

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: P590810

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590810
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-35-UNV-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

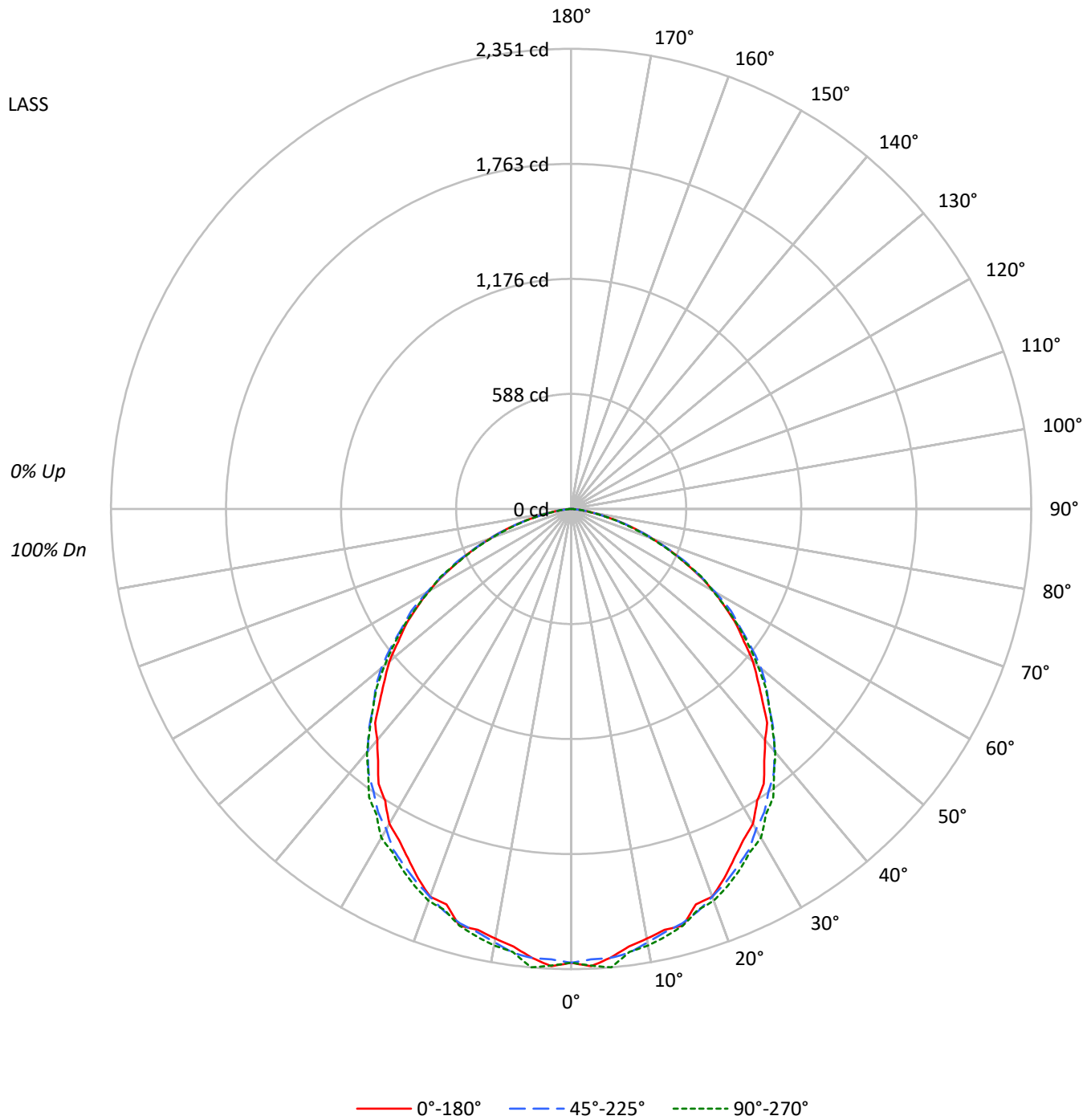
Lumens per Lamp: N/A
Luminaire Lumens: 5842.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6238	6238	6238
5°	6217	6219	6350
10°	6091	6144	6187
15°	6139	6106	6140
20°	6035	6035	6100
25°	5850	5978	6043
30°	5770	5871	6027
35°	5634	5781	5911
40°	5414	5675	5700
45°	5251	5437	5445
50°	5078	5308	5206
55°	4838	4933	4898
60°	4525	4570	4487
65°	4034	4137	4006
70°	3461	3473	3377
75°	2742	2735	2629
80°	1836	1785	1715
85°	997	988	923

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5578 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.0	3.7
10°-20°	617.9	10.6
20°-30°	925.8	15.8
30°-40°	1097.3	18.8
40°-50°	1099.3	18.8
50°-60°	933.1	16.0
60°-70°	629.1	10.8
70°-80°	276.4	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°	1761.8	30.2
0°-40°	2859.1	48.9
0°-60°	4891.5	83.7
0°-90°	5842.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5842.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2318	2318	2318	2318	2318	
5°	2302	2296	2302	2296	2351	217
15°	2204	2178	2192	2203	2204	614
25°	1970	1981	2013	2040	2035	911
35°	1715	1720	1760	1800	1799	1065
45°	1380	1405	1429	1466	1431	1067
55°	1031	1024	1051	1044	1044	917
65°	634	625	650	625	629	630
75°	264	258	263	244	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°	2318.0	2318.0	2318.0	2318.0	2318.0
2.5°	2338.0	2320.4	2303.9	2323.0	2334.7
5°	2301.5	2296.1	2302.4	2295.5	2350.9
7.5°	2254.2	2274.9	2286.8	2279.4	2282.6
10°	2229.1	2221.9	2248.5	2267.1	2264.4
12.5°	2202.1	2212.9	2214.4	2234.5	2236.3
15°	2203.6	2178.2	2191.7	2203.0	2203.9
17.5°	2118.0	2145.6	2154.8	2180.9	2148.6
20°	2107.6	2087.5	2107.6	2134.2	2130.0
22.5°	2043.2	2020.8	2063.9	2087.5	2086.0
25°	1970.2	1981.0	2013.3	2039.6	2035.4
27.5°	1906.1	1918.7	1964.8	2001.0	1977.7
30°	1856.8	1850.5	1889.4	1921.7	1939.7
32.5°	1768.5	1791.2	1836.7	1868.7	1851.7
35°	1714.9	1720.0	1759.8	1800.5	1799.3
37.5°	1621.2	1644.9	1700.8	1712.2	1701.7
40°	1541.3	1565.0	1615.5	1627.8	1622.7
42.5°	1482.4	1486.5	1529.9	1544.0	1521.6
45°	1379.7	1405.4	1428.8	1465.6	1430.9
47.5°	1292.3	1304.3	1354.6	1364.4	1346.2
50°	1213.0	1217.2	1267.8	1255.5	1243.5
52.5°	1113.3	1131.0	1159.4	1157.0	1143.0
55°	1031.3	1024.5	1051.4	1044.2	1043.9
57.5°	932.9	944.8	967.0	955.6	937.4
60°	840.7	841.0	849.1	836.2	833.8
62.5°	738.0	741.6	743.4	727.6	753.3
65°	633.6	625.2	649.7	624.9	629.1
67.5°	537.5	541.7	539.3	523.7	529.7
70°	439.9	445.3	441.4	423.8	429.2
72.5°	350.8	344.2	348.4	326.2	336.4
75°	263.7	258.3	263.1	244.5	252.9
77.5°	179.6	183.8	180.8	170.9	176.6
80°	118.5	115.2	115.2	109.5	110.7
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)