

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: P590843

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590843
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-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

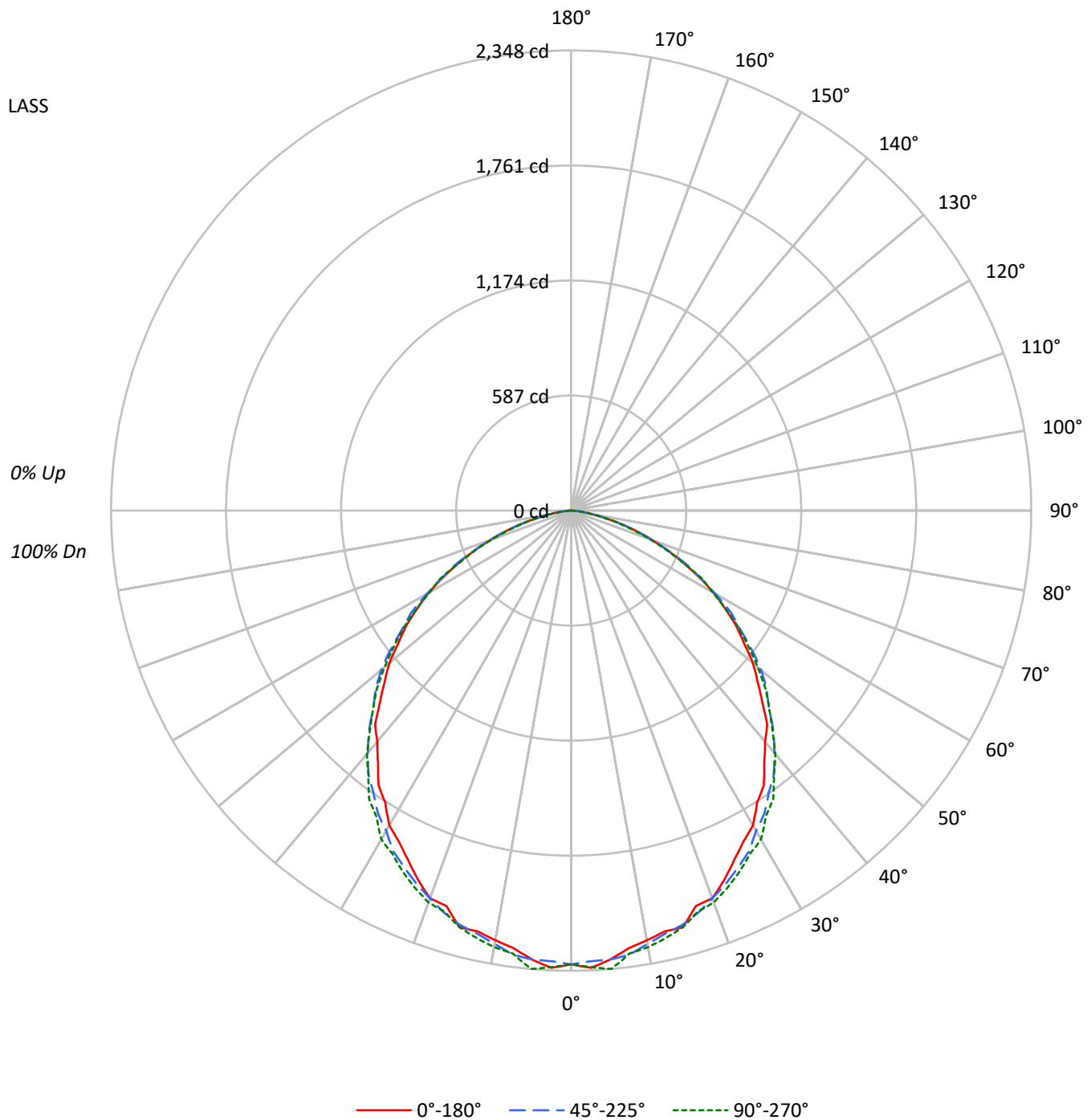
Lumens per Lamp: N/A
Luminaire Lumens: 5835.0 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6230	6230	6230
5°	6209	6212	6343
10°	6084	6137	6180
15°	6132	6098	6133
20°	6028	6028	6092
25°	5843	5971	6036
30°	5762	5864	6020
35°	5627	5774	5904
40°	5408	5668	5694
45°	5244	5431	5439
50°	5072	5301	5200
55°	4833	4927	4892
60°	4519	4564	4482
65°	4029	4132	4001
70°	3457	3469	3373
75°	2739	2732	2626
80°	1835	1784	1714
85°	997	988	923

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5571 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.8	3.7
10°-20°	617.2	10.6
20°-30°	924.7	15.8
30°-40°	1096.0	18.8
40°-50°	1098.0	18.8
50°-60°	932.0	16.0
60°-70°	628.4	10.8
70°-80°	276.1	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°	1759.7	30.2
0°-40°	2855.7	48.9
0°-60°	4885.7	83.7
0°-90°	5835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5835.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2315	2315	2315	2315	2315	
5°	2299	2293	2300	2293	2348	217
15°	2201	2176	2189	2200	2201	613
25°	1968	1979	2011	2037	2033	910
35°	1713	1718	1758	1798	1797	1063
45°	1378	1404	1427	1464	1429	1066
55°	1030	1023	1050	1043	1043	916
65°	633	624	649	624	628	629
75°	263	258	263	244	253	282
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°	2315.2	2315.2	2315.2	2315.2	2315.2
2.5°	2335.2	2317.6	2301.1	2320.3	2331.9
5°	2298.7	2293.4	2299.6	2292.8	2348.1
7.5°	2251.5	2272.1	2284.1	2276.6	2279.9
10°	2226.4	2219.2	2245.8	2264.4	2261.7
12.5°	2199.5	2210.3	2211.8	2231.8	2233.6
15°	2201.0	2175.6	2189.0	2200.4	2201.3
17.5°	2115.5	2143.0	2152.3	2178.3	2146.0
20°	2105.0	2085.0	2105.0	2131.6	2127.5
22.5°	2040.8	2018.3	2061.4	2085.0	2083.5
25°	1967.8	1978.6	2010.9	2037.2	2033.0
27.5°	1903.9	1916.4	1962.4	1998.6	1975.3
30°	1854.5	1848.3	1887.1	1919.4	1937.3
32.5°	1766.4	1789.1	1834.5	1866.5	1849.5
35°	1712.8	1717.9	1757.7	1798.3	1797.1
37.5°	1619.3	1642.9	1698.8	1710.2	1699.7
40°	1539.5	1563.1	1613.6	1625.9	1620.8
42.5°	1480.6	1484.8	1528.1	1542.2	1519.7
45°	1378.0	1403.8	1427.1	1463.8	1429.2
47.5°	1290.8	1302.7	1352.9	1362.8	1344.6
50°	1211.5	1215.7	1266.2	1254.0	1242.0
52.5°	1112.0	1129.6	1158.0	1155.6	1141.6
55°	1030.1	1023.2	1050.1	1043.0	1042.7
57.5°	931.8	943.7	965.8	954.5	936.2
60°	839.7	840.0	848.1	835.2	832.8
62.5°	737.2	740.7	742.5	726.7	752.4
65°	632.8	624.5	649.0	624.2	628.3
67.5°	536.9	541.1	538.7	523.1	529.1
70°	439.4	444.8	440.9	423.3	428.7
72.5°	350.3	343.8	347.9	325.8	336.0
75°	263.4	258.0	262.8	244.2	252.6
77.5°	179.4	183.5	180.6	170.7	176.4
80°	118.4	115.1	115.1	109.4	110.6
82.5°	69.1	65.8	64.9	63.1	65.8
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)