

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: P562914

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562914
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-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6414.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

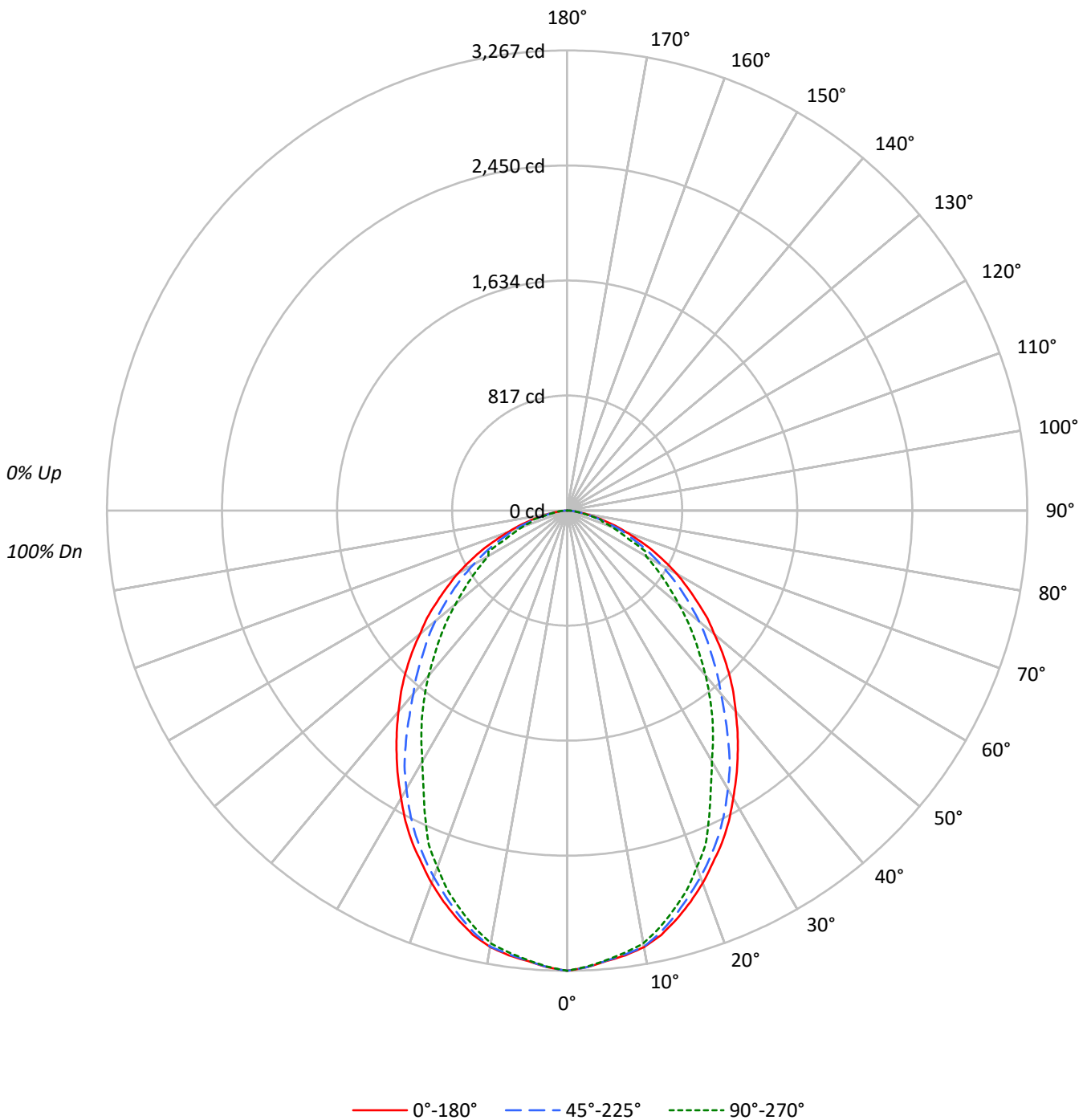
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4396	4396	4396
5°	4336	4331	4326
10°	4299	4294	4263
15°	4183	4141	4083
20°	4029	3964	3856
25°	3863	3779	3544
30°	3662	3544	3192
35°	3468	3276	2953
40°	3271	2985	2687
45°	3083	2760	2429
50°	2854	2562	2166
55°	2640	2321	1940
60°	2419	2073	1738
65°	2128	1816	1539
70°	1753	1590	1308
75°	1394	1218	1276
80°	937	878	820
85°	584	699	817

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3083 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.1	4.7
10°-20°	834.7	13.0
20°-30°	1155.5	18.0
30°-40°	1232.1	19.2
40°-50°	1124.1	17.5
50°-60°	880.6	13.7
60°-70°	573.9	8.9
70°-80°	254.3	4.0
80°-90°	54.6	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°	2294.3	35.8
0°-40°	3526.5	55.0
0°-60°	5531.2	86.2
0°-90°	6414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3267	3267	3267	3267	3267	
5°	3210	3207	3207	3203	3203	305
15°	3003	3003	2973	2942	2931	844
25°	2602	2587	2546	2455	2387	1195
35°	2111	2096	1994	1843	1798	1320
45°	1620	1586	1450	1330	1277	1248
55°	1126	1092	990	872	827	1010
65°	668	631	570	582	484	659
75°	268	249	234	223	246	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3267.2	3267.2	3267.2	3267.2	3267.2
2.5°	3244.5	3244.5	3244.5	3240.8	3240.8
5°	3210.5	3206.8	3206.8	3203.0	3203.0
7.5°	3184.1	3180.3	3176.6	3172.8	3165.2
10°	3146.3	3146.3	3142.6	3123.7	3119.9
12.5°	3085.9	3082.1	3067.0	3040.6	3033.0
15°	3002.8	3002.8	2972.6	2942.4	2931.0
17.5°	2912.2	2908.4	2870.6	2840.4	2825.3
20°	2814.0	2806.4	2768.6	2719.5	2693.1
22.5°	2704.4	2704.4	2659.1	2594.9	2568.4
25°	2602.4	2587.3	2545.8	2455.1	2387.1
27.5°	2485.3	2462.7	2417.4	2288.9	2209.6
30°	2356.9	2345.6	2281.4	2115.2	2054.8
32.5°	2236.1	2217.2	2149.2	1975.4	1926.3
35°	2111.4	2096.3	1994.3	1843.2	1797.9
37.5°	1986.8	1967.9	1839.5	1718.6	1661.9
40°	1862.1	1839.5	1699.7	1590.2	1529.7
42.5°	1745.0	1714.8	1578.8	1461.7	1393.8
45°	1620.4	1586.4	1450.4	1329.5	1276.7
47.5°	1495.7	1465.5	1340.9	1216.2	1155.8
50°	1363.5	1337.1	1223.8	1099.1	1034.9
52.5°	1254.0	1212.5	1102.9	978.3	925.4
55°	1125.6	1091.6	989.6	872.5	827.2
57.5°	1008.5	974.5	880.1	770.5	732.8
60°	899.0	849.9	770.5	676.1	645.9
62.5°	778.1	740.3	672.3	593.0	630.8
65°	668.5	630.8	570.3	581.7	483.5
67.5°	547.7	528.8	475.9	423.0	407.9
70°	445.7	423.0	404.2	347.5	332.4
72.5°	355.0	332.4	305.9	275.7	264.4
75°	268.2	249.3	234.2	222.8	245.5
77.5°	185.1	177.5	166.2	154.9	151.1
80°	120.9	117.1	113.3	109.5	105.8
82.5°	71.8	71.8	71.8	71.8	71.8
85°	37.8	41.5	45.3	49.1	52.9
87.5°	22.7	22.7	26.4	30.2	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)