

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: P590867

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590867
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-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 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: 5846.0 lumens
Efficiency: N/A
Efficacy: 124.9 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

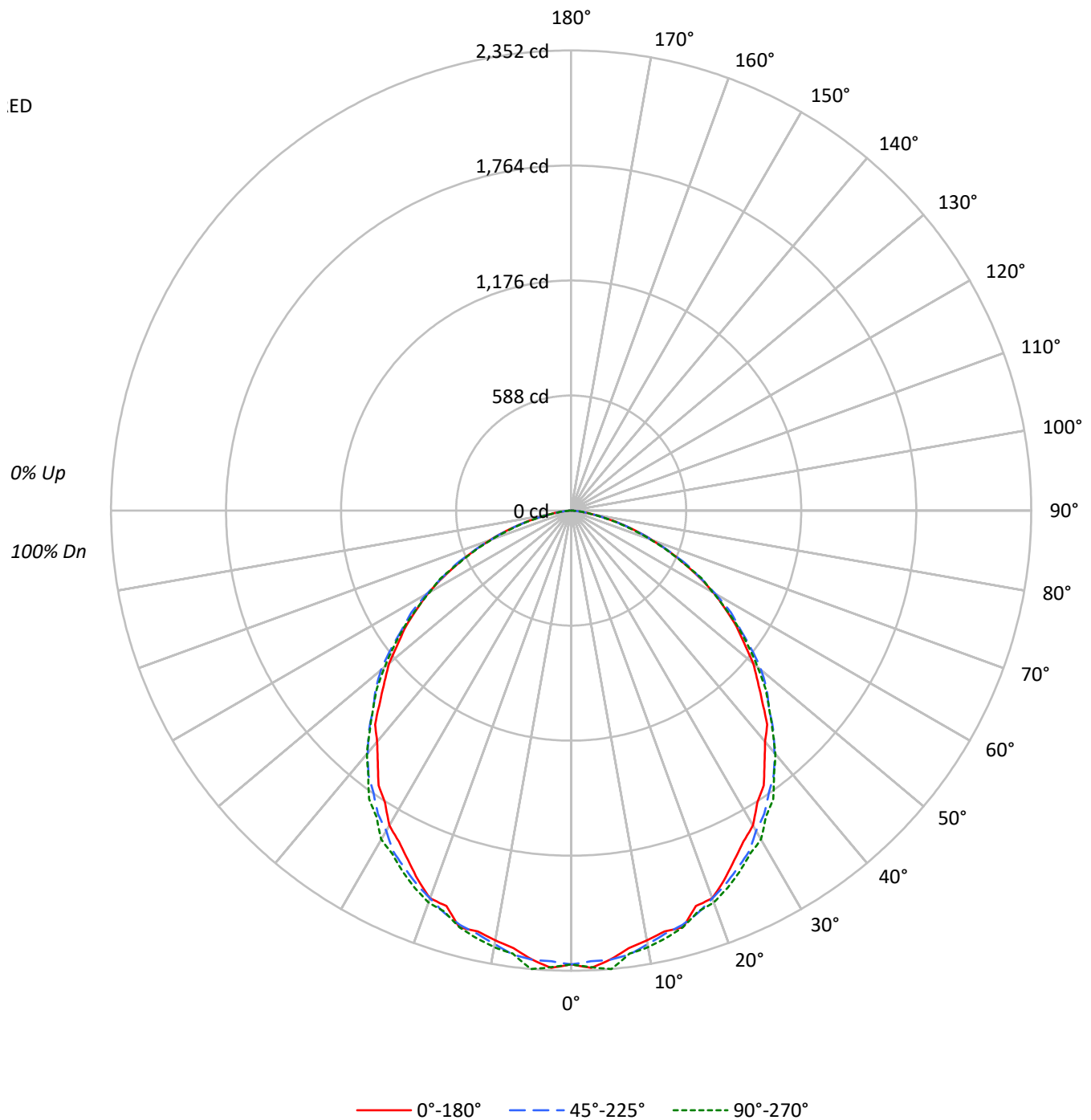
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
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°	6242	6242	6242
5°	6221	6224	6355
10°	6095	6148	6192
15°	6143	6110	6144
20°	6040	6040	6104
25°	5854	5982	6048
30°	5773	5875	6031
35°	5638	5785	5915
40°	5418	5679	5704
45°	5254	5441	5449
50°	5081	5311	5210
55°	4842	4936	4901
60°	4528	4573	4491
65°	4037	4140	4008
70°	3463	3475	3379
75°	2744	2738	2632
80°	1838	1787	1717
85°	997	988	923

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5581 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.2	3.7
10°-20°	618.4	10.6
20°-30°	926.4	15.8
30°-40°	1098.0	18.8
40°-50°	1100.1	18.8
50°-60°	933.8	16.0
60°-70°	629.5	10.8
70°-80°	276.6	4.7
80°-90°	44.9	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°	1763.0	30.2
0°-40°	2861.0	48.9
0°-60°	4894.9	83.7
0°-90°	5846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2320	2320	2320	2320	2320	
5°	2303	2298	2304	2297	2352	217
15°	2205	2180	2193	2204	2205	614
25°	1972	1982	2015	2041	2037	911
35°	1716	1721	1761	1802	1800	1065
45°	1381	1406	1430	1467	1432	1068
55°	1032	1025	1052	1045	1045	918
65°	634	626	650	625	630	631
75°	264	258	263	245	253	283
85°	32	31	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2319.5	2319.5	2319.5	2319.5	2319.5
2.5°	2339.6	2321.9	2305.5	2324.6	2336.3
5°	2303.1	2297.7	2304.0	2297.1	2352.5
7.5°	2255.8	2276.4	2288.4	2280.9	2284.2
10°	2230.6	2223.4	2250.1	2268.6	2265.9
12.5°	2203.6	2214.4	2215.9	2236.0	2237.8
15°	2205.1	2179.7	2193.2	2204.5	2205.4
17.5°	2119.5	2147.0	2156.3	2182.4	2150.0
20°	2109.0	2088.9	2109.0	2135.7	2131.5
22.5°	2044.6	2022.2	2065.3	2088.9	2087.4
25°	1971.5	1982.3	2014.7	2041.0	2036.8
27.5°	1907.4	1920.0	1966.1	2002.4	1979.0
30°	1858.0	1851.7	1890.7	1923.0	1941.0
32.5°	1769.7	1792.4	1838.0	1870.0	1852.9
35°	1716.1	1721.2	1761.0	1801.7	1800.5
37.5°	1622.3	1646.0	1702.0	1713.4	1702.9
40°	1542.4	1566.0	1616.6	1628.9	1623.8
42.5°	1483.4	1487.6	1531.0	1545.1	1522.6
45°	1380.6	1406.4	1429.8	1466.6	1431.9
47.5°	1293.2	1305.2	1355.5	1365.4	1347.1
50°	1213.8	1218.0	1268.6	1256.4	1244.4
52.5°	1114.1	1131.8	1160.2	1157.8	1143.7
55°	1032.0	1025.2	1052.1	1044.9	1044.6
57.5°	933.5	945.5	967.7	956.3	938.0
60°	841.3	841.6	849.7	836.8	834.4
62.5°	738.5	742.1	743.9	728.1	753.8
65°	634.0	625.6	650.2	625.3	629.5
67.5°	537.9	542.1	539.7	524.1	530.1
70°	440.2	445.6	441.7	424.1	429.5
72.5°	351.0	344.4	348.6	326.4	336.6
75°	263.9	258.5	263.3	244.7	253.1
77.5°	179.7	183.9	180.9	171.0	176.7
80°	118.6	115.3	115.3	109.6	110.8
82.5°	69.2	65.9	65.0	63.2	65.9
85°	32.3	31.4	32.0	31.1	29.9
87.5°	11.7	12.0	12.0	11.4	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)