

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: P562986

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562986
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-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6652.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

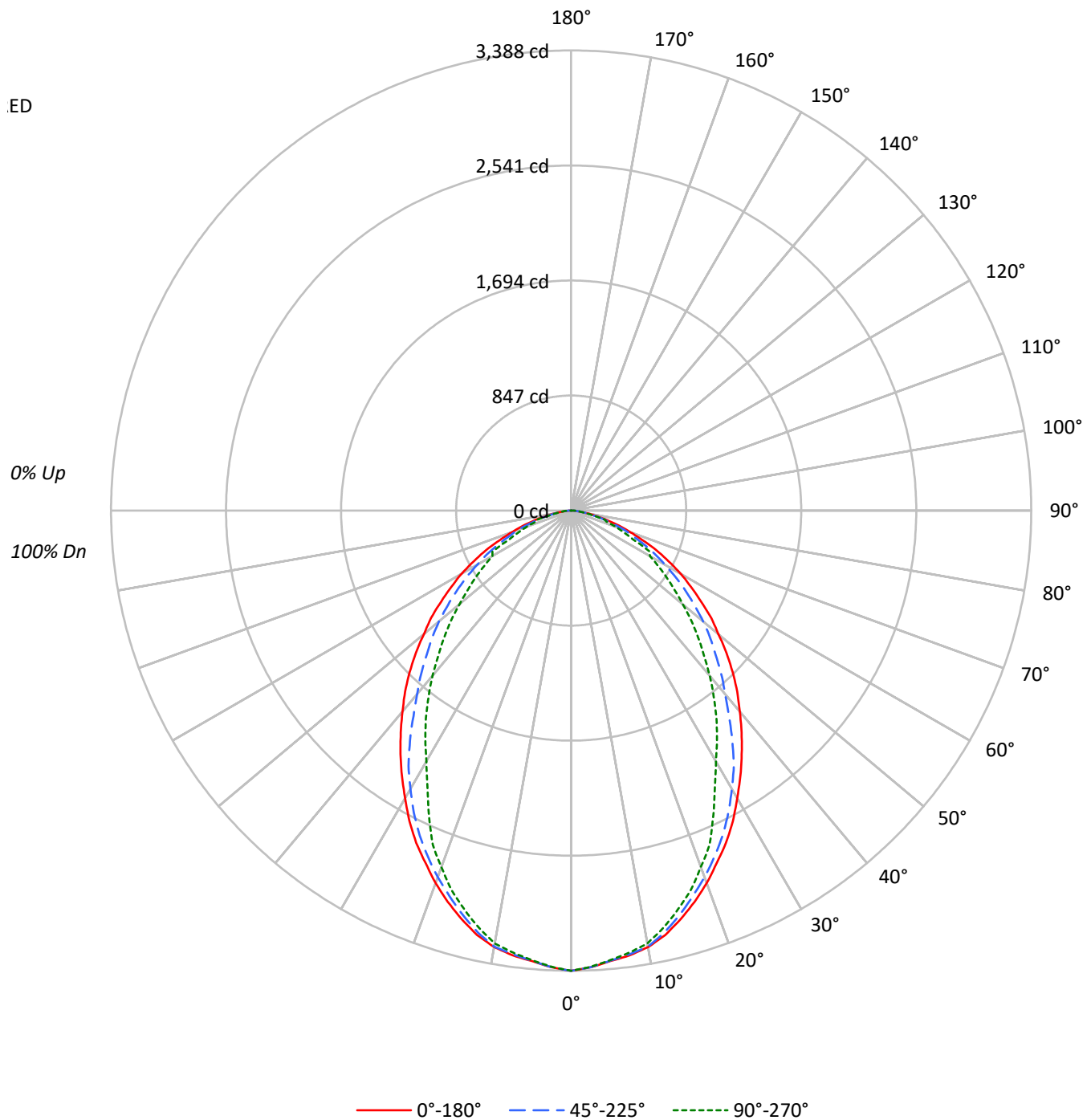
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4559	4559	4559
5°	4497	4492	4487
10°	4458	4453	4421
15°	4338	4294	4234
20°	4179	4111	3999
25°	4007	3920	3675
30°	3798	3676	3311
35°	3597	3397	3063
40°	3392	3096	2787
45°	3198	2862	2519
50°	2960	2657	2247
55°	2738	2407	2012
60°	2509	2150	1803
65°	2208	1883	1596
70°	1818	1649	1356
75°	1446	1263	1324
80°	972	910	850
85°	605	726	846

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3198 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.4	4.7
10°-20°	865.6	13.0
20°-30°	1198.4	18.0
30°-40°	1277.9	19.2
40°-50°	1165.8	17.5
50°-60°	913.3	13.7
60°-70°	595.2	8.9
70°-80°	263.7	4.0
80°-90°	56.6	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°	2379.5	35.8
0°-40°	3657.3	55.0
0°-60°	5736.4	86.2
0°-90°	6652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3388	3388	3388	3388	3388	
5°	3330	3326	3326	3322	3322	316
15°	3114	3114	3083	3052	3040	875
25°	2699	2683	2640	2546	2476	1239
35°	2190	2174	2068	1912	1865	1369
45°	1680	1645	1504	1379	1324	1294
55°	1167	1132	1026	905	858	1047
65°	693	654	592	603	501	683
75°	278	258	243	231	255	298
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°	3388.4	3388.4	3388.4	3388.4	3388.4
2.5°	3364.9	3364.9	3364.9	3361.0	3361.0
5°	3329.7	3325.8	3325.8	3321.8	3321.8
7.5°	3302.3	3298.3	3294.4	3290.5	3282.7
10°	3263.1	3263.1	3259.2	3239.6	3235.7
12.5°	3200.4	3196.5	3180.8	3153.4	3145.6
15°	3114.2	3114.2	3082.9	3051.6	3039.8
17.5°	3020.2	3016.3	2977.1	2945.8	2930.1
20°	2918.4	2910.5	2871.4	2820.4	2793.0
22.5°	2804.8	2804.8	2757.8	2691.2	2663.7
25°	2699.0	2683.3	2640.2	2546.2	2475.7
27.5°	2577.6	2554.1	2507.1	2373.9	2291.6
30°	2444.4	2432.6	2366.0	2193.7	2131.0
32.5°	2319.0	2299.4	2228.9	2048.7	1997.8
35°	2189.8	2174.1	2068.3	1911.6	1864.6
37.5°	2060.5	2040.9	1907.7	1782.4	1723.6
40°	1931.2	1907.7	1762.8	1649.2	1586.5
42.5°	1809.8	1778.4	1637.4	1516.0	1445.5
45°	1680.5	1645.3	1504.2	1378.9	1324.0
47.5°	1551.2	1519.9	1390.6	1261.4	1198.7
50°	1414.1	1386.7	1269.2	1139.9	1073.3
52.5°	1300.5	1257.4	1143.8	1014.6	959.7
55°	1167.3	1132.1	1026.3	904.9	857.9
57.5°	1045.9	1010.7	912.7	799.1	760.0
60°	932.3	881.4	799.1	701.2	669.9
62.5°	807.0	767.8	697.3	615.0	654.2
65°	693.4	654.2	591.5	603.3	501.4
67.5°	568.0	548.4	493.6	438.7	423.1
70°	462.2	438.7	419.1	360.4	344.7
72.5°	368.2	344.7	317.3	286.0	274.2
75°	278.1	258.5	242.9	231.1	254.6
77.5°	191.9	184.1	172.4	160.6	156.7
80°	125.4	121.4	117.5	113.6	109.7
82.5°	74.4	74.4	74.4	74.4	74.4
85°	39.2	43.1	47.0	50.9	54.8
87.5°	23.5	23.5	27.4	31.3	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)