

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: P561783

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561783
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-LD4-2STD-40-UNV-80-87-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6291.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

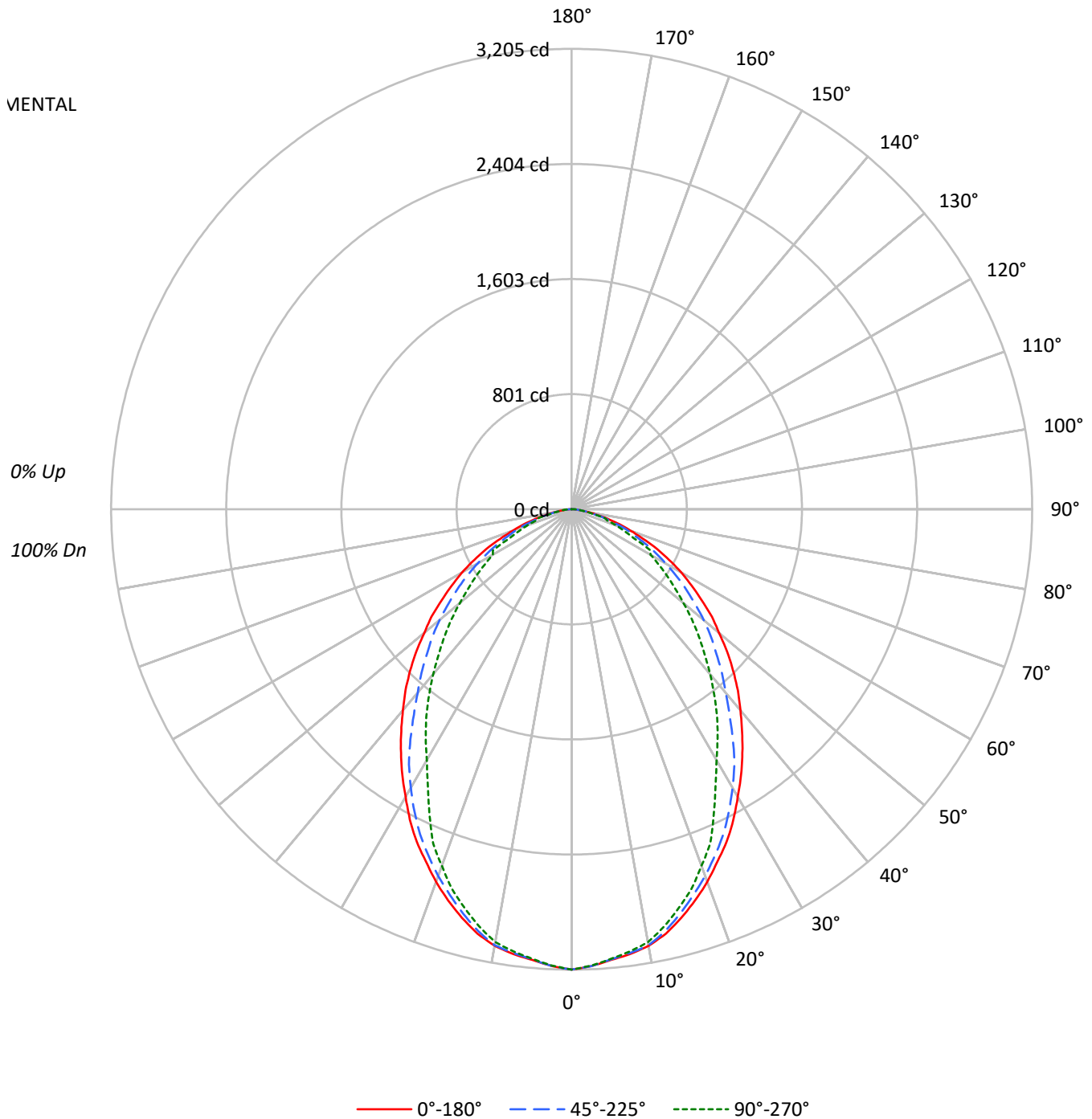
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8624	8624	8624
5°	8506	8496	8486
10°	8432	8422	8362
15°	8205	8123	8009
20°	7904	7776	7564
25°	7579	7414	6952
30°	7183	6953	6262
35°	6803	6426	5793
40°	6416	5856	5271
45°	6048	5414	4765
50°	5599	5025	4250
55°	5180	4554	3806
60°	4745	4068	3409
65°	4175	3562	3019
70°	3440	3119	2565
75°	2734	2388	2504
80°	1836	1722	1607
85°	1142	1374	1602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.3	4.7
10°-20°	818.7	13.0
20°-30°	1133.4	18.0
30°-40°	1208.5	19.2
40°-50°	1102.5	17.5
50°-60°	863.7	13.7
60°-70°	562.9	8.9
70°-80°	249.4	4.0
80°-90°	53.5	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°	2250.3	35.8
0°-40°	3458.9	55.0
0°-60°	5425.1	86.2
0°-90°	6291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3205	3205	3205	3205	3205	
5°	3149	3145	3145	3142	3142	299
15°	2945	2945	2916	2886	2875	828
25°	2552	2538	2497	2408	2341	1172
35°	2071	2056	1956	1808	1763	1295
45°	1589	1556	1423	1304	1252	1224
55°	1104	1071	971	856	811	990
65°	656	619	559	570	474	646
75°	263	244	230	219	241	282
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3204.6	3204.6	3204.6	3204.6	3204.6
2.5°	3182.3	3182.3	3182.3	3178.6	3178.6
5°	3149.0	3145.3	3145.3	3141.6	3141.6
7.5°	3123.0	3119.3	3115.6	3111.9	3104.5
10°	3086.0	3086.0	3082.3	3063.8	3060.1
12.5°	3026.7	3023.0	3008.2	2982.3	2974.9
15°	2945.2	2945.2	2915.6	2885.9	2874.8
17.5°	2856.3	2852.6	2815.6	2785.9	2771.1
20°	2760.0	2752.6	2715.5	2667.4	2641.4
22.5°	2652.6	2652.6	2608.1	2545.1	2519.2
25°	2552.5	2537.7	2497.0	2408.0	2341.4
27.5°	2437.7	2415.5	2371.0	2245.0	2167.2
30°	2311.7	2300.6	2237.6	2074.6	2015.3
32.5°	2193.2	2174.6	2108.0	1937.5	1889.4
35°	2070.9	2056.1	1956.1	1807.9	1763.4
37.5°	1948.7	1930.1	1804.2	1685.6	1630.1
40°	1826.4	1804.2	1667.1	1559.7	1500.4
42.5°	1711.6	1681.9	1548.6	1433.7	1367.0
45°	1589.3	1556.0	1422.6	1304.0	1252.2
47.5°	1467.1	1437.4	1315.2	1192.9	1133.6
50°	1337.4	1311.5	1200.3	1078.1	1015.1
52.5°	1230.0	1189.2	1081.8	959.5	907.6
55°	1104.0	1070.7	970.6	855.8	811.3
57.5°	989.2	955.8	863.2	755.8	718.7
60°	881.7	833.6	755.8	663.1	633.5
62.5°	763.2	726.1	659.4	581.6	618.7
65°	655.7	618.7	559.4	570.5	474.2
67.5°	537.2	518.7	466.8	414.9	400.1
70°	437.2	414.9	396.4	340.8	326.0
72.5°	348.2	326.0	300.1	270.4	259.3
75°	263.0	244.5	229.7	218.6	240.8
77.5°	181.5	174.1	163.0	151.9	148.2
80°	118.5	114.8	111.1	107.4	103.7
82.5°	70.4	70.4	70.4	70.4	70.4
85°	37.0	40.8	44.5	48.2	51.9
87.5°	22.2	22.2	25.9	29.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)