

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: P563050

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563050
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7005.0 lumens
Efficiency: N/A
Efficacy: 105.2 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

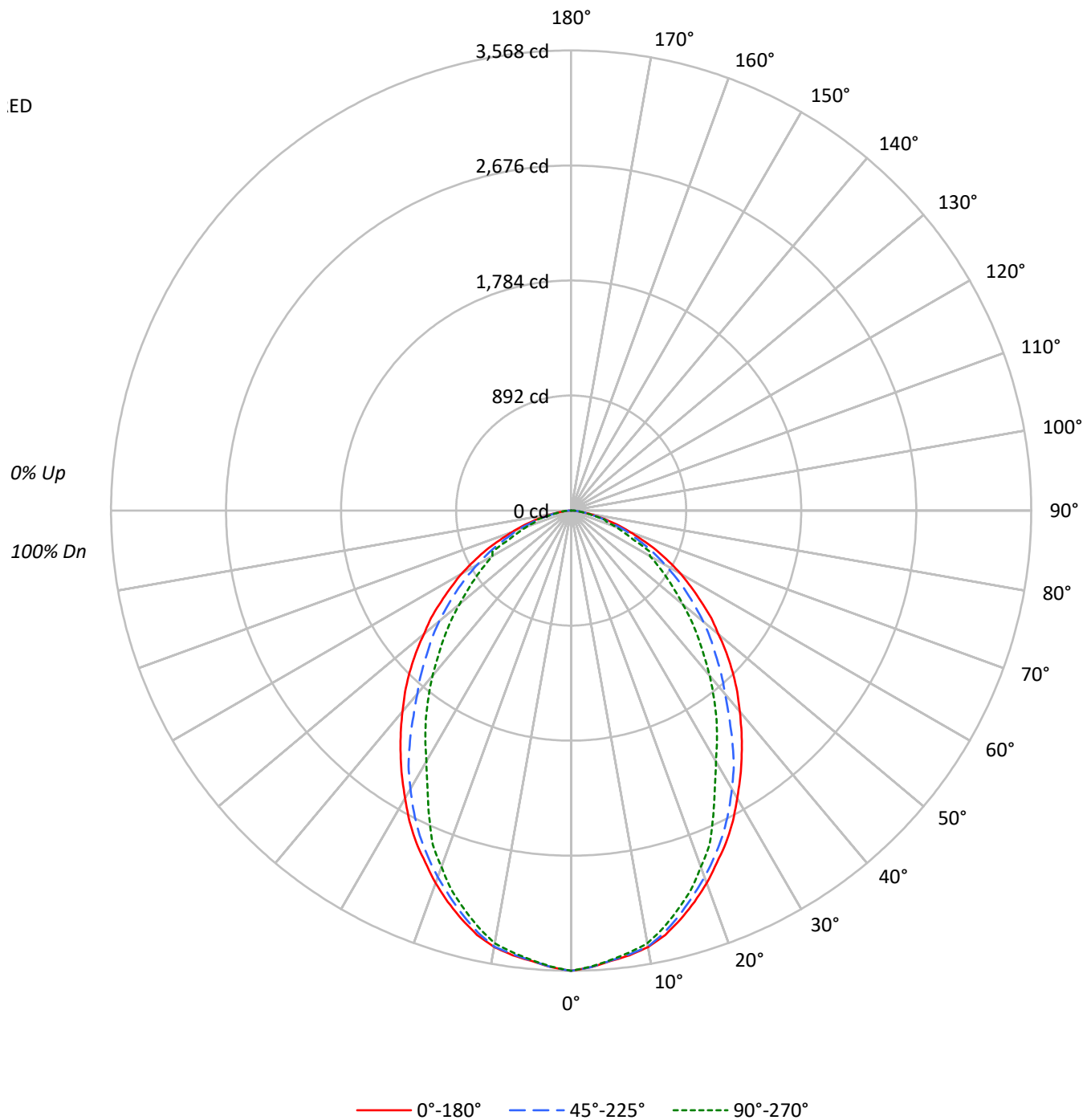
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4801	4801	4801
5°	4736	4730	4725
10°	4695	4689	4655
15°	4568	4522	4459
20°	4400	4329	4211
25°	4219	4128	3870
30°	3999	3871	3487
35°	3788	3578	3225
40°	3572	3260	2934
45°	3367	3014	2653
50°	3117	2798	2366
55°	2884	2535	2119
60°	2642	2264	1898
65°	2325	1983	1681
70°	1915	1736	1428
75°	1523	1330	1394
80°	1023	959	895
85°	638	764	892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3367 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	332.2	4.7
10°-20°	911.6	13.0
20°-30°	1262.0	18.0
30°-40°	1345.7	19.2
40°-50°	1227.7	17.5
50°-60°	961.8	13.7
60°-70°	626.8	8.9
70°-80°	277.7	4.0
80°-90°	59.6	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°	2505.7	35.8
0°-40°	3851.4	55.0
0°-60°	6040.8	86.2
0°-90°	7005.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7005.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3568	3568	3568	3568	3568	
5°	3506	3502	3502	3498	3498	333
15°	3280	3280	3246	3214	3201	922
25°	2842	2826	2780	2681	2607	1305
35°	2306	2290	2178	2013	1964	1442
45°	1770	1733	1584	1452	1394	1363
55°	1229	1192	1081	953	903	1103
65°	730	689	623	635	528	720
75°	293	272	256	243	268	314
85°	41	45	50	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3568.3	3568.3	3568.3	3568.3	3568.3
2.5°	3543.5	3543.5	3543.5	3539.4	3539.4
5°	3506.4	3502.3	3502.3	3498.1	3498.1
7.5°	3477.5	3473.4	3469.2	3465.1	3456.9
10°	3436.2	3436.2	3432.1	3411.5	3407.4
12.5°	3370.2	3366.1	3349.6	3320.7	3312.5
15°	3279.5	3279.5	3246.5	3213.5	3201.1
17.5°	3180.5	3176.4	3135.1	3102.1	3085.6
20°	3073.2	3065.0	3023.7	2970.1	2941.2
22.5°	2953.6	2953.6	2904.1	2834.0	2805.1
25°	2842.2	2825.7	2780.4	2681.3	2607.1
27.5°	2714.3	2689.6	2640.1	2499.8	2413.2
30°	2574.1	2561.7	2491.6	2310.1	2244.1
32.5°	2442.1	2421.5	2347.2	2157.5	2103.8
35°	2306.0	2289.5	2178.1	2013.1	1963.6
37.5°	2169.8	2149.2	2008.9	1876.9	1815.1
40°	2033.7	2008.9	1856.3	1736.7	1670.7
42.5°	1905.8	1872.8	1724.3	1596.4	1522.2
45°	1769.7	1732.6	1584.1	1452.1	1394.3
47.5°	1633.6	1600.6	1464.4	1328.3	1262.3
50°	1489.2	1460.3	1336.5	1200.4	1130.3
52.5°	1369.5	1324.2	1204.5	1068.4	1010.7
55°	1229.3	1192.2	1080.8	952.9	903.4
57.5°	1101.4	1064.3	961.2	841.5	800.3
60°	981.8	928.2	841.5	738.4	705.4
62.5°	849.8	808.5	734.3	647.6	688.9
65°	730.2	688.9	622.9	635.3	528.0
67.5°	598.1	577.5	519.8	462.0	445.5
70°	486.8	462.0	441.4	379.5	363.0
72.5°	387.8	363.0	334.1	301.1	288.8
75°	292.9	272.3	255.8	243.4	268.1
77.5°	202.1	193.9	181.5	169.1	165.0
80°	132.0	127.9	123.8	119.6	115.5
82.5°	78.4	78.4	78.4	78.4	78.4
85°	41.3	45.4	49.5	53.6	57.8
87.5°	24.8	24.8	28.9	33.0	37.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)