

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: P562985

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562985
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6669.0 lumens
Efficiency: N/A
Efficacy: 100.1 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

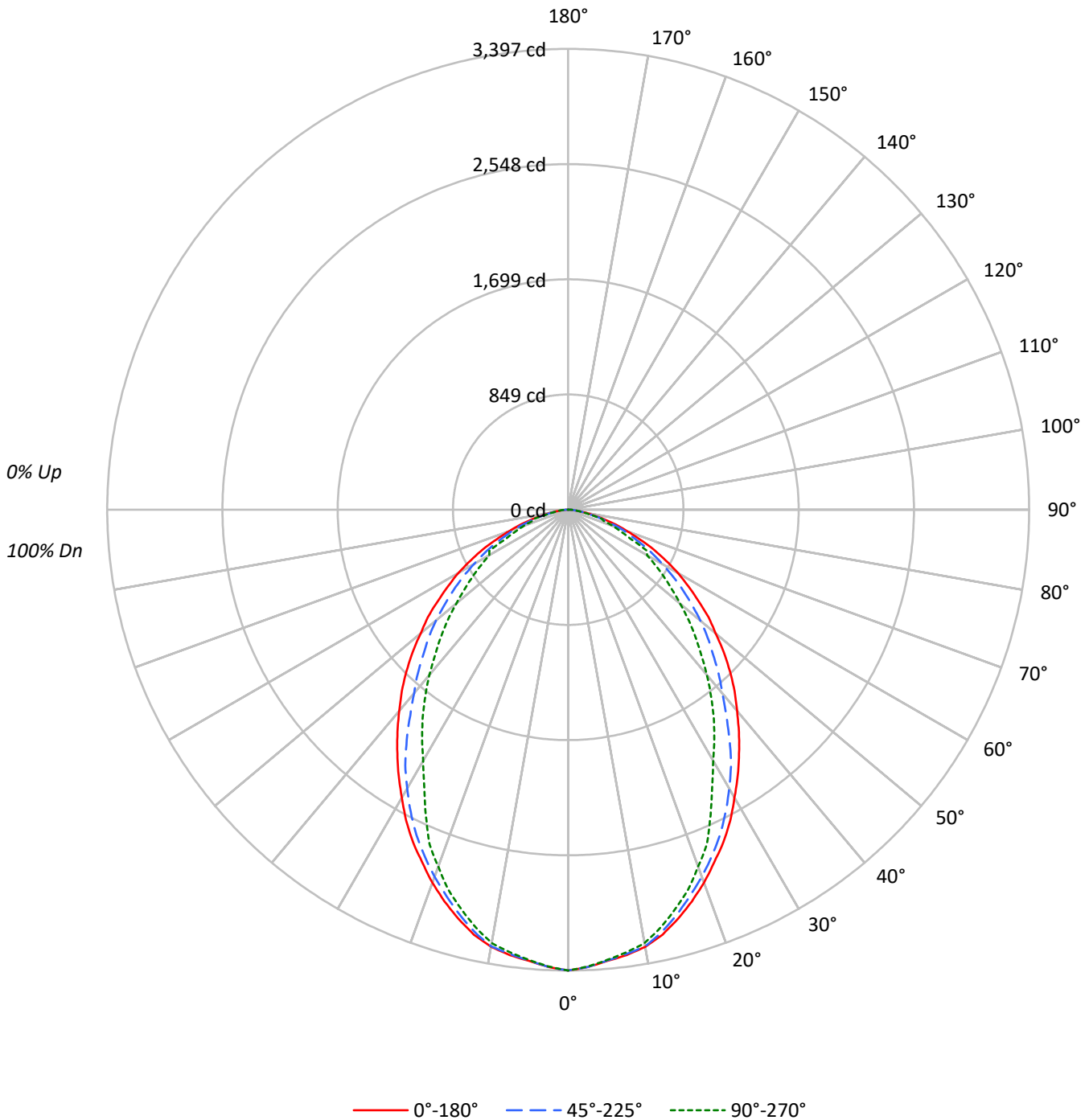
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	4571	4571	4571
5°	4509	4503	4498
10°	4470	4464	4432
15°	4349	4305	4245
20°	4189	4122	4009
25°	4017	3930	3685
30°	3807	3685	3319
35°	3606	3406	3071
40°	3401	3104	2794
45°	3206	2870	2526
50°	2968	2663	2253
55°	2745	2414	2018
60°	2515	2156	1807
65°	2213	1888	1600
70°	1823	1653	1360
75°	1449	1266	1327
80°	974	913	852
85°	607	727	849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.2	4.7
10°-20°	867.9	13.0
20°-30°	1201.5	18.0
30°-40°	1281.1	19.2
40°-50°	1168.8	17.5
50°-60°	915.6	13.7
60°-70°	596.8	8.9
70°-80°	264.4	4.0
80°-90°	56.8	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°	2385.6	35.8
0°-40°	3666.7	55.0
0°-60°	5751.1	86.2
0°-90°	6669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6669.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3397	3397	3397	3397	3397	
5°	3338	3334	3334	3330	3330	317
15°	3122	3122	3091	3059	3048	878
25°	2706	2690	2647	2553	2482	1242
35°	2195	2180	2074	1916	1869	1373
45°	1685	1650	1508	1382	1327	1298
55°	1170	1135	1029	907	860	1050
65°	695	656	593	605	503	685
75°	279	259	244	232	255	299
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3397.1	3397.1	3397.1	3397.1	3397.1
2.5°	3373.5	3373.5	3373.5	3369.6	3369.6
5°	3338.2	3334.3	3334.3	3330.3	3330.3
7.5°	3310.7	3306.8	3302.8	3298.9	3291.1
10°	3271.4	3271.4	3267.5	3247.9	3243.9
12.5°	3208.6	3204.7	3189.0	3161.5	3153.6
15°	3122.2	3122.2	3090.8	3059.4	3047.6
17.5°	3027.9	3024.0	2984.7	2953.3	2937.6
20°	2925.8	2918.0	2878.7	2827.6	2800.2
22.5°	2811.9	2811.9	2764.8	2698.0	2670.6
25°	2705.9	2690.2	2647.0	2552.7	2482.0
27.5°	2584.2	2560.6	2513.5	2379.9	2297.5
30°	2450.6	2438.8	2372.1	2199.3	2136.4
32.5°	2325.0	2305.3	2234.6	2054.0	2002.9
35°	2195.4	2179.6	2073.6	1916.5	1869.4
37.5°	2065.8	2046.1	1912.6	1786.9	1728.0
40°	1936.2	1912.6	1767.3	1653.4	1590.5
42.5°	1814.4	1783.0	1641.6	1519.9	1449.2
45°	1684.8	1649.5	1508.1	1382.4	1327.4
47.5°	1555.2	1523.8	1394.2	1264.6	1201.7
50°	1417.7	1390.3	1272.4	1142.8	1076.1
52.5°	1303.9	1260.7	1146.8	1017.2	962.2
55°	1170.3	1135.0	1028.9	907.2	860.1
57.5°	1048.6	1013.2	915.1	801.2	761.9
60°	934.7	883.6	801.2	703.0	671.6
62.5°	809.0	769.7	699.1	616.6	655.9
65°	695.1	655.9	593.0	604.8	502.7
67.5°	569.5	549.8	494.8	439.9	424.1
70°	463.4	439.9	420.2	361.3	345.6
72.5°	369.2	345.6	318.1	286.7	274.9
75°	278.8	259.2	243.5	231.7	255.3
77.5°	192.4	184.6	172.8	161.0	157.1
80°	125.7	121.7	117.8	113.9	110.0
82.5°	74.6	74.6	74.6	74.6	74.6
85°	39.3	43.2	47.1	51.1	55.0
87.5°	23.6	23.6	27.5	31.4	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)