

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: P564071

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564071
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-LD4-4STD-35-UNV-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14665.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

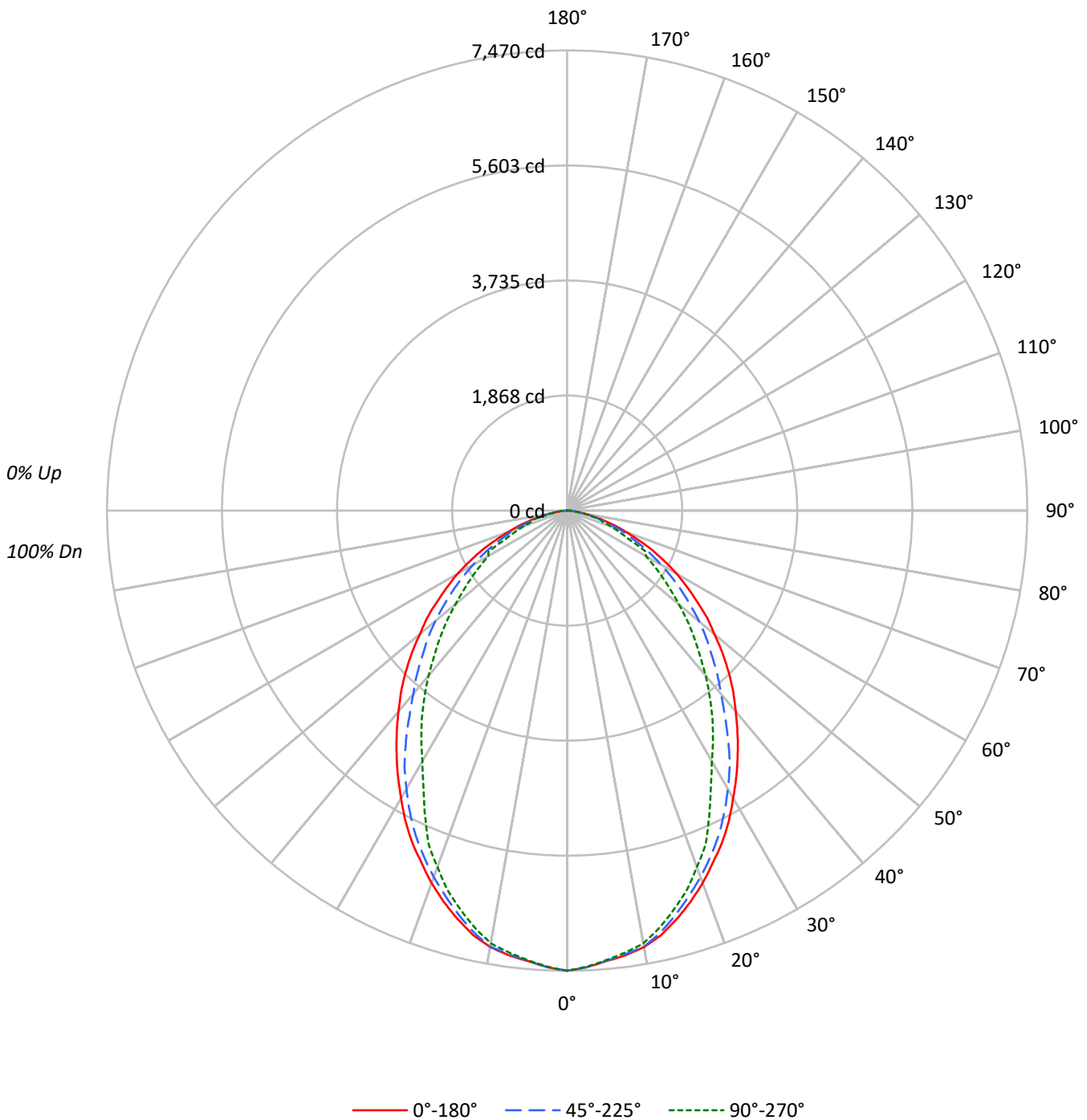
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10051	10051	10051
5°	9914	9903	9891
10°	9828	9817	9746
15°	9563	9467	9335
20°	9212	9064	8817
25°	8834	8641	8103
30°	8372	8104	7299
35°	7929	7490	6752
40°	7478	6826	6143
45°	7050	6310	5554
50°	6526	5857	4953
55°	6037	5308	4437
60°	5531	4741	3974
65°	4867	4152	3519
70°	4009	3635	2990
75°	3188	2783	2918
80°	2142	2008	1874
85°	1334	1599	1866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7050 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	695.4	4.7
10°-20°	1908.4	13.0
20°-30°	2642.0	18.0
30°-40°	2817.2	19.2
40°-50°	2570.1	17.5
50°-60°	2013.5	13.7
60°-70°	1312.3	8.9
70°-80°	581.4	4.0
80°-90°	124.8	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°	5245.8	35.8
0°-40°	8063.0	55.0
0°-60°	12646.5	86.2
0°-90°	14665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7470	7470	7470	7470	7470	
5°	7341	7332	7332	7323	7323	697
15°	6866	6866	6796	6728	6702	1930
25°	5950	5916	5821	5613	5458	2732
35°	4828	4793	4560	4214	4111	3018
45°	3705	3627	3316	3040	2919	2854
55°	2574	2496	2263	1995	1891	2308
65°	1529	1442	1304	1330	1105	1506
75°	613	570	535	510	561	657
85°	86	95	104	112	121	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7470.2	7470.2	7470.2	7470.2	7470.2
2.5°	7418.3	7418.3	7418.3	7409.7	7409.7
5°	7340.6	7332.0	7332.0	7323.3	7323.3
7.5°	7280.2	7271.5	7262.9	7254.3	7237.0
10°	7193.8	7193.8	7185.2	7142.0	7133.4
12.5°	7055.6	7047.0	7012.4	6952.0	6934.7
15°	6865.6	6865.6	6796.5	6727.5	6701.5
17.5°	6658.4	6649.7	6563.4	6494.3	6459.7
20°	6433.8	6416.6	6330.2	6217.9	6157.5
22.5°	6183.4	6183.4	6079.8	5932.9	5872.5
25°	5950.2	5915.7	5820.7	5613.4	5458.0
27.5°	5682.5	5630.7	5527.1	5233.4	5052.1
30°	5388.9	5363.0	5216.2	4836.2	4698.0
32.5°	5112.5	5069.3	4913.9	4516.6	4404.4
35°	4827.5	4793.0	4559.8	4214.4	4110.7
37.5°	4542.5	4499.4	4205.7	3929.4	3799.8
40°	4257.6	4205.7	3886.2	3635.8	3497.6
42.5°	3989.8	3920.8	3609.9	3342.1	3186.7
45°	3704.9	3627.1	3316.2	3039.9	2919.0
47.5°	3419.9	3350.8	3065.8	2780.8	2642.6
50°	3117.6	3057.2	2798.1	2513.1	2366.3
52.5°	2867.2	2772.2	2521.7	2236.7	2115.8
55°	2573.5	2495.8	2262.6	1994.9	1891.3
57.5°	2305.8	2228.1	2012.2	1761.7	1675.4
60°	2055.4	1943.1	1761.7	1545.8	1476.8
62.5°	1779.0	1692.7	1537.2	1355.9	1442.2
65°	1528.6	1442.2	1304.0	1329.9	1105.4
67.5°	1252.2	1209.0	1088.1	967.2	932.7
70°	1019.1	967.2	924.1	794.5	760.0
72.5°	811.8	760.0	699.5	630.4	604.5
75°	613.2	570.0	535.4	509.5	561.3
77.5°	423.2	405.9	380.0	354.1	345.4
80°	276.4	267.7	259.1	250.4	241.8
82.5°	164.1	164.1	164.1	164.1	164.1
85°	86.4	95.0	103.6	112.3	120.9
87.5°	51.8	51.8	60.5	69.1	77.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)