4.7
80°-90°	52.8	0.8
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°	2069.4	30.2
0°-40°	3358.3	48.9
0°-60°	5745.6	83.7
0°-90°	6862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2723	2723	2723	2723	2723	
5°	2703	2697	2704	2696	2761	255
15°	2588	2558	2574	2588	2589	721
25°	2314	2327	2365	2396	2391	1070
35°	2014	2020	2067	2115	2114	1251
45°	1621	1651	1678	1722	1681	1254
55°	1211	1203	1235	1226	1226	1078
65°	744	734	763	734	739	740
75°	310	303	309	287	297	332
85°	38	37	38	37	35	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2722.7	2722.7	2722.7	2722.7	2722.7
2.5°	2746.2	2725.5	2706.1	2728.6	2742.4
5°	2703.3	2697.0	2704.4	2696.3	2761.3
7.5°	2647.8	2672.0	2686.1	2677.3	2681.2
10°	2618.3	2609.8	2641.1	2662.9	2659.7
12.5°	2586.6	2599.3	2601.0	2624.6	2626.7
15°	2588.4	2558.5	2574.3	2587.7	2588.7
17.5°	2487.8	2520.2	2531.1	2561.7	2523.7
20°	2475.5	2452.0	2475.5	2506.8	2501.9
22.5°	2400.0	2373.6	2424.2	2452.0	2450.2
25°	2314.2	2326.8	2364.8	2395.7	2390.8
27.5°	2239.0	2253.7	2307.9	2350.4	2323.0
30°	2180.9	2173.6	2219.3	2257.2	2278.3
32.5°	2077.2	2104.0	2157.4	2195.0	2175.0
35°	2014.3	2020.3	2067.0	2114.9	2113.5
37.5°	1904.3	1932.1	1997.8	2011.2	1998.8
40°	1810.4	1838.2	1897.6	1912.0	1906.0
42.5°	1741.2	1746.1	1797.1	1813.6	1787.2
45°	1620.6	1650.8	1678.2	1721.5	1680.7
47.5°	1517.9	1532.0	1591.1	1602.7	1581.2
50°	1424.8	1429.7	1489.1	1474.7	1460.6
52.5°	1307.7	1328.5	1361.9	1359.0	1342.5
55°	1211.4	1203.3	1235.0	1226.5	1226.2
57.5°	1095.7	1109.8	1135.8	1122.5	1101.0
60°	987.5	987.8	997.3	982.2	979.4
62.5°	866.9	871.1	873.2	854.6	884.8
65°	744.2	734.4	763.2	734.0	738.9
67.5°	631.4	636.3	633.5	615.2	622.2
70°	516.8	523.1	518.5	497.8	504.1
72.5°	412.0	404.3	409.2	383.2	395.1
75°	309.7	303.4	309.0	287.2	297.1
77.5°	210.9	215.8	212.3	200.7	207.4
80°	139.2	135.3	135.3	128.7	130.1
82.5°	81.2	77.3	76.3	74.2	77.3
85°	38.0	36.9	37.6	36.6	35.2
87.5°	13.7	14.1	14.1	13.4	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)