

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: P563631

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563631
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-50-UNV-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11515.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

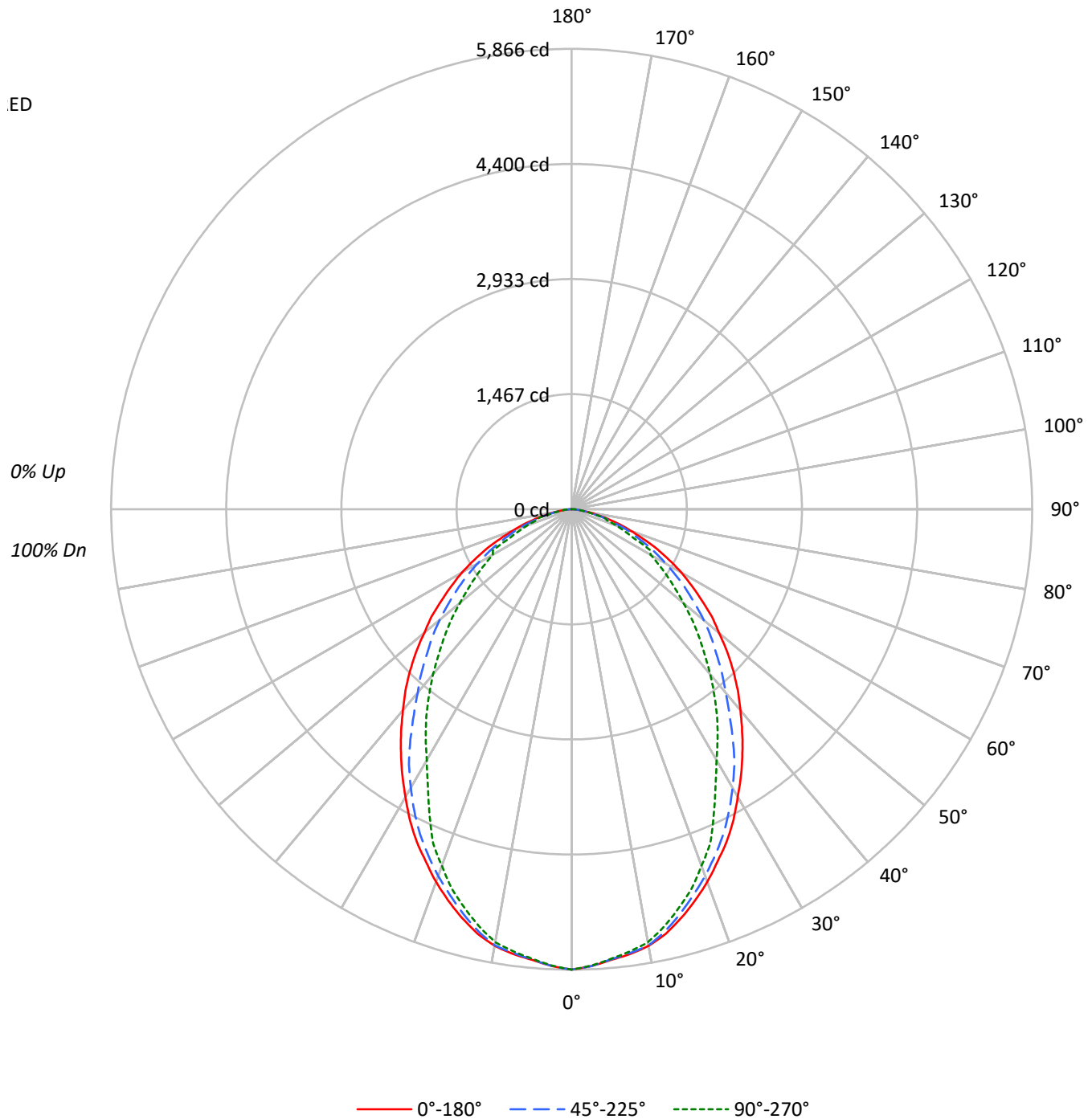
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7892	7892	7892
5°	7785	7776	7767
10°	7717	7708	7652
15°	7509	7434	7330
20°	7234	7117	6923
25°	6936	6785	6362
30°	6574	6363	5731
35°	6226	5881	5302
40°	5872	5360	4824
45°	5535	4955	4361
50°	5124	4599	3889
55°	4740	4168	3483
60°	4343	3722	3120
65°	3821	3260	2763
70°	3148	2854	2347
75°	2503	2185	2292
80°	1681	1576	1471
85°	1047	1257	1465

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5535 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	546.0	4.7
10°-20°	1498.5	13.0
20°-30°	2074.5	18.0
30°-40°	2212.1	19.2
40°-50°	2018.0	17.5
50°-60°	1581.0	13.7
60°-70°	1030.4	8.9
70°-80°	456.5	4.0
80°-90°	98.0	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°	4119.0	35.8
0°-40°	6331.1	55.0
0°-60°	9930.1	86.2
0°-90°	11515.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11515.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5866	5866	5866	5866	5866	
5°	5764	5757	5757	5750	5750	547
15°	5391	5391	5337	5282	5262	1516
25°	4672	4645	4570	4408	4286	2145
35°	3791	3764	3580	3309	3228	2370
45°	2909	2848	2604	2387	2292	2241
55°	2021	1960	1777	1566	1485	1812
65°	1200	1132	1024	1044	868	1183
75°	482	448	420	400	441	516
85°	68	75	81	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5865.6	5865.6	5865.6	5865.6	5865.6
2.5°	5824.9	5824.9	5824.9	5818.1	5818.1
5°	5763.9	5757.1	5757.1	5750.3	5750.3
7.5°	5716.4	5709.6	5702.8	5696.1	5682.5
10°	5648.6	5648.6	5641.8	5607.9	5601.1
12.5°	5540.1	5533.3	5506.2	5458.7	5445.2
15°	5390.9	5390.9	5336.7	5282.4	5262.1
17.5°	5228.2	5221.4	5153.6	5099.3	5072.2
20°	5051.9	5038.3	4970.5	4882.3	4834.9
22.5°	4855.2	4855.2	4773.8	4658.6	4611.1
25°	4672.1	4645.0	4570.4	4407.7	4285.6
27.5°	4461.9	4421.2	4339.9	4109.3	3966.9
30°	4231.4	4211.0	4095.7	3797.4	3688.9
32.5°	4014.4	3980.5	3858.4	3546.5	3458.3
35°	3790.6	3763.5	3580.4	3309.1	3227.8
37.5°	3566.8	3532.9	3302.4	3085.4	2983.7
40°	3343.0	3302.4	3051.5	2854.8	2746.3
42.5°	3132.8	3078.6	2834.5	2624.3	2502.2
45°	2909.1	2848.0	2603.9	2386.9	2292.0
47.5°	2685.3	2631.0	2407.3	2183.5	2075.0
50°	2448.0	2400.5	2197.1	1973.3	1858.0
52.5°	2251.3	2176.7	1980.1	1756.3	1661.4
55°	2020.7	1959.7	1776.6	1566.4	1485.0
57.5°	1810.5	1749.5	1580.0	1383.3	1315.5
60°	1613.9	1525.7	1383.3	1213.8	1159.6
62.5°	1396.9	1329.1	1207.0	1064.6	1132.4
65°	1200.2	1132.4	1023.9	1044.3	868.0
67.5°	983.2	949.3	854.4	759.5	732.4
70°	800.2	759.5	725.6	623.9	596.7
72.5°	637.4	596.7	549.3	495.0	474.7
75°	481.5	447.5	420.4	400.1	440.8
77.5°	332.3	318.7	298.4	278.0	271.2
80°	217.0	210.2	203.4	196.6	189.9
82.5°	128.8	128.8	128.8	128.8	128.8
85°	67.8	74.6	81.4	88.2	94.9
87.5°	40.7	40.7	47.5	54.2	61.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)