

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: P563186

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563186
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-LD4-3HI-50-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12577.0 lumens
Efficiency: N/A
Efficacy: 97.0 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

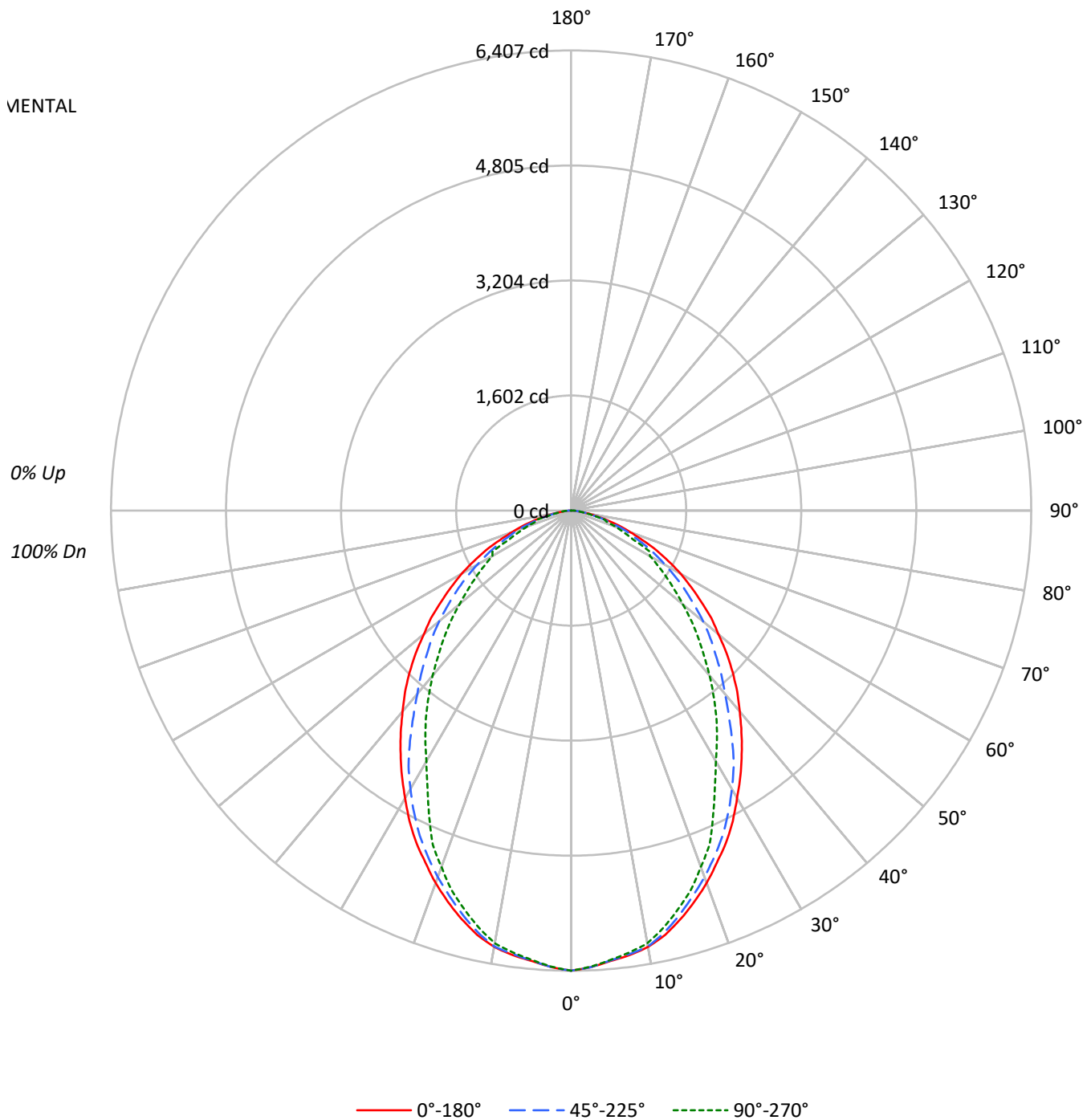
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8620	8620	8620
5°	8503	8493	8483
10°	8429	8419	8358
15°	8202	8119	8006
20°	7901	7773	7561
25°	7576	7411	6949
30°	7180	6950	6260
35°	6800	6423	5791
40°	6413	5854	5269
45°	6046	5412	4763
50°	5597	5023	4248
55°	5177	4552	3805
60°	4743	4066	3408
65°	4174	3561	3018
70°	3438	3118	2564
75°	2734	2387	2503
80°	1836	1722	1607
85°	1144	1372	1601

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6046 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	596.4	4.7
10°-20°	1636.7	13.0
20°-30°	2265.9	18.0
30°-40°	2416.1	19.2
40°-50°	2204.2	17.5
50°-60°	1726.8	13.7
60°-70°	1125.4	8.9
70°-80°	498.6	4.0
80°-90°	107.1	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°	4498.9	35.8
0°-40°	6915.0	55.0
0°-60°	10845.9	86.2
0°-90°	12577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12577.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6407	6407	6407	6407	6407	
5°	6296	6288	6288	6281	6281	598
15°	5888	5888	5829	5770	5747	1655
25°	5103	5073	4992	4814	4681	2343
35°	4140	4111	3911	3614	3526	2588
45°	3177	3111	2844	2607	2503	2448
55°	2207	2140	1940	1711	1622	1980
65°	1311	1237	1118	1141	948	1292
75°	526	489	459	437	481	564
85°	74	82	89	96	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6406.6	6406.6	6406.6	6406.6	6406.6
2.5°	6362.1	6362.1	6362.1	6354.7	6354.7
5°	6295.5	6288.1	6288.1	6280.6	6280.6
7.5°	6243.6	6236.2	6228.8	6221.4	6206.6
10°	6169.6	6169.6	6162.1	6125.1	6117.7
12.5°	6051.0	6043.6	6014.0	5962.2	5947.4
15°	5888.1	5888.1	5828.9	5769.6	5747.4
17.5°	5710.4	5702.9	5628.9	5569.6	5540.0
20°	5517.8	5503.0	5428.9	5332.6	5280.8
22.5°	5303.0	5303.0	5214.1	5088.2	5036.4
25°	5103.0	5073.4	4991.9	4814.2	4680.9
27.5°	4873.4	4829.0	4740.1	4488.3	4332.8
30°	4621.6	4599.4	4473.5	4147.6	4029.1
32.5°	4384.6	4347.6	4214.3	3873.6	3777.3
35°	4140.2	4110.6	3910.6	3614.3	3525.5
37.5°	3895.8	3858.7	3606.9	3369.9	3258.8
40°	3651.4	3606.9	3332.9	3118.1	2999.6
42.5°	3421.8	3362.5	3095.9	2866.3	2733.0
45°	3177.4	3110.7	2844.1	2607.1	2503.4
47.5°	2932.9	2873.7	2629.3	2384.9	2266.4
50°	2673.7	2621.9	2399.7	2155.3	2029.4
52.5°	2458.9	2377.5	2162.7	1918.3	1814.6
55°	2207.1	2140.5	1940.5	1710.9	1622.0
57.5°	1977.5	1910.9	1725.7	1510.9	1436.8
60°	1762.7	1666.4	1510.9	1325.7	1266.5
62.5°	1525.7	1451.7	1318.3	1162.8	1236.9
65°	1310.9	1236.9	1118.4	1140.6	948.0
67.5°	1073.9	1036.9	933.2	829.5	799.9
70°	874.0	829.5	792.5	681.4	651.8
72.5°	696.2	651.8	599.9	540.7	518.4
75°	525.9	488.8	459.2	437.0	481.4
77.5°	362.9	348.1	325.9	303.7	296.3
80°	237.0	229.6	222.2	214.8	207.4
82.5°	140.7	140.7	140.7	140.7	140.7
85°	74.1	81.5	88.9	96.3	103.7
87.5°	44.4	44.4	51.8	59.3	66.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)