

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: P563445

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563445
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-24-4-LD4-3STD-35-UNV-80-86-EDD
Description: 2X4 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: 11345.0 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

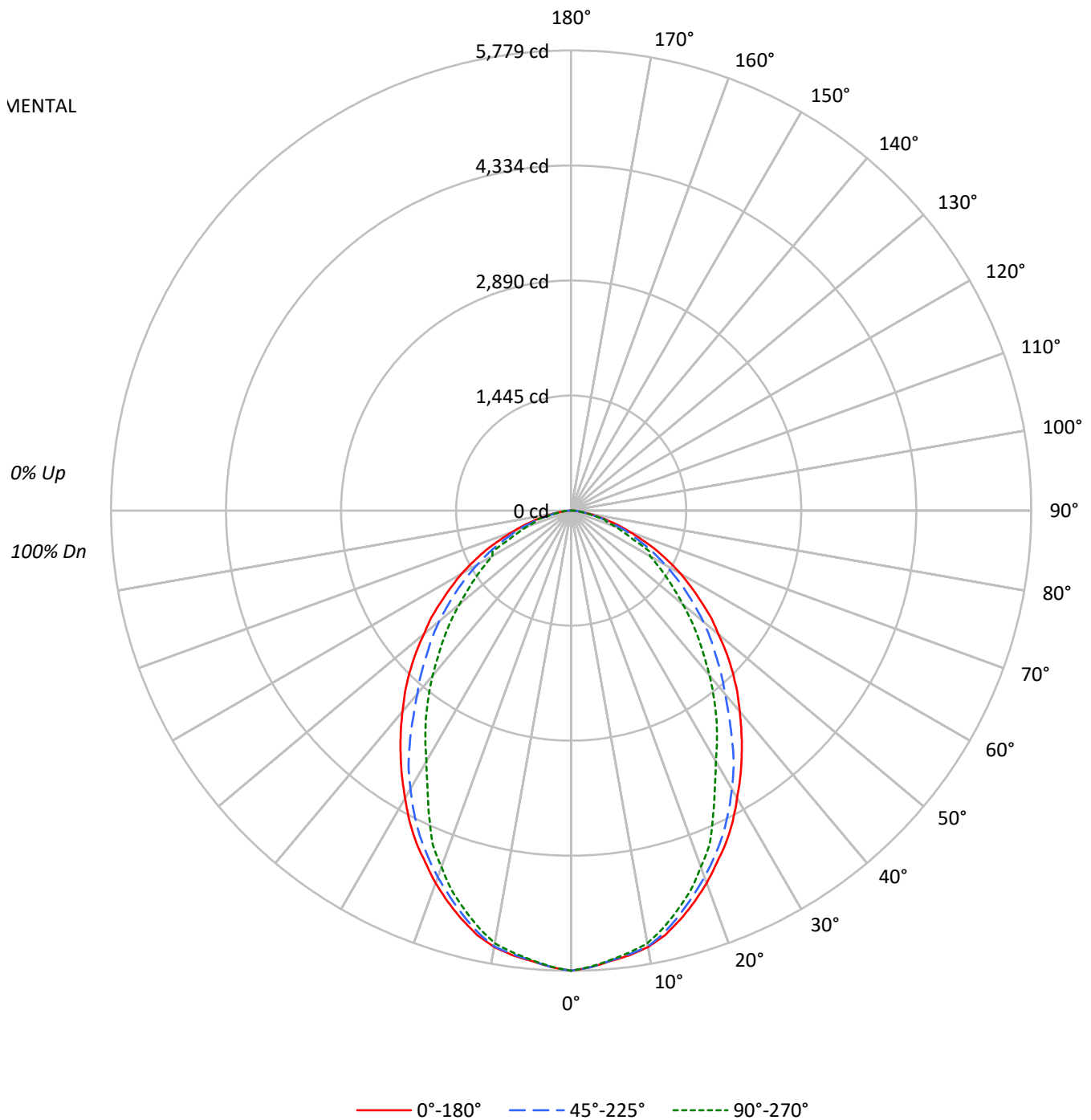
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7776	7776	7776
5°	7670	7661	7652
10°	7603	7594	7539
15°	7398	7324	7222
20°	7127	7012	6821
25°	6834	6685	6268
30°	6477	6269	5647
35°	6134	5794	5223
40°	5785	5280	4752
45°	5454	4882	4297
50°	5048	4531	3832
55°	4670	4106	3432
60°	4279	3668	3074
65°	3765	3212	2723
70°	3101	2812	2313
75°	2466	2153	2258
80°	1657	1553	1450
85°	1031	1238	1443

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5454 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	537.9	4.7
10°-20°	1476.3	13.0
20°-30°	2043.9	18.0
30°-40°	2179.4	19.2
40°-50°	1988.2	17.5
50°-60°	1557.6	13.7
60°-70°	1015.2	8.9
70°-80°	449.8	4.0
80°-90°	96.6	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°	4058.2	35.8
0°-40°	6237.6	55.0
0°-60°	9783.5	86.2
0°-90°	11345.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11345.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5779	5779	5779	5779	5779	
5°	5679	5672	5672	5665	5665	539
15°	5311	5311	5258	5204	5184	1493
25°	4603	4576	4503	4343	4222	2113
35°	3735	3708	3528	3260	3180	2335
45°	2866	2806	2566	2352	2258	2208
55°	1991	1931	1750	1543	1463	1786
65°	1182	1116	1009	1029	855	1165
75°	474	441	414	394	434	508
85°	67	74	80	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5779.0	5779.0	5779.0	5779.0	5779.0
2.5°	5738.9	5738.9	5738.9	5732.2	5732.2
5°	5678.8	5672.1	5672.1	5665.4	5665.4
7.5°	5632.0	5625.3	5618.6	5612.0	5598.6
10°	5565.2	5565.2	5558.5	5525.1	5518.4
12.5°	5458.3	5451.6	5424.9	5378.1	5364.8
15°	5311.3	5311.3	5257.9	5204.4	5184.4
17.5°	5151.0	5144.3	5077.5	5024.0	4997.3
20°	4977.3	4963.9	4897.1	4810.3	4763.5
22.5°	4783.5	4783.5	4703.4	4589.8	4543.0
25°	4603.2	4576.4	4502.9	4342.6	4222.3
27.5°	4396.0	4356.0	4275.8	4048.6	3908.3
30°	4168.9	4148.8	4035.3	3741.3	3634.4
32.5°	3955.1	3921.7	3801.4	3494.1	3407.3
35°	3734.6	3707.9	3527.5	3260.3	3180.1
37.5°	3514.2	3480.8	3253.6	3039.8	2939.6
40°	3293.7	3253.6	3006.4	2812.7	2705.8
42.5°	3086.6	3033.1	2792.6	2585.5	2465.3
45°	2866.1	2806.0	2565.5	2351.7	2258.1
47.5°	2645.6	2592.2	2371.7	2151.3	2044.4
50°	2411.8	2365.0	2164.6	1944.1	1830.6
52.5°	2218.1	2144.6	1950.8	1730.4	1636.8
55°	1990.9	1930.8	1750.4	1543.3	1463.1
57.5°	1783.8	1723.7	1556.7	1362.9	1296.1
60°	1590.1	1503.2	1362.9	1195.9	1142.4
62.5°	1376.3	1309.5	1189.2	1048.9	1115.7
65°	1182.5	1115.7	1008.8	1028.9	855.2
67.5°	968.7	935.3	841.8	748.3	721.5
70°	788.3	748.3	714.9	614.6	587.9
72.5°	628.0	587.9	541.2	487.7	467.7
75°	474.3	440.9	414.2	394.2	434.3
77.5°	327.4	314.0	294.0	273.9	267.2
80°	213.8	207.1	200.4	193.7	187.1
82.5°	126.9	126.9	126.9	126.9	126.9
85°	66.8	73.5	80.2	86.9	93.5
87.5°	40.1	40.1	46.8	53.4	60.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)