

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: P563307

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563307
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-LD4-3LO-35-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8780.0 lumens
Efficiency: N/A
Efficacy: 125.1 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

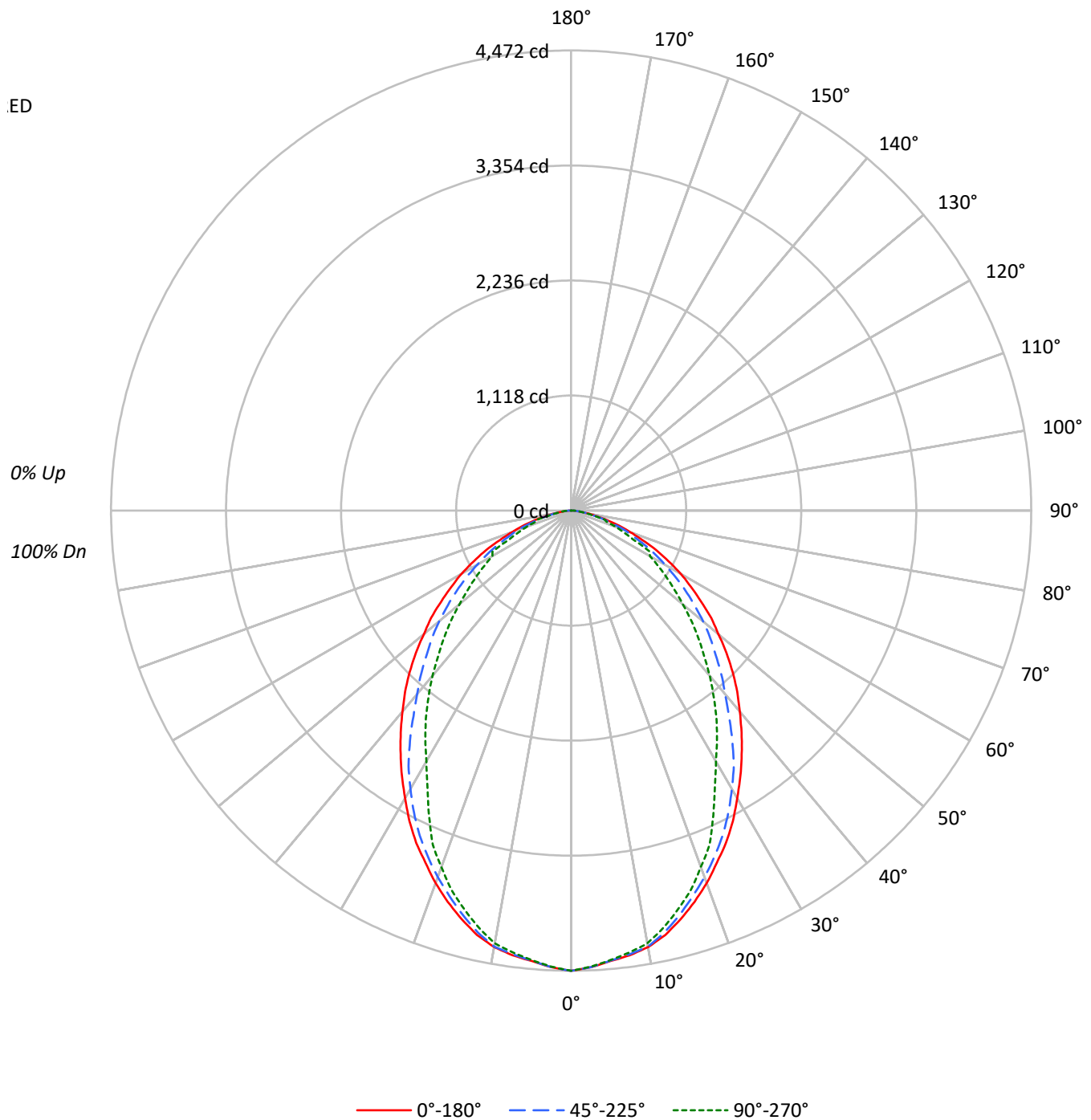
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6018	6018	6018
5°	5936	5929	5922
10°	5884	5877	5835
15°	5726	5668	5589
20°	5515	5427	5278
25°	5289	5174	4851
30°	5013	4852	4370
35°	4747	4484	4042
40°	4477	4087	3678
45°	4221	3778	3325
50°	3907	3507	2965
55°	3614	3178	2656
60°	3312	2838	2379
65°	2914	2486	2107
70°	2400	2176	1790
75°	1908	1667	1747
80°	1282	1202	1122
85°	798	957	1118

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4221 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	416.3	4.7
10°-20°	1142.6	13.0
20°-30°	1581.8	18.0
30°-40°	1686.7	19.2
40°-50°	1538.7	17.5
50°-60°	1205.5	13.7
60°-70°	785.7	8.9
70°-80°	348.1	4.0
80°-90°	74.7	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°	3140.7	35.8
0°-40°	4827.3	55.0
0°-60°	7571.5	86.2
0°-90°	8780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4472	4472	4472	4472	4472	
5°	4395	4390	4390	4384	4384	417
15°	4110	4110	4069	4028	4012	1156
25°	3562	3542	3485	3361	3268	1635
35°	2890	2870	2730	2523	2461	1807
45°	2218	2172	1985	1820	1748	1709
55°	1541	1494	1355	1194	1132	1382
65°	915	864	781	796	662	902
75°	367	341	321	305	336	393
85°	52	57	62	67	72	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4472.4	4472.4	4472.4	4472.4	4472.4
2.5°	4441.4	4441.4	4441.4	4436.2	4436.2
5°	4394.9	4389.7	4389.7	4384.5	4384.5
7.5°	4358.7	4353.5	4348.3	4343.2	4332.8
10°	4307.0	4307.0	4301.8	4275.9	4270.8
12.5°	4224.2	4219.1	4198.4	4162.2	4151.8
15°	4110.5	4110.5	4069.1	4027.8	4012.2
17.5°	3986.4	3981.2	3929.5	3888.2	3867.5
20°	3852.0	3841.6	3789.9	3722.7	3686.5
22.5°	3702.0	3702.0	3640.0	3552.1	3515.9
25°	3562.4	3541.7	3484.9	3360.8	3267.7
27.5°	3402.1	3371.1	3309.1	3133.3	3024.7
30°	3226.3	3210.8	3122.9	2895.4	2812.7
32.5°	3060.9	3035.0	2942.0	2704.1	2636.9
35°	2890.3	2869.6	2730.0	2523.2	2461.1
37.5°	2719.6	2693.8	2518.0	2352.5	2275.0
40°	2549.0	2518.0	2326.7	2176.7	2094.0
42.5°	2388.7	2347.4	2161.2	2001.0	1907.9
45°	2218.1	2171.6	1985.4	1820.0	1747.6
47.5°	2047.5	2006.1	1835.5	1664.9	1582.1
50°	1866.5	1830.3	1675.2	1504.6	1416.7
52.5°	1716.6	1659.7	1509.8	1339.1	1266.8
55°	1540.8	1494.3	1354.7	1194.4	1132.3
57.5°	1380.5	1334.0	1204.7	1054.8	1003.1
60°	1230.6	1163.3	1054.8	925.5	884.1
62.5°	1065.1	1013.4	920.3	811.8	863.5
65°	915.2	863.5	780.7	796.2	661.8
67.5°	749.7	723.9	651.5	579.1	558.4
70°	610.1	579.1	553.2	475.7	455.0
72.5°	486.0	455.0	418.8	377.4	361.9
75°	367.1	341.2	320.6	305.1	336.1
77.5°	253.4	243.0	227.5	212.0	206.8
80°	165.5	160.3	155.1	149.9	144.8
82.5°	98.2	98.2	98.2	98.2	98.2
85°	51.7	56.9	62.0	67.2	72.4
87.5°	31.0	31.0	36.2	41.4	46.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)