

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: P561525

Luminaire Tested: FSR-12-4-LD4-2LO-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561525
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2LO-35-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

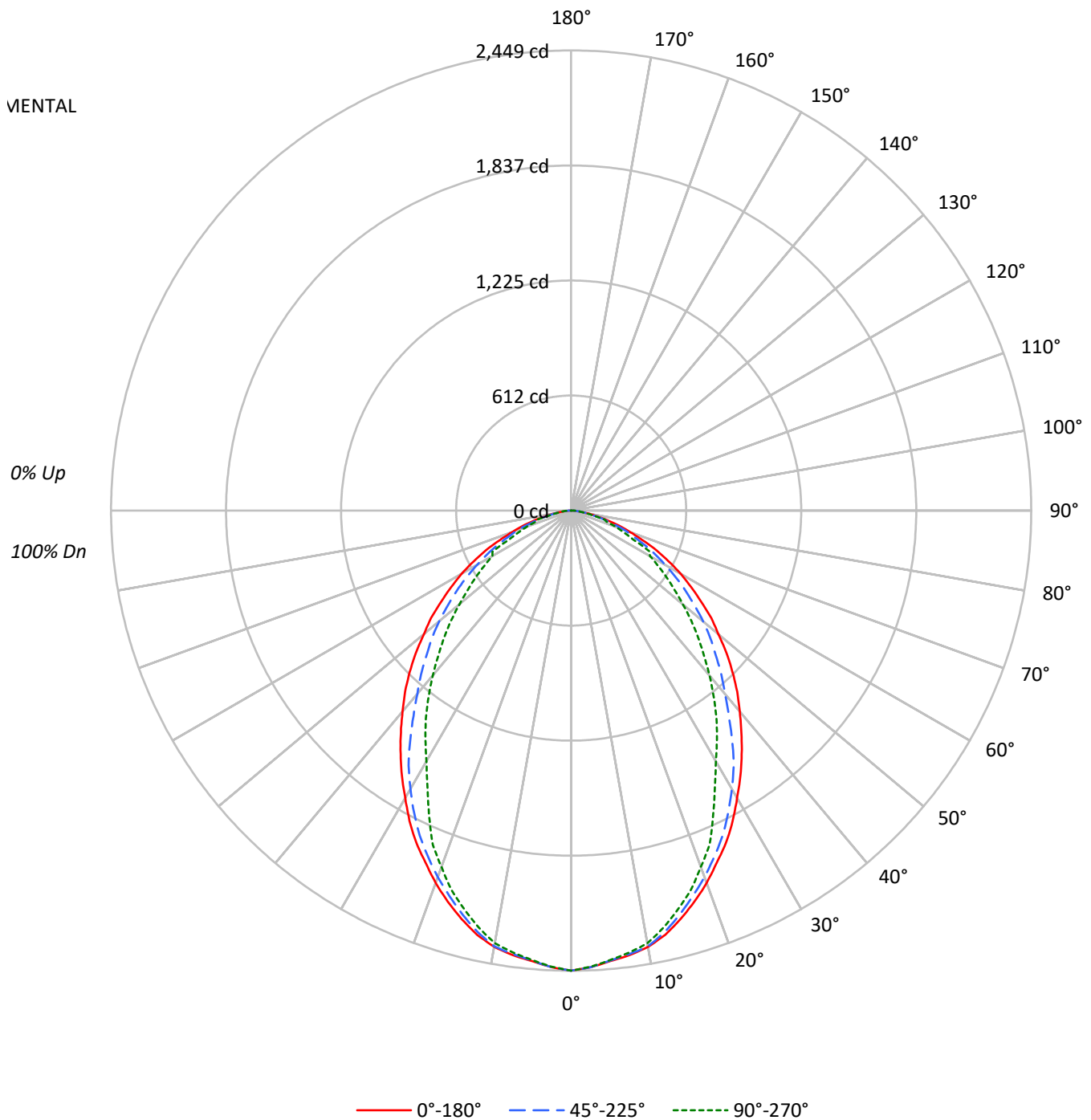
Lumens per Lamp: N/A
Luminaire Lumens: 4807.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6589	6589	6589
5°	6500	6492	6484
10°	6443	6436	6389
15°	6270	6206	6120
20°	6039	5942	5780
25°	5791	5665	5312
30°	5489	5313	4785
35°	5198	4910	4426
40°	4902	4475	4027
45°	4622	4137	3641
50°	4278	3840	3247
55°	3958	3480	2908
60°	3626	3108	2605
65°	3190	2721	2307
70°	2628	2383	1960
75°	2090	1825	1913
80°	1404	1316	1229
85°	874	1050	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4622 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.9	4.7
10°-20°	625.5	13.0
20°-30°	866.0	18.0
30°-40°	923.4	19.2
40°-50°	842.4	17.5
50°-60°	660.0	13.7
60°-70°	430.1	8.9
70°-80°	190.6	4.0
80°-90°	40.9	0.9
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°	1719.5	35.8
0°-40°	2642.9	55.0
0°-60°	4145.4	86.2
0°-90°	4807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4807.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2449	2449	2449	2449	2449	
5°	2406	2403	2403	2400	2400	228
15°	2250	2250	2228	2205	2197	633
25°	1950	1939	1908	1840	1789	895
35°	1582	1571	1495	1381	1347	989
45°	1214	1189	1087	996	957	935
55°	844	818	742	654	620	757
65°	501	473	427	436	362	494
75°	201	187	176	167	184	215
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2448.6	2448.6	2448.6	2448.6	2448.6
2.5°	2431.6	2431.6	2431.6	2428.8	2428.8
5°	2406.2	2403.3	2403.3	2400.5	2400.5
7.5°	2386.3	2383.5	2380.7	2377.9	2372.2
10°	2358.0	2358.0	2355.2	2341.1	2338.2
12.5°	2312.7	2309.9	2298.6	2278.8	2273.1
15°	2250.5	2250.5	2227.8	2205.2	2196.7
17.5°	2182.5	2179.7	2151.4	2128.7	2117.4
20°	2108.9	2103.3	2075.0	2038.2	2018.3
22.5°	2026.8	2026.8	1992.9	1944.7	1924.9
25°	1950.4	1939.1	1907.9	1840.0	1789.1
27.5°	1862.7	1845.7	1811.7	1715.5	1656.0
30°	1766.4	1757.9	1709.8	1585.2	1539.9
32.5°	1675.8	1661.7	1610.7	1480.5	1443.7
35°	1582.4	1571.1	1494.6	1381.4	1347.4
37.5°	1489.0	1474.8	1378.6	1288.0	1245.5
40°	1395.6	1378.6	1273.8	1191.8	1146.5
42.5°	1307.8	1285.2	1183.3	1095.5	1044.6
45°	1214.4	1188.9	1087.0	996.4	956.8
47.5°	1121.0	1098.3	1004.9	911.5	866.2
50°	1021.9	1002.1	917.2	823.8	775.6
52.5°	939.8	908.7	826.6	733.2	693.5
55°	843.6	818.1	741.7	653.9	619.9
57.5°	755.8	730.3	659.6	577.5	549.2
60°	673.7	636.9	577.5	506.7	484.1
62.5°	583.1	554.8	503.9	444.4	472.7
65°	501.0	472.7	427.4	435.9	362.3
67.5°	410.5	396.3	356.7	317.0	305.7
70°	334.0	317.0	302.9	260.4	249.1
72.5°	266.1	249.1	229.3	206.6	198.2
75°	201.0	186.8	175.5	167.0	184.0
77.5°	138.7	133.0	124.6	116.1	113.2
80°	90.6	87.8	84.9	82.1	79.3
82.5°	53.8	53.8	53.8	53.8	53.8
85°	28.3	31.1	34.0	36.8	39.6
87.5°	17.0	17.0	19.8	22.6	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)