

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: P590834

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590834
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

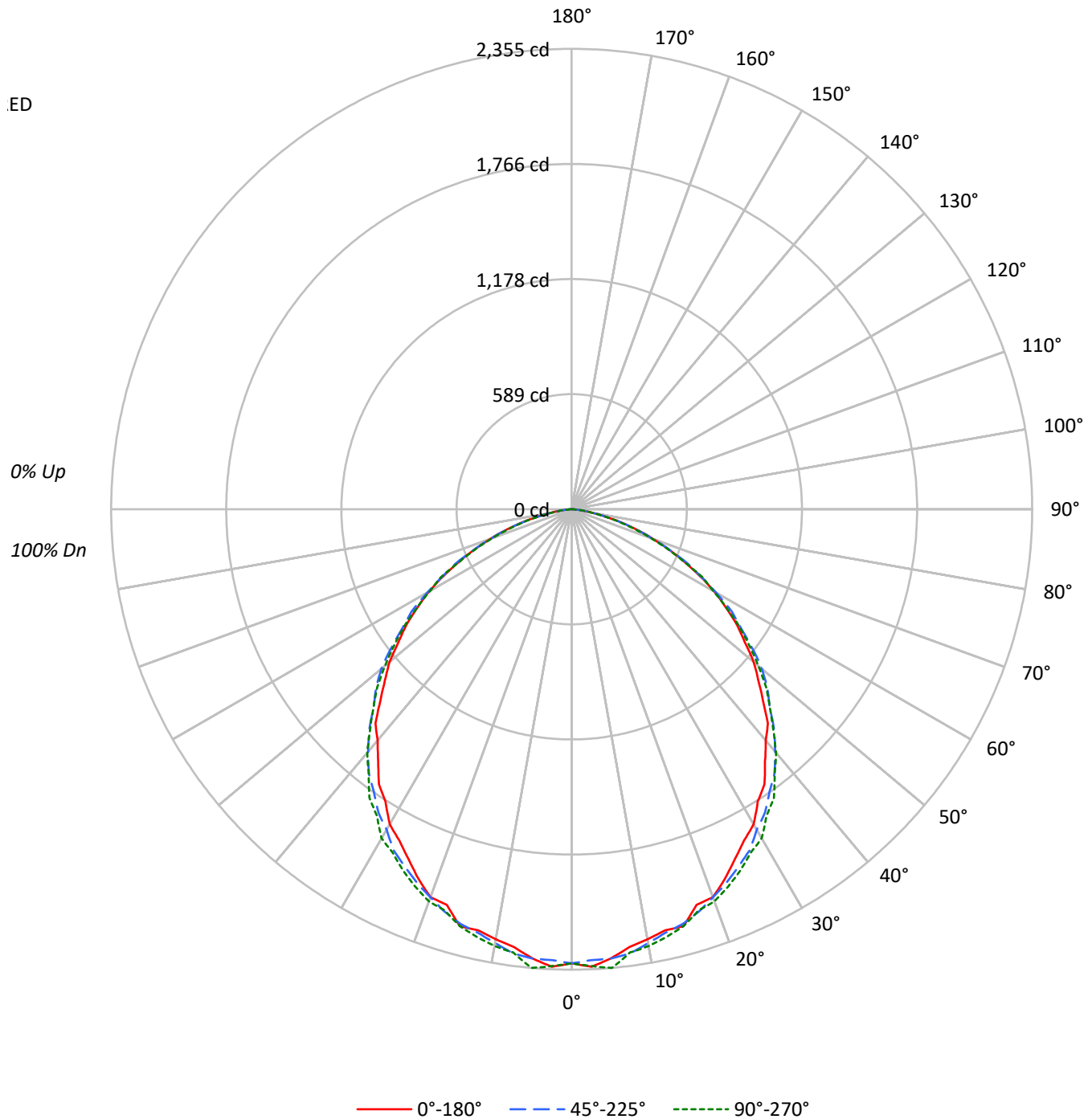
Lumens per Lamp: N/A
Luminaire Lumens: 5853.0 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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				
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°	6249	6249	6249
5°	6229	6231	6362
10°	6102	6156	6199
15°	6151	6117	6152
20°	6047	6047	6111
25°	5861	5989	6055
30°	5780	5882	6038
35°	5644	5792	5922
40°	5425	5686	5711
45°	5261	5448	5456
50°	5088	5318	5216
55°	4848	4942	4907
60°	4533	4578	4496
65°	4042	4145	4013
70°	3468	3480	3383
75°	2747	2741	2635
80°	1839	1788	1719
85°	1000	991	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5588 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.4	3.7
10°-20°	619.1	10.6
20°-30°	927.6	15.8
30°-40°	1099.3	18.8
40°-50°	1101.4	18.8
50°-60°	934.9	16.0
60°-70°	630.3	10.8
70°-80°	277.0	4.7
80°-90°	45.0	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°	1765.1	30.2
0°-40°	2864.5	48.9
0°-60°	4900.7	83.7
0°-90°	5853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5853.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2322	2322	2322	2322	2322	
5°	2306	2300	2307	2300	2355	217
15°	2208	2182	2196	2207	2208	615
25°	1974	1985	2017	2044	2039	913
35°	1718	1723	1763	1804	1803	1067
45°	1382	1408	1432	1468	1434	1069
55°	1033	1026	1053	1046	1046	919
65°	635	626	651	626	630	631
75°	264	259	264	245	253	283
85°	32	32	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°	2322.3	2322.3	2322.3	2322.3	2322.3
2.5°	2342.4	2324.7	2308.2	2327.4	2339.1
5°	2305.8	2300.4	2306.7	2299.8	2355.3
7.5°	2258.5	2279.1	2291.1	2283.6	2286.9
10°	2233.3	2226.1	2252.8	2271.3	2268.6
12.5°	2206.3	2217.1	2218.6	2238.7	2240.5
15°	2207.8	2182.3	2195.8	2207.2	2208.1
17.5°	2122.0	2149.6	2158.9	2185.0	2152.6
20°	2111.5	2091.4	2111.5	2138.2	2134.0
22.5°	2047.1	2024.6	2067.8	2091.4	2089.9
25°	1973.9	1984.7	2017.1	2043.5	2039.3
27.5°	1909.7	1922.3	1968.5	2004.8	1981.4
30°	1860.3	1854.0	1892.9	1925.3	1943.3
32.5°	1771.8	1794.6	1840.2	1872.3	1855.2
35°	1718.1	1723.2	1763.1	1803.9	1802.7
37.5°	1624.3	1648.0	1704.0	1715.4	1704.9
40°	1544.2	1567.9	1618.6	1630.9	1625.8
42.5°	1485.1	1489.3	1532.8	1546.9	1524.4
45°	1382.3	1408.1	1431.5	1468.4	1433.6
47.5°	1294.7	1306.7	1357.1	1367.0	1348.7
50°	1215.3	1219.5	1270.2	1257.9	1245.9
52.5°	1115.4	1133.1	1161.6	1159.2	1145.1
55°	1033.3	1026.4	1053.4	1046.2	1045.9
57.5°	934.6	946.6	968.8	957.4	939.1
60°	842.3	842.6	850.7	837.8	835.4
62.5°	739.4	743.0	744.8	728.9	754.7
65°	634.8	626.4	651.0	626.1	630.3
67.5°	538.5	542.7	540.3	524.7	530.7
70°	440.8	446.2	442.3	424.6	430.0
72.5°	351.4	344.8	349.0	326.8	337.0
75°	264.2	258.8	263.6	245.0	253.4
77.5°	179.9	184.1	181.1	171.2	176.9
80°	118.7	115.4	115.4	109.7	110.9
82.5°	69.3	66.0	65.1	63.3	66.0
85°	32.4	31.5	32.1	31.2	30.0
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)