

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: P562983

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562983
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-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7406.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

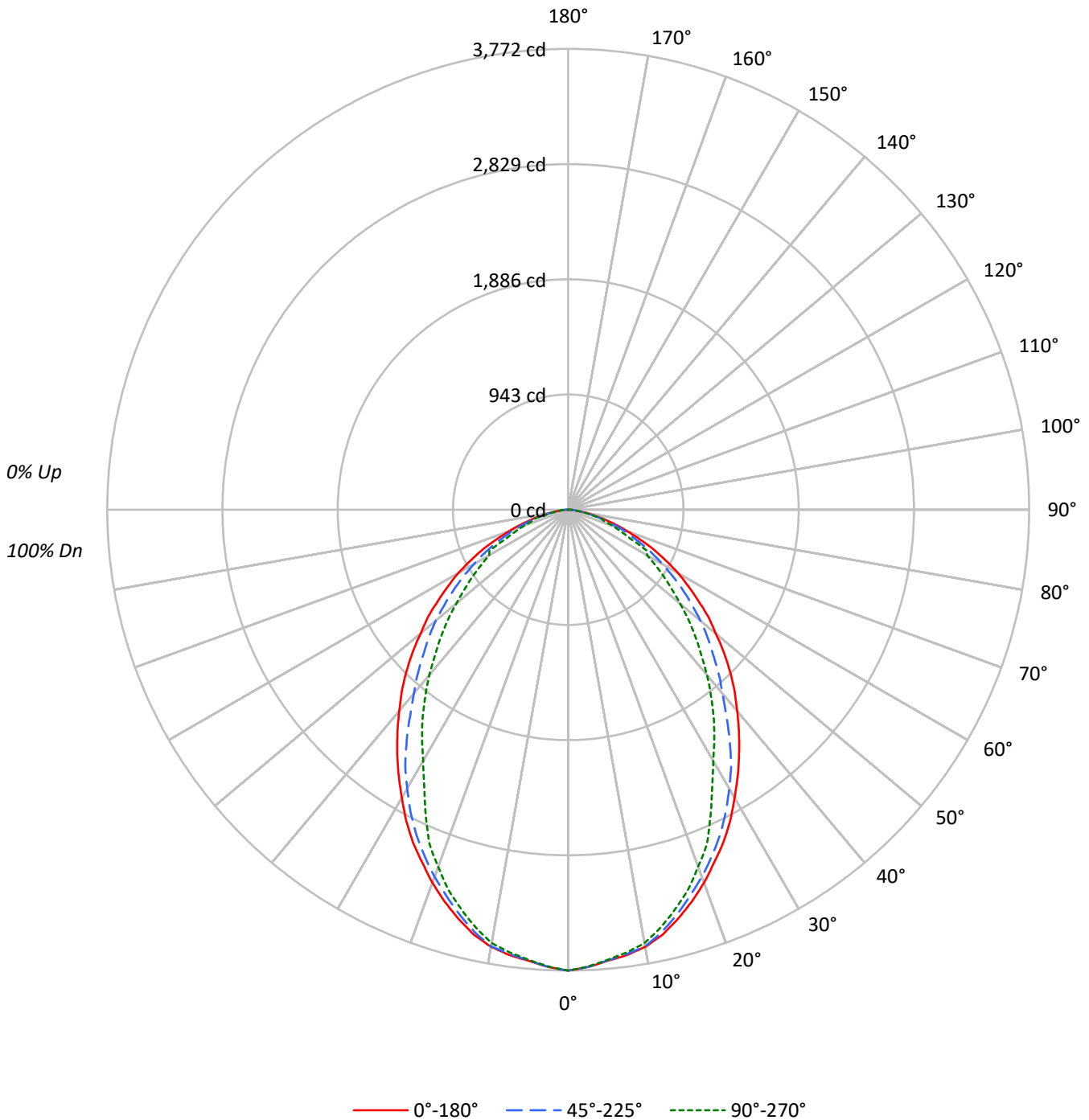
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5076	5076	5076
5°	5007	5001	4995
10°	4964	4958	4922
15°	4830	4781	4714
20°	4652	4577	4452
25°	4461	4364	4092
30°	4228	4093	3686
35°	4005	3782	3410
40°	3776	3447	3102
45°	3560	3187	2805
50°	3296	2958	2501
55°	3049	2681	2240
60°	2793	2394	2007
65°	2457	2097	1777
70°	2024	1836	1510
75°	1610	1406	1474
80°	1082	1013	946
85°	673	807	943

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3560 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.2	4.7
10°-20°	963.8	13.0
20°-30°	1334.3	18.0
30°-40°	1422.7	19.2
40°-50°	1297.9	17.5
50°-60°	1016.8	13.7
60°-70°	662.7	8.9
70°-80°	293.6	4.0
80°-90°	63.1	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°	2649.2	35.8
0°-40°	4071.9	55.0
0°-60°	6386.6	86.2
0°-90°	7406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7406.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3772	3772	3772	3772	3772	
5°	3707	3703	3703	3698	3698	352
15°	3467	3467	3432	3397	3384	975
25°	3005	2988	2940	2835	2756	1380
35°	2438	2420	2303	2128	2076	1524
45°	1871	1832	1675	1535	1474	1441
55°	1300	1260	1143	1008	955	1166
65°	772	728	659	672	558	761
75°	310	288	270	257	284	332
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3772.5	3772.5	3772.5	3772.5	3772.5
2.5°	3746.3	3746.3	3746.3	3742.0	3742.0
5°	3707.1	3702.7	3702.7	3698.4	3698.4
7.5°	3676.6	3672.2	3667.8	3663.5	3654.8
10°	3633.0	3633.0	3628.6	3606.8	3602.4
12.5°	3563.2	3558.8	3541.4	3510.8	3502.1
15°	3467.2	3467.2	3432.3	3397.4	3384.4
17.5°	3362.6	3358.2	3314.6	3279.7	3262.2
20°	3249.2	3240.4	3196.8	3140.1	3109.6
22.5°	3122.7	3122.7	3070.3	2996.2	2965.7
25°	3004.9	2987.5	2939.5	2834.8	2756.3
27.5°	2869.7	2843.6	2791.2	2642.9	2551.4
30°	2721.4	2708.4	2634.2	2442.3	2372.5
32.5°	2581.9	2560.1	2481.6	2281.0	2224.3
35°	2438.0	2420.5	2302.8	2128.3	2076.0
37.5°	2294.0	2272.2	2123.9	1984.4	1919.0
40°	2150.1	2123.9	1962.6	1836.1	1766.3
42.5°	2014.9	1980.0	1823.0	1687.8	1609.3
45°	1871.0	1831.7	1674.7	1535.2	1474.1
47.5°	1727.1	1692.2	1548.3	1404.3	1334.6
50°	1574.4	1543.9	1413.1	1269.1	1195.0
52.5°	1447.9	1400.0	1273.5	1129.6	1068.5
55°	1299.7	1260.4	1142.7	1007.5	955.1
57.5°	1164.5	1125.2	1016.2	889.7	846.1
60°	1038.0	981.3	889.7	780.7	745.8
62.5°	898.4	854.8	776.3	684.7	728.3
65°	771.9	728.3	658.6	671.6	558.2
67.5°	632.4	610.6	549.5	488.5	471.0
70°	514.6	488.5	466.7	401.2	383.8
72.5°	410.0	383.8	353.3	318.4	305.3
75°	309.7	287.8	270.4	257.3	283.5
77.5°	213.7	205.0	191.9	178.8	174.5
80°	139.6	135.2	130.8	126.5	122.1
82.5°	82.9	82.9	82.9	82.9	82.9
85°	43.6	48.0	52.3	56.7	61.1
87.5°	26.2	26.2	30.5	34.9	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)