

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: P562849

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562849
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-LD4-2LO-50-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5998.0 lumens
Efficiency: N/A
Efficacy: 128.2 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

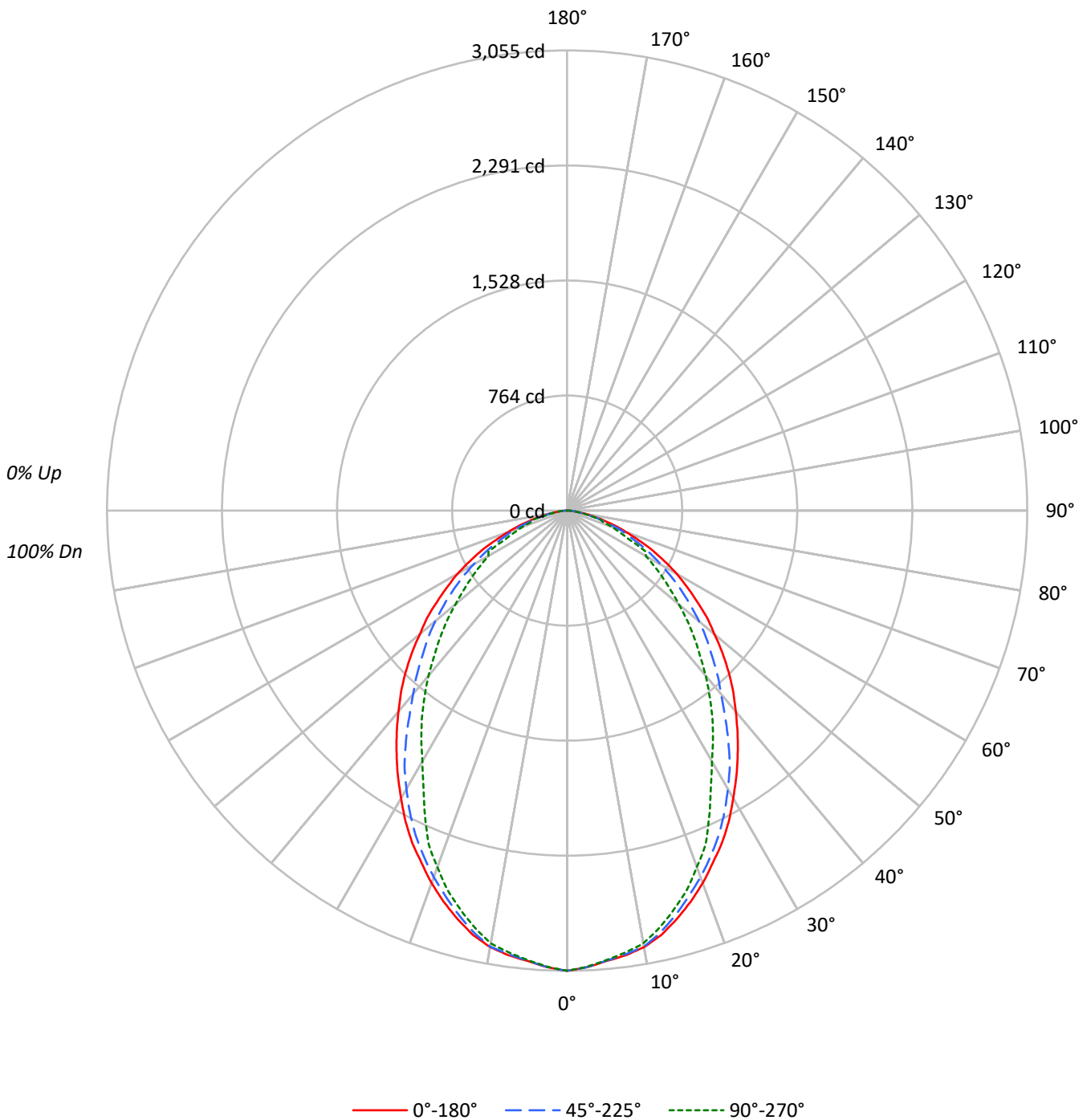
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4111	4111	4111
5°	4055	4050	4046
10°	4020	4015	3986
15°	3912	3872	3818
20°	3768	3707	3606
25°	3613	3534	3314
30°	3424	3315	2985
35°	3243	3063	2762
40°	3058	2792	2513
45°	2883	2581	2272
50°	2669	2395	2026
55°	2469	2171	1814
60°	2262	1939	1625
65°	1990	1698	1439
70°	1640	1487	1223
75°	1304	1138	1194
80°	876	821	766
85°	545	655	763

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2883 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.4	4.7
10°-20°	780.5	13.0
20°-30°	1080.6	18.0
30°-40°	1152.2	19.2
40°-50°	1051.2	17.5
50°-60°	823.5	13.7
60°-70°	536.7	8.9
70°-80°	237.8	4.0
80°-90°	51.1	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°	2145.5	35.8
0°-40°	3297.8	55.0
0°-60°	5172.4	86.2
0°-90°	5998.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5998.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3055	3055	3055	3055	3055	
5°	3002	2999	2999	2995	2995	285
15°	2808	2808	2780	2752	2741	789
25°	2434	2420	2381	2296	2232	1117
35°	1974	1960	1865	1724	1681	1234
45°	1515	1484	1356	1243	1194	1167
55°	1053	1021	925	816	774	944
65°	625	590	533	544	452	616
75°	251	233	219	208	230	269
85°	35	39	42	46	49	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3055.3	3055.3	3055.3	3055.3	3055.3
2.5°	3034.1	3034.1	3034.1	3030.6	3030.6
5°	3002.3	2998.8	2998.8	2995.3	2995.3
7.5°	2977.6	2974.1	2970.5	2967.0	2959.9
10°	2942.3	2942.3	2938.7	2921.1	2917.5
12.5°	2885.8	2882.2	2868.1	2843.4	2836.3
15°	2808.1	2808.1	2779.8	2751.5	2740.9
17.5°	2723.3	2719.7	2684.4	2656.2	2642.0
20°	2631.4	2624.4	2589.1	2543.1	2518.4
22.5°	2529.0	2529.0	2486.6	2426.6	2401.9
25°	2433.6	2419.5	2380.7	2295.9	2232.3
27.5°	2324.1	2303.0	2260.6	2140.5	2066.3
30°	2204.1	2193.5	2133.4	1978.0	1921.5
32.5°	2091.0	2073.4	2009.8	1847.3	1801.4
35°	1974.5	1960.3	1865.0	1723.7	1681.3
37.5°	1857.9	1840.2	1720.2	1607.1	1554.1
40°	1741.3	1720.2	1589.5	1487.0	1430.5
42.5°	1631.8	1603.6	1476.4	1366.9	1303.4
45°	1515.3	1483.5	1356.3	1243.3	1193.9
47.5°	1398.7	1370.5	1253.9	1137.3	1080.8
50°	1275.1	1250.4	1144.4	1027.9	967.8
52.5°	1172.7	1133.8	1031.4	914.8	865.4
55°	1052.6	1020.8	925.4	815.9	773.5
57.5°	943.1	911.3	823.0	720.6	685.2
60°	840.6	794.7	720.6	632.3	604.0
62.5°	727.6	692.3	628.7	554.5	589.9
65°	625.2	589.9	533.4	543.9	452.1
67.5°	512.2	494.5	445.0	395.6	381.5
70°	416.8	395.6	377.9	325.0	310.8
72.5°	332.0	310.8	286.1	257.8	247.2
75°	250.8	233.1	219.0	208.4	229.6
77.5°	173.1	166.0	155.4	144.8	141.3
80°	113.0	109.5	106.0	102.4	98.9
82.5°	67.1	67.1	67.1	67.1	67.1
85°	35.3	38.9	42.4	45.9	49.4
87.5°	21.2	21.2	24.7	28.3	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)