

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: P562147

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562147
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-LD4-1HI-50-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4829.0 lumens
Efficiency: N/A
Efficacy: 111.8 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

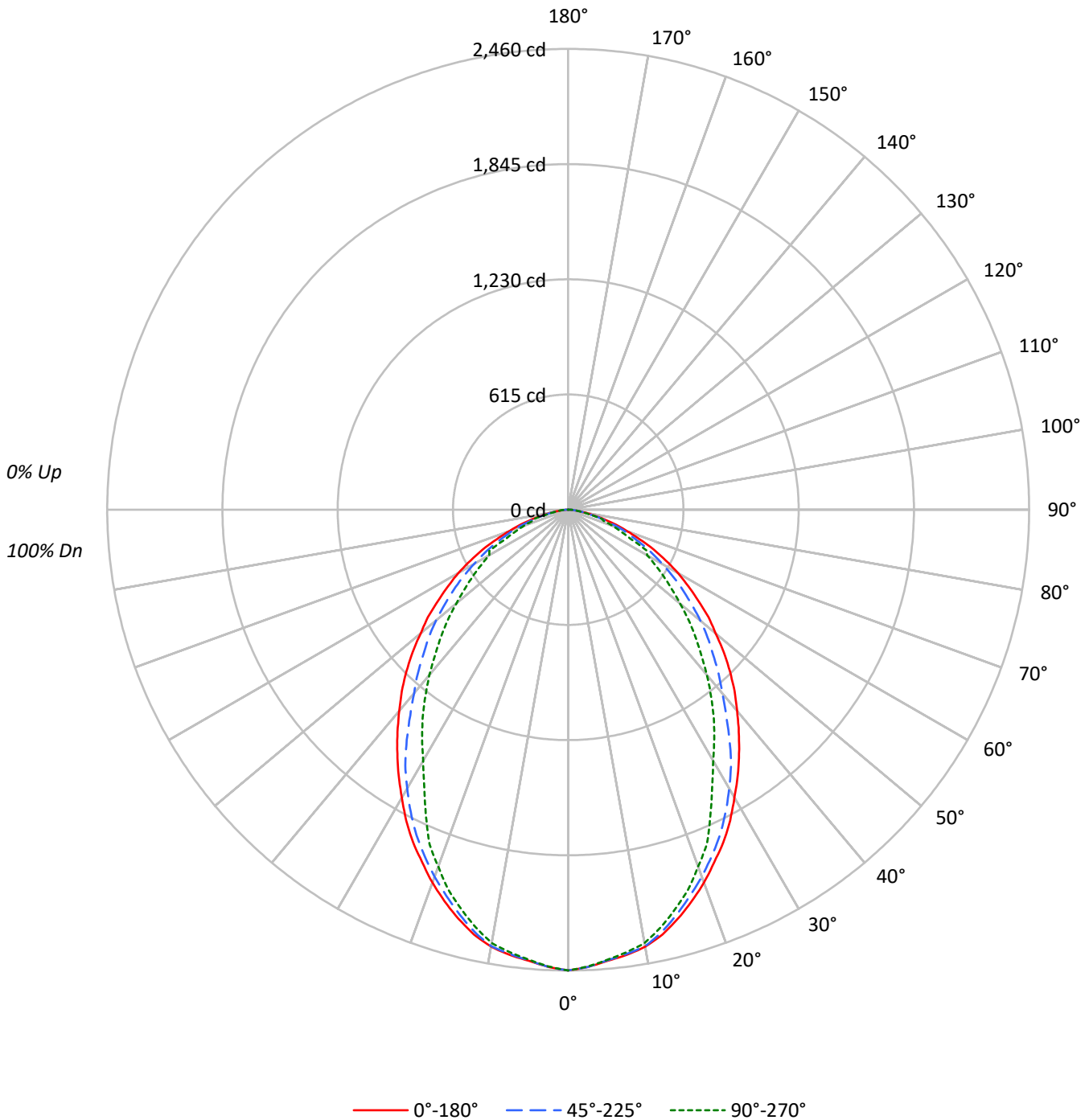
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3310	3310	3310
5°	3265	3261	3257
10°	3236	3233	3209
15°	3149	3117	3074
20°	3033	2985	2903
25°	2909	2846	2668
30°	2757	2669	2403
35°	2611	2466	2223
40°	2462	2248	2023
45°	2321	2078	1829
50°	2149	1929	1631
55°	1988	1748	1461
60°	1821	1561	1309
65°	1602	1367	1159
70°	1320	1197	984
75°	1050	917	961
80°	705	661	617
85°	438	526	614

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2321 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.0	4.7
10°-20°	628.4	13.0
20°-30°	870.0	18.0
30°-40°	927.7	19.2
40°-50°	846.3	17.5
50°-60°	663.0	13.7
60°-70°	432.1	8.9
70°-80°	191.4	4.0
80°-90°	41.1	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°	1727.4	35.8
0°-40°	2655.0	55.0
0°-60°	4164.3	86.2
0°-90°	4829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2460	2460	2460	2460	2460	
5°	2417	2414	2414	2412	2412	229
15°	2261	2261	2238	2215	2207	636
25°	1959	1948	1917	1848	1797	900
35°	1590	1578	1502	1388	1354	994
45°	1220	1194	1092	1001	961	940
55°	847	822	745	657	623	760
65°	503	475	429	438	364	496
75°	202	188	176	168	185	216
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2459.8	2459.8	2459.8	2459.8	2459.8
2.5°	2442.8	2442.8	2442.8	2439.9	2439.9
5°	2417.2	2414.3	2414.3	2411.5	2411.5
7.5°	2397.3	2394.4	2391.6	2388.7	2383.0
10°	2368.8	2368.8	2366.0	2351.8	2348.9
12.5°	2323.3	2320.5	2309.1	2289.2	2283.5
15°	2260.8	2260.8	2238.0	2215.3	2206.7
17.5°	2192.5	2189.7	2161.2	2138.5	2127.1
20°	2118.6	2112.9	2084.5	2047.5	2027.6
22.5°	2036.1	2036.1	2002.0	1953.6	1933.7
25°	1959.3	1948.0	1916.7	1848.4	1797.2
27.5°	1871.2	1854.1	1820.0	1723.3	1663.6
30°	1774.5	1766.0	1717.6	1592.5	1547.0
32.5°	1683.5	1669.3	1618.1	1487.3	1450.3
35°	1589.6	1578.3	1501.5	1387.7	1353.6
37.5°	1495.8	1481.6	1384.9	1293.9	1251.2
40°	1402.0	1384.9	1279.7	1197.2	1151.7
42.5°	1313.8	1291.1	1188.7	1100.5	1049.3
45°	1220.0	1194.4	1092.0	1001.0	961.2
47.5°	1126.1	1103.4	1009.5	915.7	870.2
50°	1026.6	1006.7	921.4	827.5	779.2
52.5°	944.1	912.8	830.4	736.5	696.7
55°	847.4	821.8	745.1	656.9	622.8
57.5°	759.3	733.7	662.6	580.1	551.7
60°	676.8	639.8	580.1	509.0	486.3
62.5°	585.8	557.4	506.2	446.5	474.9
65°	503.3	474.9	429.4	437.9	364.0
67.5°	412.3	398.1	358.3	318.5	307.1
70°	335.6	318.5	304.3	261.6	250.2
72.5°	267.3	250.2	230.3	207.6	199.1
75°	201.9	187.7	176.3	167.8	184.8
77.5°	139.3	133.7	125.1	116.6	113.7
80°	91.0	88.2	85.3	82.5	79.6
82.5°	54.0	54.0	54.0	54.0	54.0
85°	28.4	31.3	34.1	37.0	39.8
87.5°	17.1	17.1	19.9	22.7	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)