

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: P563276

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563276
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-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6888.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

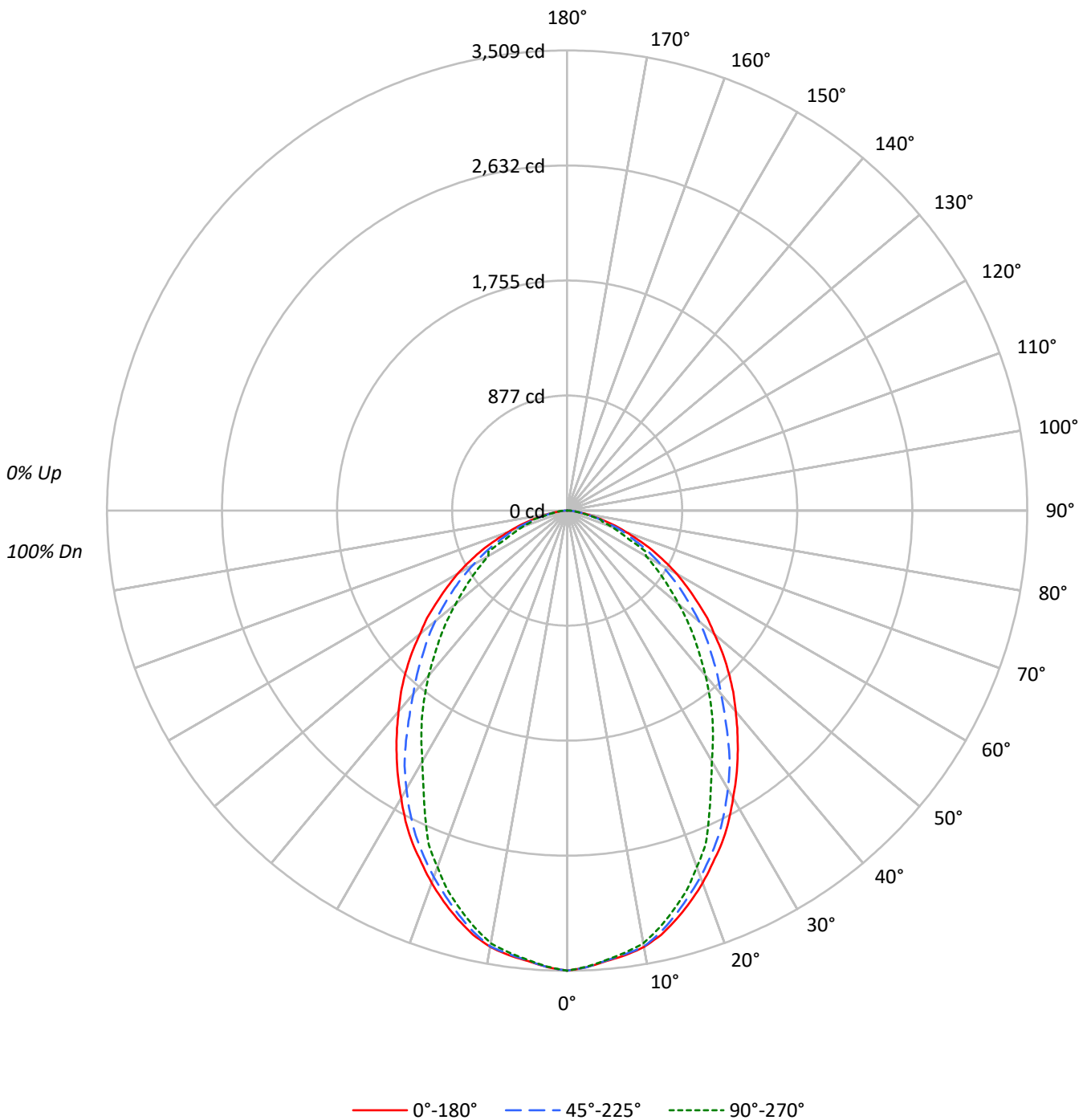
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4721	4721	4721
5°	4657	4651	4646
10°	4616	4611	4578
15°	4492	4447	4384
20°	4327	4257	4141
25°	4149	4059	3806
30°	3932	3806	3428
35°	3724	3518	3171
40°	3512	3206	2885
45°	3311	2964	2609
50°	3065	2751	2326
55°	2836	2493	2084
60°	2598	2227	1866
65°	2286	1950	1653
70°	1883	1707	1404
75°	1497	1307	1371
80°	1006	943	880
85°	627	752	877

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.6	4.7
10°-20°	896.3	13.0
20°-30°	1240.9	18.0
30°-40°	1323.2	19.2
40°-50°	1207.1	17.5
50°-60°	945.7	13.7
60°-70°	616.4	8.9
70°-80°	273.1	4.0
80°-90°	58.6	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°	2463.9	35.8
0°-40°	3787.1	55.0
0°-60°	5939.9	86.2
0°-90°	6888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3509	3509	3509	3509	3509	
5°	3448	3444	3444	3440	3440	327
15°	3225	3225	3192	3160	3148	907
25°	2795	2778	2734	2637	2564	1283
35°	2267	2251	2142	1979	1931	1418
45°	1740	1704	1558	1428	1371	1340
55°	1209	1172	1063	937	888	1084
65°	718	677	612	625	519	708
75°	288	268	252	239	264	309
85°	41	45	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3508.7	3508.7	3508.7	3508.7	3508.7
2.5°	3484.3	3484.3	3484.3	3480.3	3480.3
5°	3447.8	3443.8	3443.8	3439.7	3439.7
7.5°	3419.4	3415.4	3411.3	3407.2	3399.1
10°	3378.9	3378.9	3374.8	3354.5	3350.5
12.5°	3314.0	3309.9	3293.7	3265.3	3257.2
15°	3224.7	3224.7	3192.3	3159.8	3147.6
17.5°	3127.4	3123.3	3082.7	3050.3	3034.1
20°	3021.9	3013.8	2973.2	2920.5	2892.1
22.5°	2904.3	2904.3	2855.6	2786.6	2758.2
25°	2794.8	2778.5	2733.9	2636.6	2563.5
27.5°	2669.0	2644.7	2596.0	2458.1	2372.9
30°	2531.1	2518.9	2450.0	2271.5	2206.6
32.5°	2401.3	2381.0	2308.0	2121.4	2068.7
35°	2267.4	2251.2	2141.7	1979.4	1930.8
37.5°	2133.6	2113.3	1975.4	1845.6	1784.7
40°	1999.7	1975.4	1825.3	1707.7	1642.8
42.5°	1874.0	1841.5	1695.5	1569.8	1496.8
45°	1740.1	1703.6	1557.6	1427.8	1371.0
47.5°	1606.3	1573.8	1440.0	1306.1	1241.2
50°	1464.3	1435.9	1314.2	1180.4	1111.4
52.5°	1346.7	1302.1	1184.4	1050.6	993.8
55°	1208.8	1172.3	1062.7	937.0	888.3
57.5°	1083.0	1046.5	945.1	827.5	786.9
60°	965.4	912.7	827.5	726.1	693.6
62.5°	835.6	795.0	722.0	636.8	677.4
65°	718.0	677.4	612.5	624.7	519.2
67.5°	588.2	567.9	511.1	454.3	438.1
70°	478.6	454.3	434.0	373.2	356.9
72.5°	381.3	356.9	328.6	296.1	283.9
75°	288.0	267.7	251.5	239.3	263.7
77.5°	198.8	190.6	178.5	166.3	162.2
80°	129.8	125.7	121.7	117.6	113.6
82.5°	77.1	77.1	77.1	77.1	77.1
85°	40.6	44.6	48.7	52.7	56.8
87.5°	24.3	24.3	28.4	32.4	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)