

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: P562895

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562895
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-35-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7086.0 lumens
Efficiency: N/A
Efficacy: 106.4 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

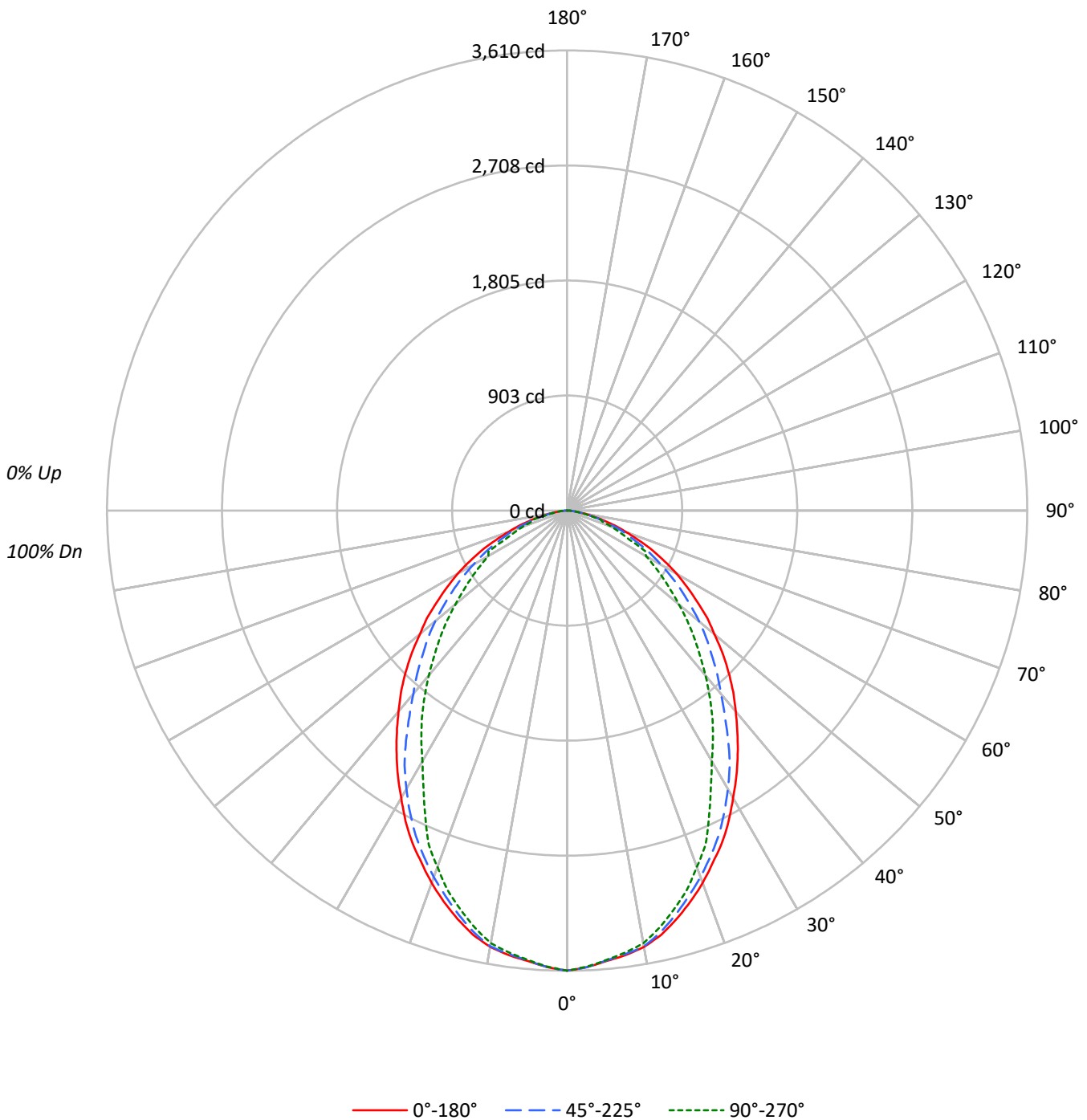
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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											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°	4857	4857	4857
5°	4791	4785	4779
10°	4749	4743	4709
15°	4621	4574	4511
20°	4451	4380	4260
25°	4268	4175	3915
30°	4046	3916	3527
35°	3831	3619	3263
40°	3613	3298	2968
45°	3406	3049	2684
50°	3153	2830	2393
55°	2917	2565	2144
60°	2672	2291	1920
65°	2351	2006	1700
70°	1937	1757	1445
75°	1540	1345	1410
80°	1034	970	905
85°	644	773	902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.0	4.7
10°-20°	922.1	13.0
20°-30°	1276.6	18.0
30°-40°	1361.2	19.2
40°-50°	1241.9	17.5
50°-60°	972.9	13.7
60°-70°	634.1	8.9
70°-80°	280.9	4.0
80°-90°	60.3	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°	2534.7	35.8
0°-40°	3896.0	55.0
0°-60°	6110.7	86.2
0°-90°	7086.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7086.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3610	3610	3610	3610	3610	
5°	3547	3543	3543	3539	3539	337
15°	3317	3317	3284	3251	3238	933
25°	2875	2858	2812	2712	2637	1320
35°	2333	2316	2203	2036	1986	1458
45°	1790	1753	1602	1469	1410	1379
55°	1244	1206	1093	964	914	1115
65°	739	697	630	643	534	728
75°	296	275	259	246	271	318
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3609.5	3609.5	3609.5	3609.5	3609.5
2.5°	3584.5	3584.5	3584.5	3580.3	3580.3
5°	3546.9	3542.7	3542.7	3538.6	3538.6
7.5°	3517.7	3513.5	3509.4	3505.2	3496.8
10°	3476.0	3476.0	3471.8	3450.9	3446.8
12.5°	3409.2	3405.0	3388.4	3359.1	3350.8
15°	3317.4	3317.4	3284.0	3250.6	3238.1
17.5°	3217.3	3213.1	3171.4	3138.0	3121.3
20°	3108.8	3100.4	3058.7	3004.5	2975.2
22.5°	2987.8	2987.8	2937.7	2866.7	2837.5
25°	2875.1	2858.4	2812.5	2712.4	2637.2
27.5°	2745.7	2720.7	2670.6	2528.7	2441.1
30°	2603.9	2591.3	2520.4	2336.8	2270.0
32.5°	2470.3	2449.5	2374.4	2182.4	2128.2
35°	2332.6	2315.9	2203.3	2036.3	1986.3
37.5°	2194.9	2174.1	2032.2	1898.6	1836.1
40°	2057.2	2032.2	1877.8	1756.8	1690.0
42.5°	1927.9	1894.5	1744.3	1614.9	1539.8
45°	1790.2	1752.6	1602.4	1468.8	1410.4
47.5°	1652.4	1619.1	1481.4	1343.7	1276.9
50°	1506.4	1477.2	1352.0	1214.3	1143.4
52.5°	1385.4	1339.5	1218.5	1080.8	1022.3
55°	1243.5	1206.0	1093.3	963.9	913.9
57.5°	1114.2	1076.6	972.3	851.3	809.5
60°	993.1	938.9	851.3	746.9	713.6
62.5°	859.6	817.9	742.8	655.1	696.9
65°	738.6	696.9	630.1	642.6	534.1
67.5°	605.1	584.2	525.8	467.4	450.7
70°	492.4	467.4	446.5	383.9	367.2
72.5°	392.2	367.2	338.0	304.6	292.1
75°	296.3	275.4	258.7	246.2	271.2
77.5°	204.5	196.1	183.6	171.1	166.9
80°	133.5	129.4	125.2	121.0	116.8
82.5°	79.3	79.3	79.3	79.3	79.3
85°	41.7	45.9	50.1	54.2	58.4
87.5°	25.0	25.0	29.2	33.4	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)