

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: P562959

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562959
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7157.0 lumens
Efficiency: N/A
Efficacy: 107.5 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

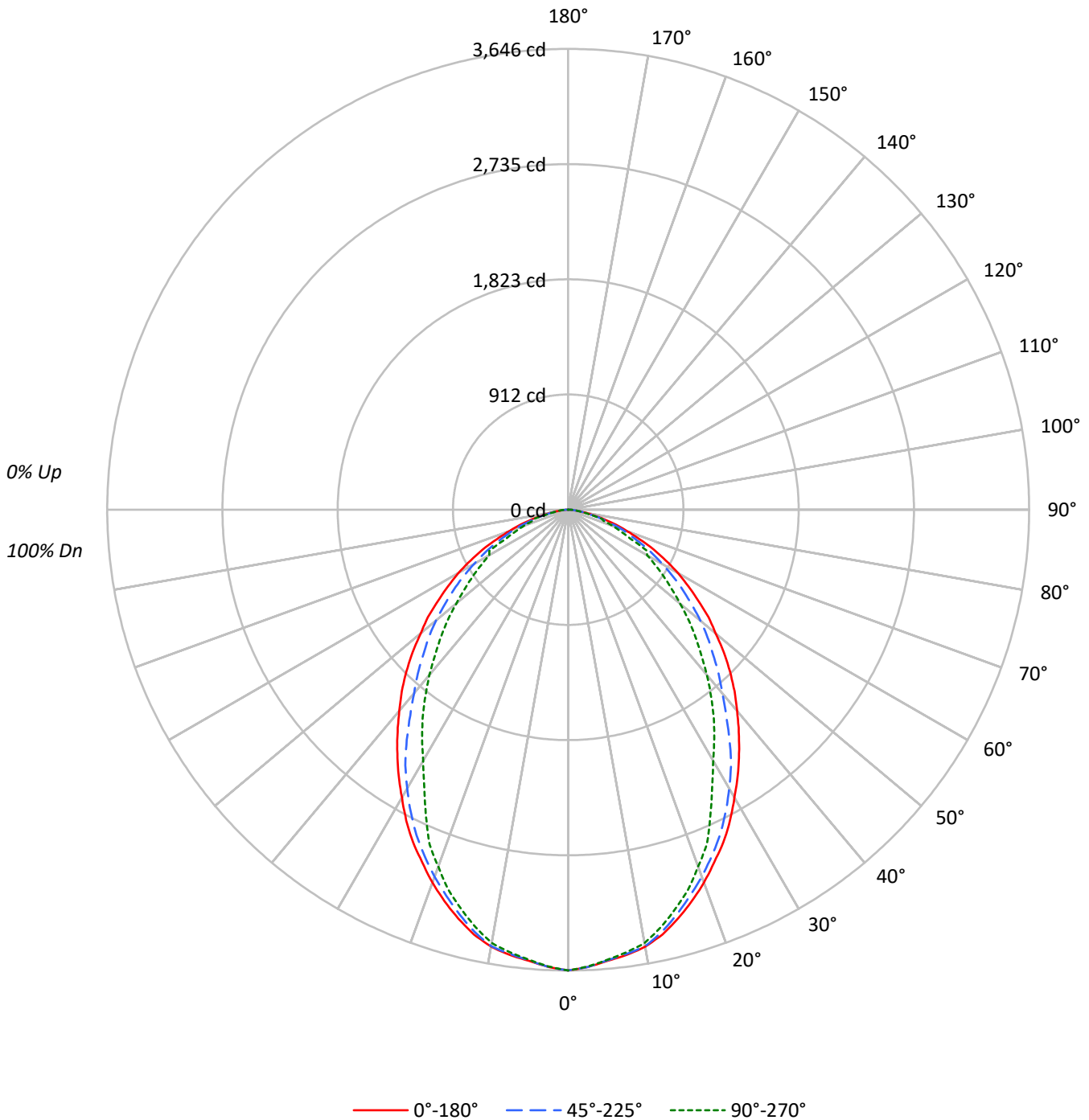
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4905	4905	4905
5°	4839	4833	4827
10°	4797	4791	4756
15°	4667	4620	4556
20°	4496	4423	4303
25°	4311	4217	3954
30°	4086	3955	3562
35°	3870	3655	3295
40°	3649	3331	2998
45°	3440	3080	2711
50°	3185	2858	2417
55°	2946	2590	2165
60°	2699	2314	1939
65°	2375	2026	1718
70°	1956	1774	1459
75°	1555	1358	1424
80°	1045	979	914
85°	650	781	911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3440 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.4	4.7
10°-20°	931.4	13.0
20°-30°	1289.4	18.0
30°-40°	1374.9	19.2
40°-50°	1254.3	17.5
50°-60°	982.6	13.7
60°-70°	640.4	8.9
70°-80°	283.7	4.0
80°-90°	60.9	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°	2560.1	35.8
0°-40°	3935.0	55.0
0°-60°	6171.9	86.2
0°-90°	7157.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7157.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3646	3646	3646	3646	3646	
5°	3582	3578	3578	3574	3574	340
15°	3351	3351	3317	3283	3271	942
25°	2904	2887	2841	2740	2664	1333
35°	2356	2339	2225	2057	2006	1473
45°	1808	1770	1618	1484	1425	1393
55°	1256	1218	1104	974	923	1127
65°	746	704	636	649	540	735
75°	299	278	261	249	274	321
85°	42	46	51	55	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3645.7	3645.7	3645.7	3645.7	3645.7
2.5°	3620.4	3620.4	3620.4	3616.2	3616.2
5°	3582.5	3578.2	3578.2	3574.0	3574.0
7.5°	3553.0	3548.7	3544.5	3540.3	3531.9
10°	3510.8	3510.8	3506.6	3485.5	3481.3
12.5°	3443.4	3439.2	3422.3	3392.8	3384.4
15°	3350.7	3350.7	3316.9	3283.2	3270.6
17.5°	3249.5	3245.3	3203.1	3169.4	3152.6
20°	3139.9	3131.5	3089.3	3034.6	3005.1
22.5°	3017.7	3017.7	2967.1	2895.5	2866.0
25°	2903.9	2887.0	2840.7	2739.5	2663.7
27.5°	2773.2	2748.0	2697.4	2554.1	2465.6
30°	2629.9	2617.3	2545.7	2360.2	2292.8
32.5°	2495.1	2474.0	2398.1	2204.3	2149.5
35°	2356.0	2339.1	2225.3	2056.8	2006.2
37.5°	2216.9	2195.8	2052.5	1917.7	1854.5
40°	2077.8	2052.5	1896.6	1774.4	1706.9
42.5°	1947.2	1913.5	1761.7	1631.1	1555.2
45°	1808.1	1770.2	1618.4	1483.6	1424.6
47.5°	1669.0	1635.3	1496.2	1357.1	1289.7
50°	1521.5	1492.0	1365.5	1226.5	1154.8
52.5°	1399.3	1352.9	1230.7	1091.6	1032.6
55°	1256.0	1218.0	1104.2	973.6	923.0
57.5°	1125.3	1087.4	982.0	859.8	817.6
60°	1003.1	948.3	859.8	754.4	720.7
62.5°	868.2	826.1	750.2	661.7	703.8
65°	746.0	703.8	636.4	649.1	539.5
67.5°	611.1	590.1	531.0	472.0	455.2
70°	497.3	472.0	451.0	387.7	370.9
72.5°	396.2	370.9	341.4	307.7	295.0
75°	299.2	278.2	261.3	248.7	274.0
77.5°	206.5	198.1	185.4	172.8	168.6
80°	134.9	130.7	126.4	122.2	118.0
82.5°	80.1	80.1	80.1	80.1	80.1
85°	42.1	46.4	50.6	54.8	59.0
87.5°	25.3	25.3	29.5	33.7	37.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)