

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: P563855

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563855
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-LD4-4LO-35-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10583.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

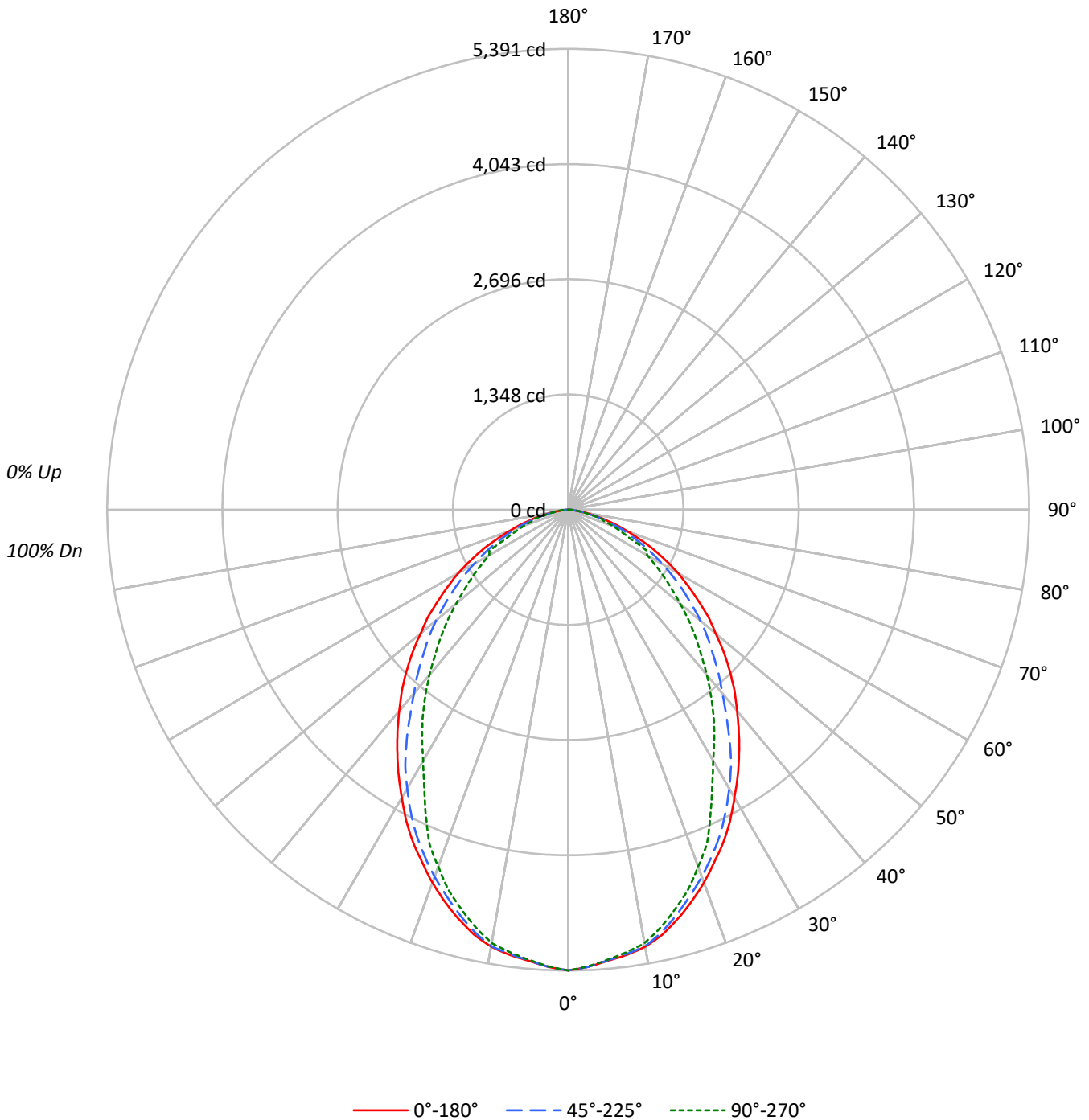
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7253	7253	7253
5°	7155	7146	7138
10°	7093	7084	7033
15°	6902	6832	6737
20°	6648	6541	6362
25°	6375	6236	5847
30°	6042	5848	5267
35°	5722	5405	4873
40°	5397	4926	4433
45°	5087	4554	4008
50°	4709	4227	3574
55°	4357	3830	3202
60°	3992	3421	2868
65°	3512	2996	2540
70°	2893	2623	2157
75°	2300	2009	2106
80°	1545	1449	1352
85°	962	1155	1348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5087 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	501.8	4.7
10°-20°	1377.2	13.0
20°-30°	1906.6	18.0
30°-40°	2033.0	19.2
40°-50°	1854.7	17.5
50°-60°	1453.0	13.7
60°-70°	947.0	8.9
70°-80°	419.6	4.0
80°-90°	90.1	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°	3785.6	35.8
0°-40°	5818.6	55.0
0°-60°	9126.4	86.2
0°-90°	10583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10583.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5391	5391	5391	5391	5391	
5°	5297	5291	5291	5285	5285	503
15°	4955	4955	4905	4855	4836	1393
25°	4294	4269	4200	4051	3939	1971
35°	3484	3459	3291	3041	2966	2178
45°	2674	2618	2393	2194	2106	2059
55°	1857	1801	1633	1440	1365	1666
65°	1103	1041	941	960	798	1087
75°	442	411	386	368	405	474
85°	62	69	75	81	87	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5390.8	5390.8	5390.8	5390.8	5390.8
2.5°	5353.4	5353.4	5353.4	5347.2	5347.2
5°	5297.4	5291.1	5291.1	5284.9	5284.9
7.5°	5253.7	5247.5	5241.3	5235.0	5222.6
10°	5191.4	5191.4	5185.2	5154.0	5147.8
12.5°	5091.7	5085.5	5060.5	5016.9	5004.4
15°	4954.6	4954.6	4904.7	4854.9	4836.2
17.5°	4805.0	4798.8	4736.5	4686.6	4661.7
20°	4643.0	4630.5	4568.2	4487.2	4443.5
22.5°	4462.2	4462.2	4387.5	4281.5	4237.9
25°	4294.0	4269.0	4200.5	4050.9	3938.7
27.5°	4100.8	4063.4	3988.6	3776.7	3645.8
30°	3888.9	3870.2	3764.2	3490.0	3390.3
32.5°	3689.5	3658.3	3546.1	3259.4	3178.4
35°	3483.8	3458.9	3290.6	3041.3	2966.5
37.5°	3278.1	3247.0	3035.1	2835.6	2742.2
40°	3072.5	3035.1	2804.5	2623.7	2524.0
42.5°	2879.3	2829.4	2605.1	2411.9	2299.7
45°	2673.6	2617.5	2393.2	2193.7	2106.5
47.5°	2467.9	2418.1	2212.4	2006.8	1907.0
50°	2249.8	2206.2	2019.2	1813.6	1707.6
52.5°	2069.1	2000.5	1819.8	1614.1	1526.9
55°	1857.2	1801.1	1632.8	1439.6	1364.8
57.5°	1664.0	1607.9	1452.1	1271.4	1209.0
60°	1483.3	1402.2	1271.4	1115.6	1065.7
62.5°	1283.8	1221.5	1109.3	978.5	1040.8
65°	1103.1	1040.8	941.1	959.8	797.7
67.5°	903.7	872.5	785.3	698.0	673.1
70°	735.4	698.0	666.8	573.4	548.4
72.5°	585.8	548.4	504.8	454.9	436.3
75°	442.5	411.3	386.4	367.7	405.1
77.5°	305.4	292.9	274.2	255.5	249.3
80°	199.4	193.2	187.0	180.7	174.5
82.5°	118.4	118.4	118.4	118.4	118.4
85°	62.3	68.6	74.8	81.0	87.3
87.5°	37.4	37.4	43.6	49.9	56.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)