

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: P561721

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561721
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-35-UNV-80-88-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5609.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

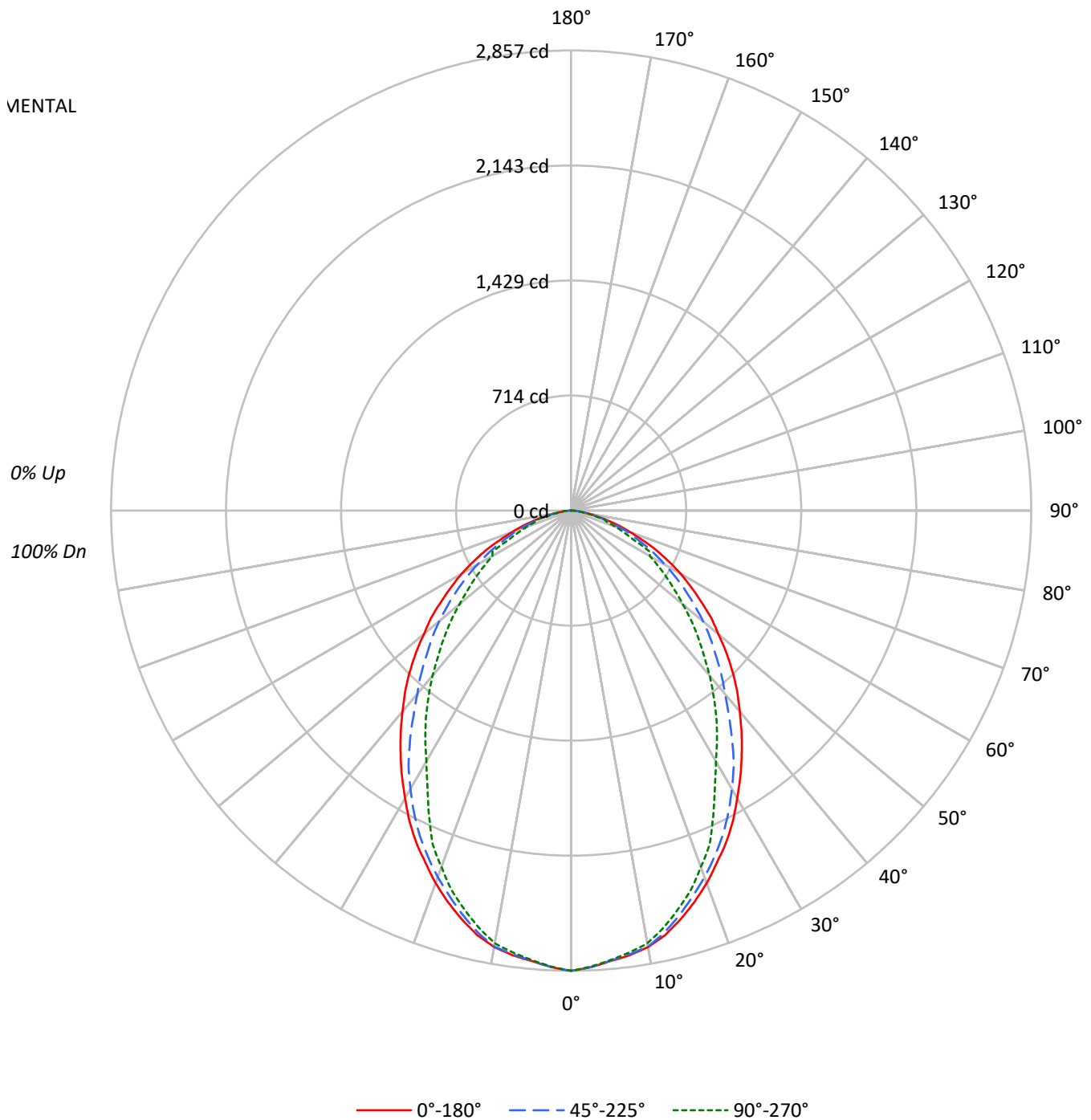
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7688	7688	7688
5°	7584	7575	7566
10°	7518	7509	7455
15°	7316	7242	7141
20°	7047	6933	6744
25°	6757	6610	6198
30°	6404	6199	5583
35°	6066	5729	5165
40°	5720	5221	4699
45°	5393	4827	4249
50°	4992	4480	3789
55°	4618	4060	3394
60°	4231	3626	3040
65°	3722	3176	2692
70°	3067	2781	2287
75°	2438	2129	2232
80°	1638	1536	1433
85°	1019	1223	1426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5393 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.0	4.7
10°-20°	729.9	13.0
20°-30°	1010.5	18.0
30°-40°	1077.5	19.2
40°-50°	983.0	17.5
50°-60°	770.1	13.7
60°-70°	501.9	8.9
70°-80°	222.4	4.0
80°-90°	47.7	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°	2006.4	35.8
0°-40°	3083.9	55.0
0°-60°	4837.0	86.2
0°-90°	5609.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5609.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2857	2857	2857	2857	2857	
5°	2808	2804	2804	2801	2801	267
15°	2626	2626	2600	2573	2563	738
25°	2276	2263	2226	2147	2088	1045
35°	1846	1833	1744	1612	1572	1154
45°	1417	1387	1268	1163	1116	1092
55°	984	955	865	763	723	883
65°	585	552	499	509	423	576
75°	234	218	205	195	215	251
85°	33	36	40	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2857.1	2857.1	2857.1	2857.1	2857.1
2.5°	2837.3	2837.3	2837.3	2834.0	2834.0
5°	2807.6	2804.3	2804.3	2801.0	2801.0
7.5°	2784.5	2781.2	2777.9	2774.6	2768.0
10°	2751.5	2751.5	2748.1	2731.6	2728.3
12.5°	2698.6	2695.3	2682.1	2659.0	2652.4
15°	2625.9	2625.9	2599.5	2573.1	2563.2
17.5°	2546.7	2543.4	2510.3	2483.9	2470.7
20°	2460.8	2454.2	2421.1	2378.2	2355.1
22.5°	2365.0	2365.0	2325.4	2269.2	2246.1
25°	2275.8	2262.6	2226.3	2147.0	2087.5
27.5°	2173.4	2153.6	2114.0	2001.7	1932.3
30°	2061.1	2051.2	1995.1	1849.7	1796.9
32.5°	1955.4	1938.9	1879.4	1727.5	1684.6
35°	1846.4	1833.2	1744.0	1611.9	1572.3
37.5°	1737.4	1720.9	1608.6	1502.9	1453.3
40°	1628.4	1608.6	1486.4	1390.6	1337.7
42.5°	1526.0	1499.6	1380.7	1278.3	1218.8
45°	1417.0	1387.3	1268.4	1162.7	1116.4
47.5°	1308.0	1281.6	1172.6	1063.6	1010.7
50°	1192.4	1169.3	1070.2	961.2	905.0
52.5°	1096.6	1060.3	964.5	855.5	809.3
55°	984.3	954.6	865.4	763.0	723.4
57.5°	881.9	852.2	769.6	673.8	640.8
60°	786.1	743.2	673.8	591.2	564.8
62.5°	680.4	647.4	587.9	518.6	551.6
65°	584.6	551.6	498.8	508.7	422.8
67.5°	478.9	462.4	416.2	369.9	356.7
70°	389.8	369.9	353.4	303.9	290.7
72.5°	310.5	290.7	267.5	241.1	231.2
75°	234.5	218.0	204.8	194.9	214.7
77.5°	161.9	155.2	145.3	135.4	132.1
80°	105.7	102.4	99.1	95.8	92.5
82.5°	62.8	62.8	62.8	62.8	62.8
85°	33.0	36.3	39.6	42.9	46.2
87.5°	19.8	19.8	23.1	26.4	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)