

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: P563448

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563448
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-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8271.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

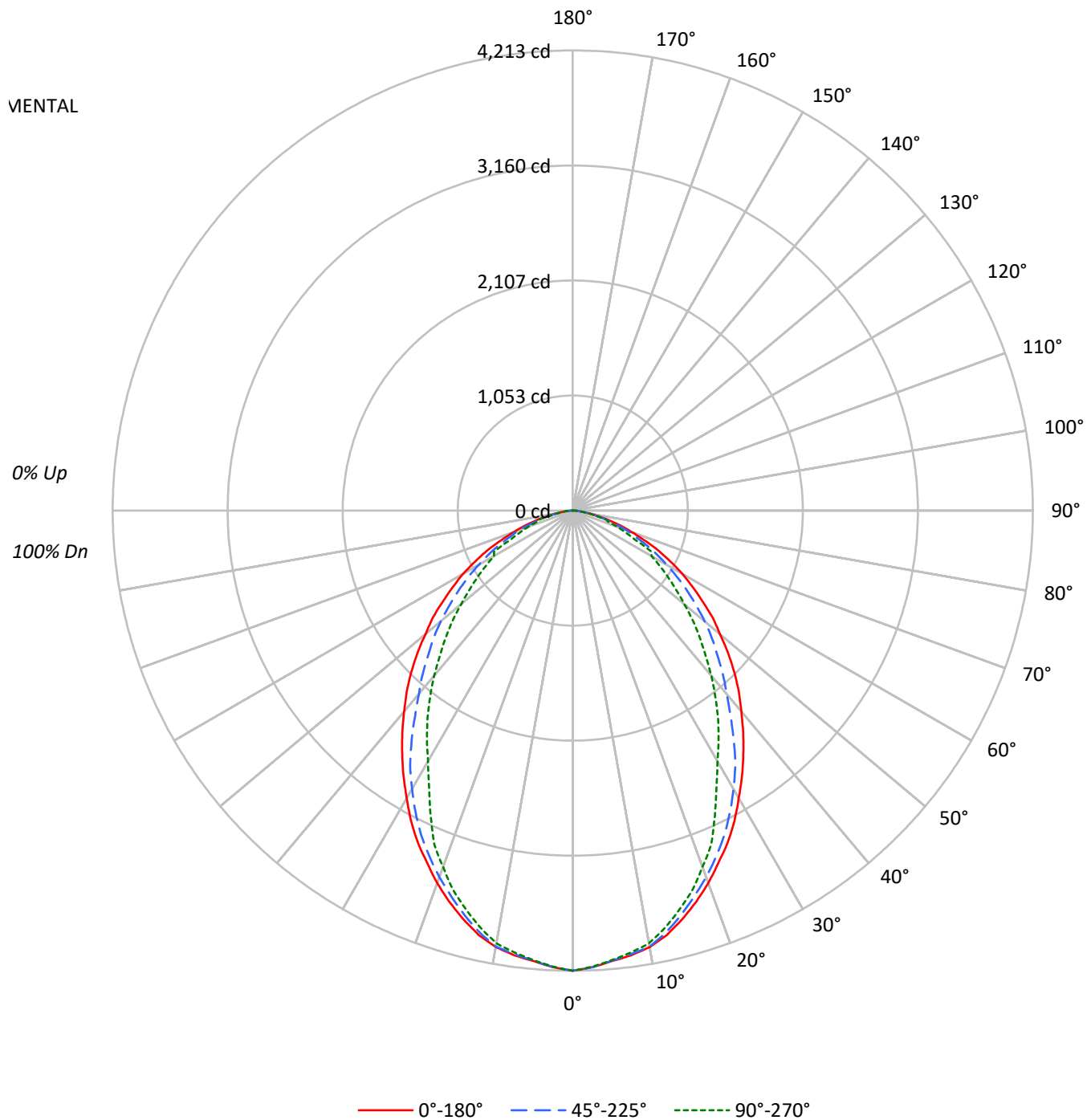
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		92
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		74
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		67
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		51
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		48
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		44
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5669	5669	5669
5°	5592	5585	5579
10°	5543	5537	5497
15°	5394	5339	5265
20°	5196	5112	4972
25°	4982	4874	4570
30°	4722	4571	4117
35°	4472	4224	3808
40°	4217	3850	3465
45°	3976	3559	3133
50°	3680	3303	2794
55°	3405	2993	2502
60°	3119	2674	2241
65°	2745	2342	1985
70°	2261	2050	1686
75°	1798	1570	1646
80°	1208	1132	1057
85°	752	902	1053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3976 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.2	4.7
10°-20°	1076.3	13.0
20°-30°	1490.1	18.0
30°-40°	1588.9	19.2
40°-50°	1449.5	17.5
50°-60°	1135.6	13.7
60°-70°	740.1	8.9
70°-80°	327.9	4.0
80°-90°	70.4	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°	2958.6	35.8
0°-40°	4547.5	55.0
0°-60°	7132.6	86.2
0°-90°	8271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4213	4213	4213	4213	4213	
5°	4140	4135	4135	4130	4130	393
15°	3872	3872	3833	3794	3780	1089
25°	3356	3336	3283	3166	3078	1541
35°	2723	2703	2572	2377	2318	1702
45°	2090	2046	1870	1714	1646	1610
55°	1452	1408	1276	1125	1067	1302
65°	862	813	736	750	623	850
75°	346	322	302	287	317	371
85°	49	54	58	63	68	68
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4213.1	4213.1	4213.1	4213.1	4213.1
2.5°	4183.9	4183.9	4183.9	4179.0	4179.0
5°	4140.1	4135.2	4135.2	4130.3	4130.3
7.5°	4106.0	4101.1	4096.2	4091.4	4081.6
10°	4057.3	4057.3	4052.4	4028.1	4023.2
12.5°	3979.3	3974.5	3955.0	3920.9	3911.2
15°	3872.2	3872.2	3833.2	3794.3	3779.6
17.5°	3755.3	3750.4	3701.7	3662.8	3643.3
20°	3628.7	3618.9	3570.2	3506.9	3472.8
22.5°	3487.4	3487.4	3429.0	3346.2	3312.1
25°	3355.9	3336.4	3282.8	3165.9	3078.3
27.5°	3204.9	3175.7	3117.2	2951.6	2849.3
30°	3039.3	3024.7	2941.9	2727.6	2649.6
32.5°	2883.4	2859.1	2771.4	2547.4	2484.0
35°	2722.7	2703.2	2571.7	2376.9	2318.4
37.5°	2562.0	2537.6	2372.0	2216.2	2143.1
40°	2401.2	2372.0	2191.8	2050.6	1972.6
42.5°	2250.3	2211.3	2035.9	1885.0	1797.3
45°	2089.5	2045.7	1870.3	1714.5	1646.3
47.5°	1928.8	1889.8	1729.1	1568.4	1490.4
50°	1758.3	1724.2	1578.1	1417.4	1334.6
52.5°	1617.1	1563.5	1422.2	1261.5	1193.3
55°	1451.5	1407.6	1276.1	1125.1	1066.7
57.5°	1300.5	1256.6	1134.9	993.6	944.9
60°	1159.2	1095.9	993.6	871.9	832.9
62.5°	1003.4	954.7	867.0	764.7	813.4
65°	862.1	813.4	735.5	750.1	623.4
67.5°	706.2	681.9	613.7	545.5	526.0
70°	574.7	545.5	521.2	448.1	428.6
72.5°	457.8	428.6	394.5	355.6	340.9
75°	345.8	321.5	302.0	287.4	316.6
77.5°	238.7	228.9	214.3	199.7	194.8
80°	155.9	151.0	146.1	141.2	136.4
82.5°	92.5	92.5	92.5	92.5	92.5
85°	48.7	53.6	58.4	63.3	68.2
87.5°	29.2	29.2	34.1	39.0	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)