

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: P590466

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590466
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-40-UNV-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6905.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

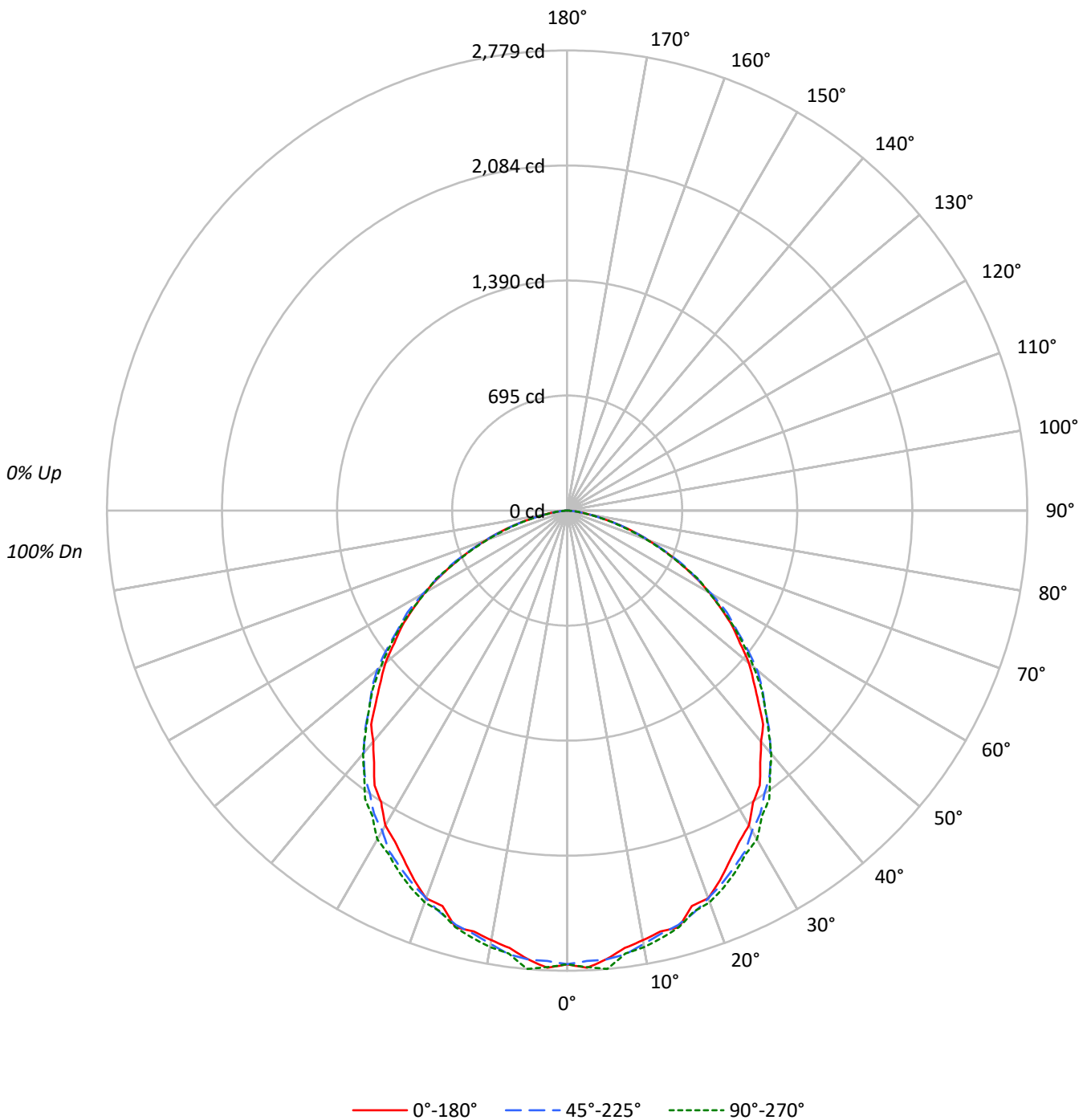
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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					86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7372	7372	7372
5°	7348	7351	7506
10°	7199	7262	7313
15°	7256	7217	7257
20°	7133	7133	7210
25°	6914	7065	7143
30°	6819	6939	7124
35°	6659	6833	6986
40°	6400	6708	6738
45°	6206	6427	6436
50°	6002	6273	6153
55°	5719	5830	5789
60°	5348	5401	5304
65°	4769	4890	4735
70°	4091	4105	3991
75°	3240	3232	3108
80°	2171	2111	2029
85°	1179	1170	1093

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6592 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.7	3.7
10°-20°	730.4	10.6
20°-30°	1094.3	15.8
30°-40°	1296.9	18.8
40°-50°	1299.3	18.8
50°-60°	1102.9	16.0
60°-70°	743.6	10.8
70°-80°	326.7	4.7
80°-90°	53.1	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°	2082.4	30.2
0°-40°	3379.3	48.9
0°-60°	5781.6	83.7
0°-90°	6905.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6905.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2740	2740	2740	2740	2740	
5°	2720	2714	2721	2713	2779	256
15°	2605	2574	2590	2604	2605	726
25°	2329	2341	2380	2411	2406	1077
35°	2027	2033	2080	2128	2127	1258
45°	1631	1661	1689	1732	1691	1261
55°	1219	1211	1243	1234	1234	1084
65°	749	739	768	739	744	745
75°	312	305	311	289	299	334
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°	2739.7	2739.7	2739.7	2739.7	2739.7
2.5°	2763.4	2742.6	2723.1	2745.7	2759.5
5°	2720.3	2713.9	2721.3	2713.2	2778.6
7.5°	2664.4	2688.8	2702.9	2694.1	2698.0
10°	2634.7	2626.2	2657.7	2679.6	2676.4
12.5°	2602.8	2615.6	2617.3	2641.0	2643.2
15°	2604.6	2574.5	2590.5	2603.9	2605.0
17.5°	2503.4	2536.0	2546.9	2577.7	2539.5
20°	2491.0	2467.3	2491.0	2522.5	2517.6
22.5°	2415.0	2388.5	2439.4	2467.3	2465.6
25°	2328.7	2341.4	2379.6	2410.7	2405.8
27.5°	2253.0	2267.8	2322.3	2365.1	2337.5
30°	2194.6	2187.2	2233.2	2271.4	2292.6
32.5°	2090.3	2117.1	2170.9	2208.8	2188.6
35°	2026.9	2033.0	2080.0	2128.1	2126.7
37.5°	1916.2	1944.2	2010.3	2023.8	2011.4
40°	1821.8	1849.7	1909.5	1924.0	1918.0
42.5°	1752.1	1757.0	1808.3	1825.0	1798.4
45°	1630.7	1661.2	1688.8	1732.3	1691.2
47.5°	1527.5	1541.6	1601.0	1612.7	1591.1
50°	1433.7	1438.7	1498.4	1483.9	1469.8
52.5°	1315.9	1336.8	1370.4	1367.6	1350.9
55°	1219.0	1210.9	1242.7	1234.2	1233.9
57.5°	1102.6	1116.8	1142.9	1129.5	1107.9
60°	993.7	994.0	1003.6	988.4	985.5
62.5°	872.3	876.6	878.7	859.9	890.4
65°	748.9	739.0	768.0	738.6	743.6
67.5°	635.3	640.3	637.4	619.0	626.1
70°	520.0	526.4	521.8	500.9	507.3
72.5°	414.6	406.8	411.8	385.6	397.6
75°	311.6	305.3	310.9	289.0	298.9
77.5°	212.2	217.2	213.7	202.0	208.7
80°	140.1	136.2	136.2	129.5	130.9
82.5°	81.7	77.8	76.8	74.6	77.8
85°	38.2	37.1	37.9	36.8	35.4
87.5°	13.8	14.1	14.1	13.4	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)