

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: P590866

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590866
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-LD4-4LO-40-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5912.0 lumens
Efficiency: N/A
Efficacy: 126.3 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

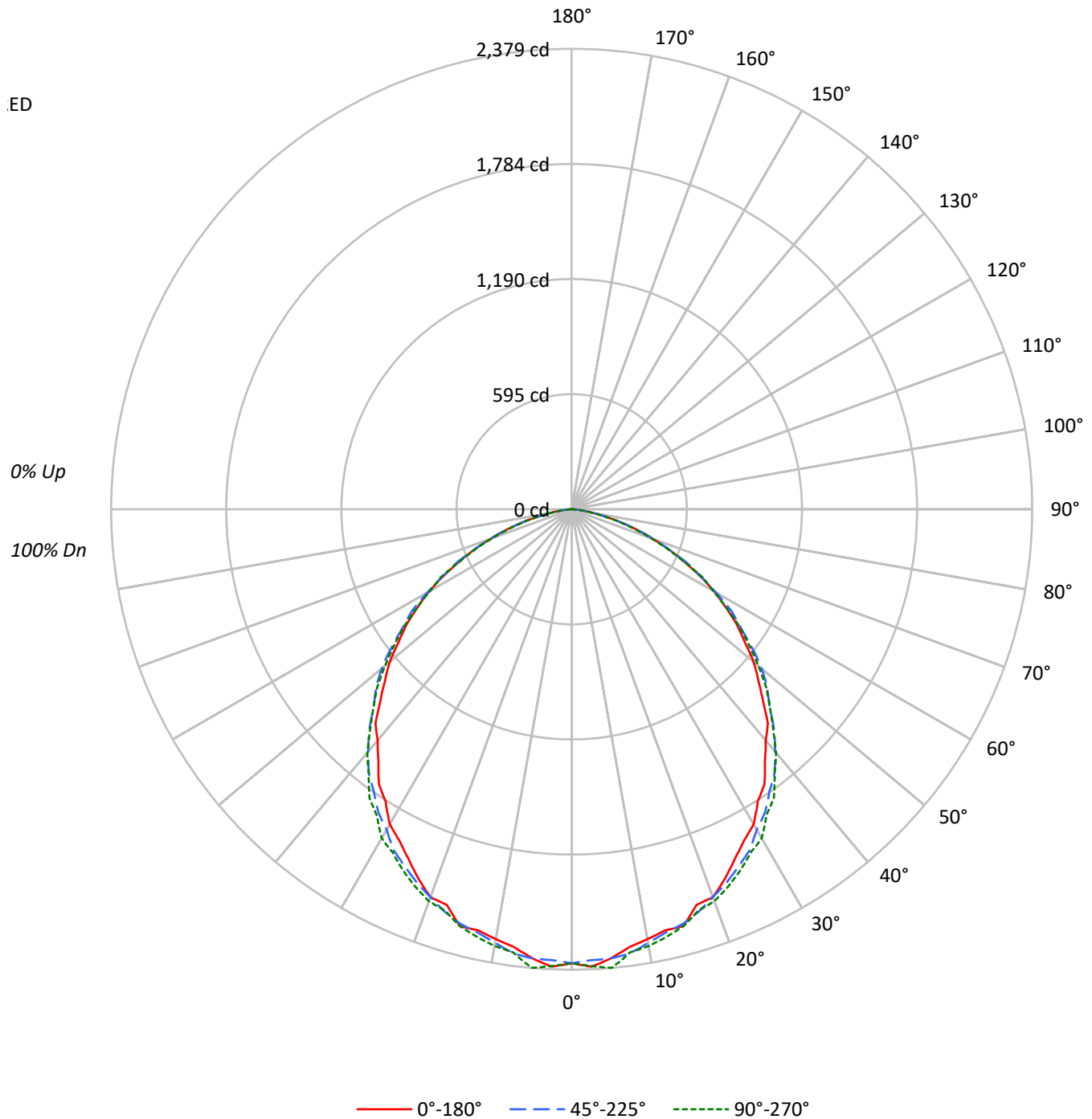
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6312	6312	6312
5°	6291	6294	6426
10°	6164	6218	6262
15°	6213	6179	6213
20°	6108	6108	6173
25°	5920	6049	6116
30°	5839	5941	6099
35°	5701	5850	5982
40°	5479	5743	5769
45°	5313	5503	5511
50°	5139	5371	5268
55°	4897	4992	4956
60°	4579	4624	4541
65°	4083	4187	4053
70°	3503	3515	3417
75°	2774	2768	2661
80°	1858	1807	1737
85°	1010	1000	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.7	3.7
10°-20°	625.3	10.6
20°-30°	936.9	15.8
30°-40°	1110.4	18.8
40°-50°	1112.5	18.8
50°-60°	944.3	16.0
60°-70°	636.7	10.8
70°-80°	279.7	4.7
80°-90°	45.5	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°	1782.9	30.2
0°-40°	2893.3	48.9
0°-60°	4950.1	83.7
0°-90°	5912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2346	2346	2346	2346	2346	
5°	2329	2324	2330	2323	2379	220
15°	2230	2204	2218	2229	2230	621
25°	1994	2005	2037	2064	2060	922
35°	1735	1741	1781	1822	1821	1078
45°	1396	1422	1446	1483	1448	1080
55°	1044	1037	1064	1057	1056	928
65°	641	633	658	632	637	638
75°	267	261	266	247	256	286
85°	33	32	32	32	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2345.7	2345.7	2345.7	2345.7	2345.7
2.5°	2366.0	2348.2	2331.5	2350.9	2362.7
5°	2329.1	2323.6	2330.0	2323.0	2379.0
7.5°	2281.2	2302.1	2314.2	2306.7	2310.0
10°	2255.8	2248.5	2275.5	2294.2	2291.5
12.5°	2228.5	2239.4	2240.9	2261.2	2263.0
15°	2230.0	2204.3	2217.9	2229.4	2230.3
17.5°	2143.4	2171.3	2180.7	2207.0	2174.3
20°	2132.8	2112.5	2132.8	2159.8	2155.5
22.5°	2067.7	2045.0	2088.6	2112.5	2111.0
25°	1993.8	2004.7	2037.4	2064.1	2059.8
27.5°	1929.0	1941.7	1988.3	2025.0	2001.4
30°	1879.0	1872.6	1912.0	1944.7	1962.9
32.5°	1789.7	1812.7	1858.7	1891.1	1873.9
35°	1735.4	1740.6	1780.9	1822.1	1820.9
37.5°	1640.6	1664.6	1721.2	1732.7	1722.1
40°	1559.8	1583.7	1634.9	1647.3	1642.2
42.5°	1500.1	1504.4	1548.3	1562.5	1539.8
45°	1396.2	1422.3	1445.9	1483.2	1448.0
47.5°	1307.8	1319.9	1370.8	1380.8	1362.3
50°	1227.5	1231.8	1283.0	1270.5	1258.4
52.5°	1126.7	1144.5	1173.3	1170.9	1156.7
55°	1043.7	1036.7	1064.0	1056.7	1056.4
57.5°	944.0	956.2	978.6	967.1	948.6
60°	850.8	851.1	859.2	846.2	843.8
62.5°	746.9	750.5	752.3	736.3	762.3
65°	641.2	632.7	657.5	632.4	636.6
67.5°	544.0	548.2	545.8	530.0	536.1
70°	445.2	450.7	446.7	428.9	434.3
72.5°	355.0	348.3	352.5	330.1	340.4
75°	266.8	261.4	266.2	247.4	255.9
77.5°	181.7	186.0	182.9	172.9	178.7
80°	119.9	116.6	116.6	110.9	112.1
82.5°	70.0	66.6	65.7	63.9	66.6
85°	32.7	31.8	32.4	31.5	30.3
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)