

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: P590494

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590494
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-50-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6867.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

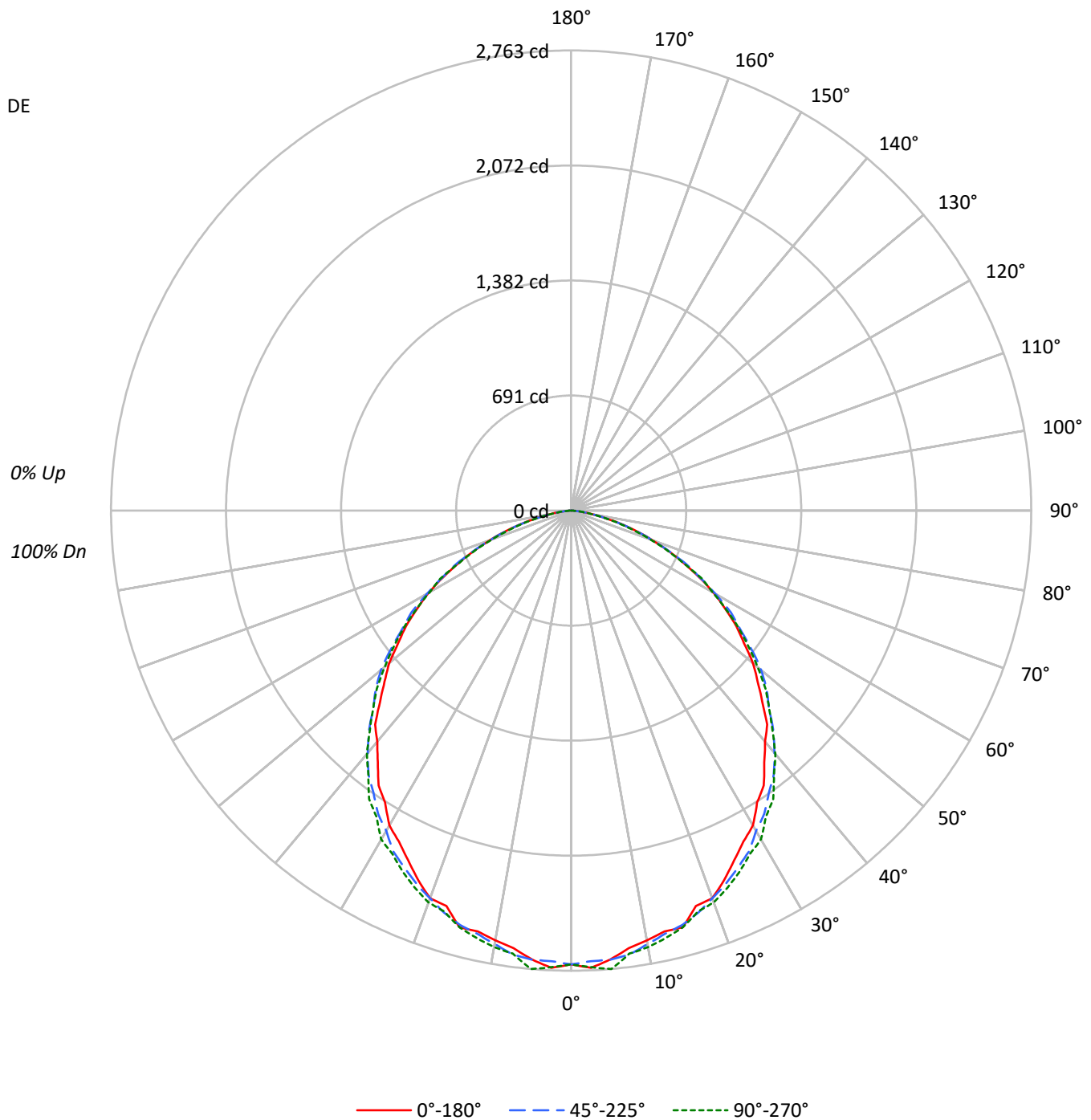
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7332	7332	7332
5°	7308	7311	7464
10°	7160	7222	7273
15°	7216	7177	7217
20°	7094	7094	7170
25°	6876	7027	7104
30°	6782	6901	7085
35°	6622	6796	6948
40°	6364	6671	6700
45°	6172	6392	6401
50°	5969	6239	6119
55°	5688	5798	5757
60°	5318	5371	5275
65°	4742	4863	4709
70°	4068	4083	3969
75°	3222	3215	3091
80°	2159	2098	2018
85°	1173	1161	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6556 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.3	3.7
10°-20°	726.4	10.6
20°-30°	1088.3	15.8
30°-40°	1289.8	18.8
40°-50°	1292.2	18.8
50°-60°	1096.8	16.0
60°-70°	739.5	10.8
70°-80°	324.9	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°	2070.9	30.2
0°-40°	3360.7	48.9
0°-60°	5749.8	83.7
0°-90°	6867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2725	2725	2725	2725	2725	
5°	2705	2699	2706	2698	2763	255
15°	2590	2560	2576	2590	2591	722
25°	2316	2328	2366	2398	2393	1071
35°	2016	2022	2069	2116	2115	1252
45°	1622	1652	1680	1723	1682	1255
55°	1212	1204	1236	1227	1227	1078
65°	745	735	764	734	740	741
75°	310	304	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°	2724.7	2724.7	2724.7	2724.7	2724.7
2.5°	2748.2	2727.5	2708.1	2730.6	2744.4
5°	2705.3	2699.0	2706.4	2698.3	2763.3
7.5°	2649.7	2674.0	2688.1	2679.3	2683.1
10°	2620.2	2611.7	2643.0	2664.8	2661.7
12.5°	2588.5	2601.2	2602.9	2626.5	2628.6
15°	2590.3	2560.4	2576.2	2589.6	2590.6
17.5°	2489.7	2522.0	2532.9	2563.5	2525.5
20°	2477.3	2453.8	2477.3	2508.7	2503.7
22.5°	2401.7	2375.3	2426.0	2453.8	2452.0
25°	2315.9	2328.5	2366.5	2397.5	2392.6
27.5°	2240.6	2255.4	2309.5	2352.1	2324.7
30°	2182.5	2175.1	2220.9	2258.9	2280.0
32.5°	2078.8	2105.5	2159.0	2196.6	2176.6
35°	2015.8	2021.8	2068.6	2116.4	2115.0
37.5°	1905.7	1933.5	1999.3	2012.6	2000.3
40°	1811.7	1839.5	1899.0	1913.4	1907.4
42.5°	1742.4	1747.4	1798.4	1814.9	1788.5
45°	1621.8	1652.0	1679.5	1722.7	1681.9
47.5°	1519.1	1533.1	1592.2	1603.8	1582.4
50°	1425.8	1430.8	1490.2	1475.8	1461.7
52.5°	1308.7	1329.4	1362.9	1360.0	1343.5
55°	1212.3	1204.2	1235.9	1227.4	1227.1
57.5°	1096.5	1110.6	1136.6	1123.3	1101.8
60°	988.2	988.5	998.0	982.9	980.1
62.5°	867.5	871.7	873.9	855.2	885.5
65°	744.7	734.9	763.7	734.5	739.5
67.5°	631.8	636.7	633.9	615.6	622.7
70°	517.1	523.5	518.9	498.1	504.5
72.5°	412.3	404.6	409.5	383.5	395.4
75°	309.9	303.6	309.2	287.4	297.3
77.5°	211.1	216.0	212.5	200.9	207.6
80°	139.3	135.4	135.4	128.8	130.2
82.5°	81.3	77.4	76.3	74.2	77.4
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)