

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: P563054

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563054
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-LD4-2STD-50-UNV-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6679.0 lumens
Efficiency: N/A
Efficacy: 100.3 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

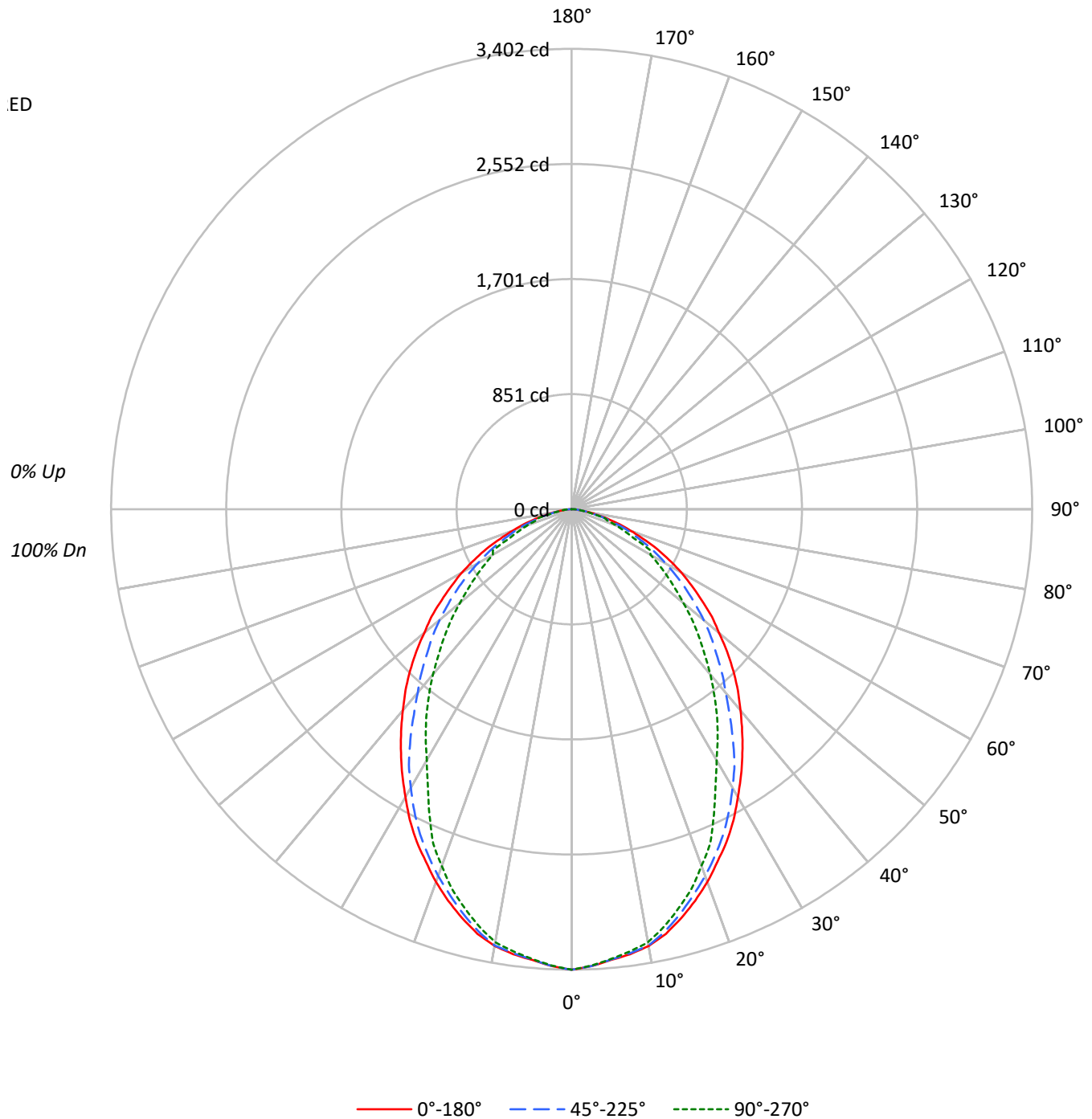
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4578	4578	4578
5°	4515	4510	4505
10°	4476	4471	4439
15°	4356	4312	4251
20°	4196	4128	4015
25°	4023	3936	3690
30°	3813	3691	3324
35°	3611	3411	3075
40°	3406	3109	2798
45°	3211	2874	2530
50°	2972	2667	2256
55°	2749	2417	2021
60°	2519	2159	1810
65°	2216	1891	1603
70°	1826	1655	1362
75°	1452	1268	1329
80°	976	914	853
85°	607	729	851

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3211 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.7	4.7
10°-20°	869.1	13.0
20°-30°	1203.3	18.0
30°-40°	1283.1	19.2
40°-50°	1170.5	17.5
50°-60°	917.0	13.7
60°-70°	597.7	8.9
70°-80°	264.8	4.0
80°-90°	56.8	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°	2389.1	35.8
0°-40°	3672.2	55.0
0°-60°	5759.7	86.2
0°-90°	6679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3402	3402	3402	3402	3402	
5°	3343	3339	3339	3335	3335	317
15°	3127	3127	3095	3064	3052	879
25°	2710	2694	2651	2557	2486	1244
35°	2199	2183	2077	1919	1872	1375
45°	1687	1652	1510	1384	1329	1300
55°	1172	1137	1030	909	861	1051
65°	696	657	594	606	503	686
75°	279	260	244	232	256	299
85°	39	43	47	51	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3402.2	3402.2	3402.2	3402.2	3402.2
2.5°	3378.6	3378.6	3378.6	3374.7	3374.7
5°	3343.2	3339.3	3339.3	3335.3	3335.3
7.5°	3315.7	3311.7	3307.8	3303.9	3296.0
10°	3276.3	3276.3	3272.4	3252.7	3248.8
12.5°	3213.4	3209.5	3193.7	3166.2	3158.3
15°	3126.9	3126.9	3095.4	3063.9	3052.1
17.5°	3032.5	3028.5	2989.2	2957.7	2942.0
20°	2930.2	2922.3	2883.0	2831.9	2804.4
22.5°	2816.2	2816.2	2769.0	2702.1	2674.6
25°	2710.0	2694.2	2651.0	2556.6	2485.8
27.5°	2588.0	2564.4	2517.2	2383.5	2300.9
30°	2454.3	2442.5	2375.6	2202.6	2139.6
32.5°	2328.4	2308.8	2238.0	2057.0	2005.9
35°	2198.6	2182.9	2076.7	1919.4	1872.2
37.5°	2068.8	2049.2	1915.5	1789.6	1730.6
40°	1939.1	1915.5	1769.9	1655.9	1592.9
42.5°	1817.1	1785.7	1644.1	1522.1	1451.3
45°	1687.3	1651.9	1510.3	1384.5	1329.4
47.5°	1557.5	1526.1	1396.3	1266.5	1203.6
50°	1419.9	1392.3	1274.3	1144.6	1077.7
52.5°	1305.8	1262.5	1148.5	1018.7	963.6
55°	1172.1	1136.7	1030.5	908.6	861.4
57.5°	1050.2	1014.8	916.4	802.4	763.0
60°	936.1	885.0	802.4	704.0	672.6
62.5°	810.2	770.9	700.1	617.5	656.8
65°	696.2	656.8	593.9	605.7	503.4
67.5°	570.3	550.6	495.6	440.5	424.8
70°	464.1	440.5	420.8	361.9	346.1
72.5°	369.7	346.1	318.6	287.1	275.3
75°	279.3	259.6	243.9	232.1	255.7
77.5°	192.7	184.9	173.1	161.3	157.3
80°	125.9	121.9	118.0	114.1	110.1
82.5°	74.7	74.7	74.7	74.7	74.7
85°	39.3	43.3	47.2	51.1	55.1
87.5°	23.6	23.6	27.5	31.5	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)