

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: P563839

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563839
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-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11140.0 lumens
Efficiency: N/A
Efficacy: 119.0 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

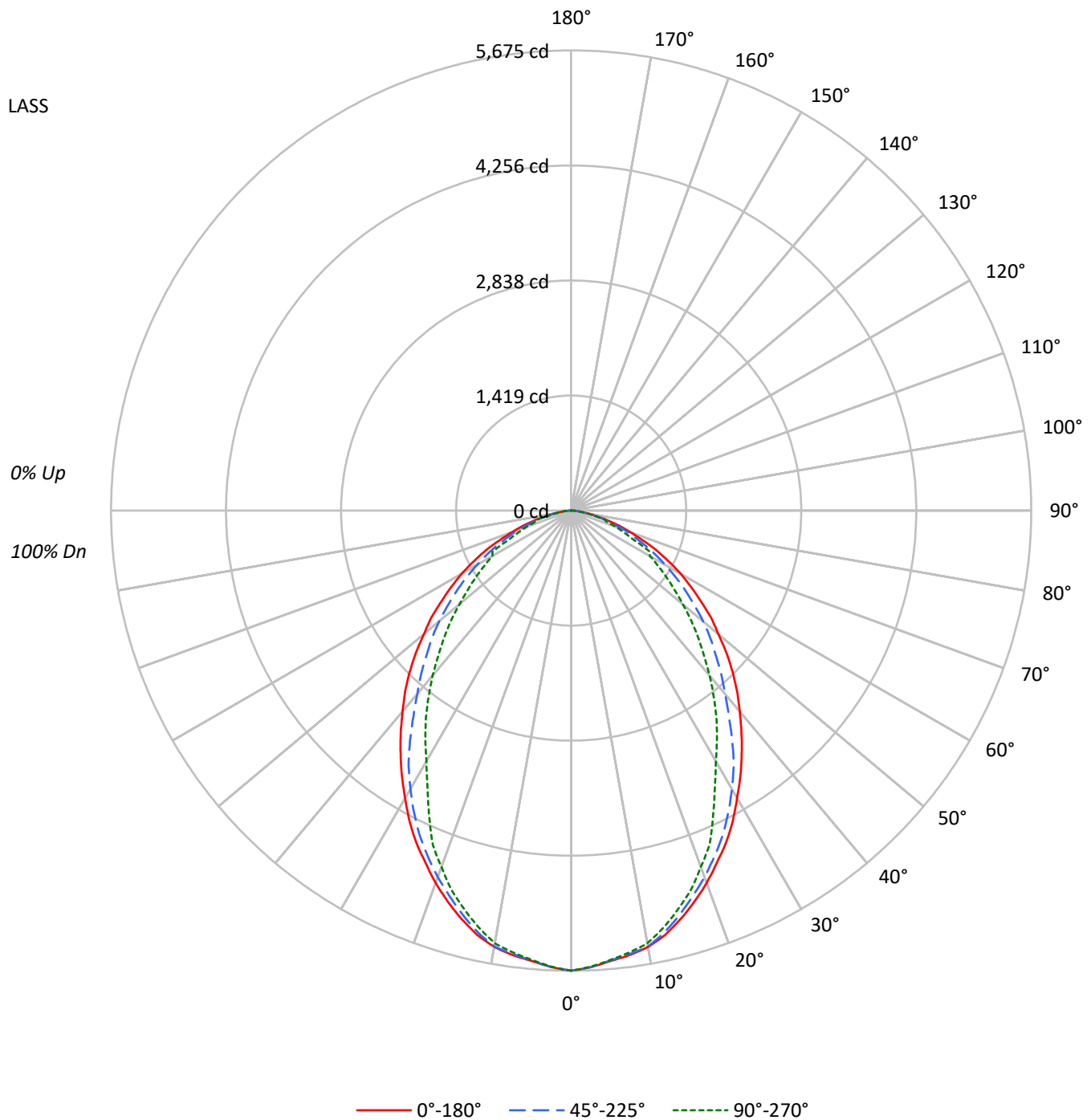
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7635	7635	7635
5°	7531	7522	7514
10°	7466	7457	7403
15°	7265	7192	7091
20°	6998	6885	6697
25°	6710	6564	6155
30°	6360	6156	5544
35°	6023	5689	5129
40°	5681	5185	4667
45°	5355	4793	4219
50°	4957	4449	3763
55°	4586	4032	3370
60°	4201	3601	3019
65°	3697	3154	2673
70°	3045	2761	2271
75°	2421	2114	2217
80°	1626	1525	1423
85°	1013	1215	1417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5355 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	528.2	4.7
10°-20°	1449.7	13.0
20°-30°	2007.0	18.0
30°-40°	2140.0	19.2
40°-50°	1952.3	17.5
50°-60°	1529.5	13.7
60°-70°	996.8	8.9
70°-80°	441.6	4.0
80°-90°	94.8	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°	3984.9	35.8
0°-40°	6124.9	55.0
0°-60°	9606.7	86.2
0°-90°	11140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11140.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5675	5675	5675	5675	5675	
5°	5576	5570	5570	5563	5563	529
15°	5215	5215	5163	5110	5091	1466
25°	4520	4494	4422	4264	4146	2075
35°	3667	3641	3464	3201	3123	2293
45°	2814	2755	2519	2309	2217	2168
55°	1955	1896	1719	1515	1437	1753
65°	1161	1096	991	1010	840	1144
75°	466	433	407	387	426	499
85°	66	72	79	85	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5674.6	5674.6	5674.6	5674.6	5674.6
2.5°	5635.2	5635.2	5635.2	5628.6	5628.6
5°	5576.2	5569.6	5569.6	5563.0	5563.0
7.5°	5530.2	5523.7	5517.1	5510.6	5497.4
10°	5464.6	5464.6	5458.1	5425.3	5418.7
12.5°	5359.7	5353.1	5326.9	5281.0	5267.8
15°	5215.4	5215.4	5162.9	5110.4	5090.7
17.5°	5057.9	5051.3	4985.7	4933.3	4907.0
20°	4887.3	4874.2	4808.6	4723.3	4677.4
22.5°	4697.1	4697.1	4618.4	4506.9	4460.9
25°	4520.0	4493.7	4421.6	4264.1	4146.0
27.5°	4316.6	4277.2	4198.5	3975.5	3837.7
30°	4093.6	4073.9	3962.4	3673.7	3568.7
32.5°	3883.6	3850.8	3732.7	3431.0	3345.7
35°	3667.1	3640.9	3463.8	3201.4	3122.7
37.5°	3450.7	3417.9	3194.8	2984.9	2886.5
40°	3234.2	3194.8	2952.1	2761.8	2656.9
42.5°	3030.8	2978.3	2742.2	2538.8	2420.7
45°	2814.3	2755.3	2519.1	2309.2	2217.3
47.5°	2597.8	2545.4	2328.9	2112.4	2007.4
50°	2368.2	2322.3	2125.5	1909.0	1797.5
52.5°	2178.0	2105.8	1915.6	1699.1	1607.2
55°	1954.9	1895.9	1718.8	1515.4	1436.7
57.5°	1751.6	1692.5	1528.5	1338.3	1272.7
60°	1561.3	1476.0	1338.3	1174.3	1121.8
62.5°	1351.4	1285.8	1167.7	1030.0	1095.6
65°	1161.2	1095.6	990.6	1010.3	839.7
67.5°	951.2	918.4	826.6	734.7	708.5
70°	774.1	734.7	701.9	603.5	577.3
72.5°	616.7	577.3	531.4	478.9	459.2
75°	465.8	433.0	406.7	387.1	426.4
77.5°	321.4	308.3	288.6	269.0	262.4
80°	209.9	203.4	196.8	190.2	183.7
82.5°	124.6	124.6	124.6	124.6	124.6
85°	65.6	72.2	78.7	85.3	91.8
87.5°	39.4	39.4	45.9	52.5	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)