

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: P563489

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563489
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11730.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

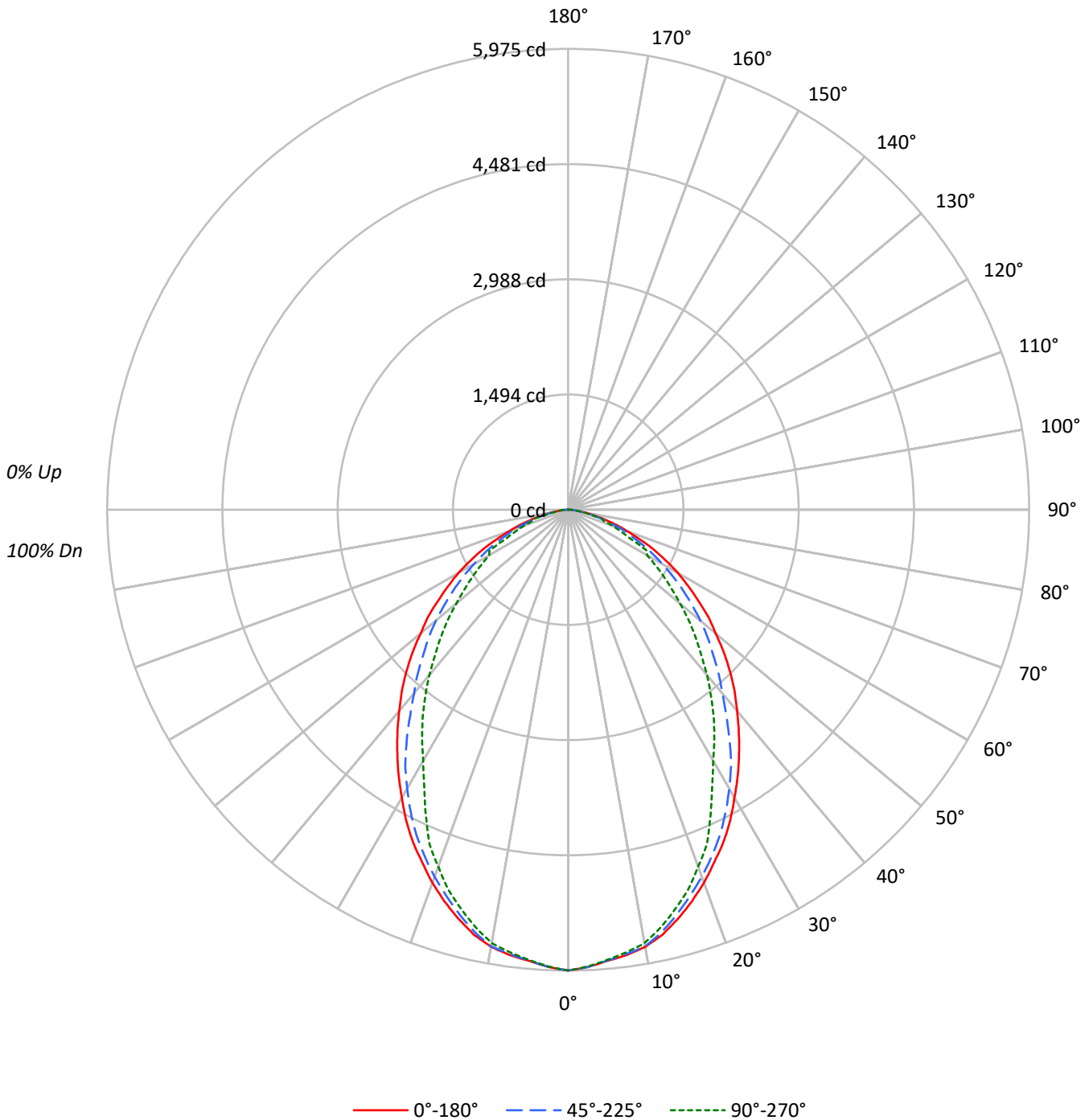
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8039	8039	8039
5°	7930	7921	7912
10°	7862	7852	7795
15°	7650	7573	7467
20°	7369	7250	7052
25°	7066	6912	6481
30°	6697	6482	5838
35°	6343	5991	5401
40°	5981	5460	4914
45°	5639	5047	4443
50°	5220	4685	3962
55°	4829	4245	3549
60°	4424	3792	3179
65°	3893	3321	2815
70°	3207	2908	2391
75°	2549	2227	2334
80°	1712	1605	1499
85°	1067	1280	1493

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5639 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	556.2	4.7
10°-20°	1526.4	13.0
20°-30°	2113.3	18.0
30°-40°	2253.4	19.2
40°-50°	2055.7	17.5
50°-60°	1610.5	13.7
60°-70°	1049.7	8.9
70°-80°	465.0	4.0
80°-90°	99.8	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°	4195.9	35.8
0°-40°	6449.3	55.0
0°-60°	10115.5	86.2
0°-90°	11730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5975	5975	5975	5975	5975	
5°	5872	5865	5865	5858	5858	557
15°	5492	5492	5436	5381	5360	1544
25°	4759	4732	4656	4490	4366	2185
35°	3861	3834	3647	3371	3288	2414
45°	2963	2901	2652	2432	2335	2283
55°	2058	1996	1810	1596	1513	1846
65°	1223	1154	1043	1064	884	1205
75°	490	456	428	408	449	526
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5975.1	5975.1	5975.1	5975.1	5975.1
2.5°	5933.7	5933.7	5933.7	5926.8	5926.8
5°	5871.5	5864.6	5864.6	5857.7	5857.7
7.5°	5823.1	5816.2	5809.3	5802.4	5788.6
10°	5754.1	5754.1	5747.2	5712.6	5705.7
12.5°	5643.5	5636.6	5609.0	5560.6	5546.8
15°	5491.6	5491.6	5436.3	5381.0	5360.3
17.5°	5325.8	5318.9	5249.8	5194.5	5166.9
20°	5146.2	5132.4	5063.3	4973.5	4925.1
22.5°	4945.9	4945.9	4863.0	4745.5	4697.2
25°	4759.4	4731.7	4655.7	4490.0	4365.6
27.5°	4545.2	4503.8	4420.9	4186.0	4041.0
30°	4310.4	4289.6	4172.2	3868.3	3757.8
32.5°	4089.3	4054.8	3930.4	3612.7	3522.9
35°	3861.4	3833.7	3647.2	3370.9	3288.0
37.5°	3633.4	3598.9	3364.0	3143.0	3039.4
40°	3405.5	3364.0	3108.4	2908.1	2797.6
42.5°	3191.3	3136.1	2887.4	2673.3	2548.9
45°	2963.4	2901.2	2652.5	2431.5	2334.8
47.5°	2735.4	2680.2	2452.2	2224.3	2113.7
50°	2493.7	2445.3	2238.1	2010.1	1892.7
52.5°	2293.3	2217.4	2017.0	1789.1	1692.4
55°	2058.5	1996.3	1809.8	1595.7	1512.8
57.5°	1844.3	1782.2	1609.5	1409.2	1340.1
60°	1644.0	1554.2	1409.2	1236.5	1181.2
62.5°	1423.0	1353.9	1229.6	1084.5	1153.6
65°	1222.7	1153.6	1043.1	1063.8	884.2
67.5°	1001.6	967.1	870.4	773.7	746.0
70°	815.1	773.7	739.1	635.5	607.9
72.5°	649.3	607.9	559.5	504.3	483.5
75°	490.4	455.9	428.3	407.6	449.0
77.5°	338.5	324.7	303.9	283.2	276.3
80°	221.0	214.1	207.2	200.3	193.4
82.5°	131.2	131.2	131.2	131.2	131.2
85°	69.1	76.0	82.9	89.8	96.7
87.5°	41.4	41.4	48.4	55.3	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)