

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: P561845

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561845
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-12-4-LD4-2STD-50-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6612.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

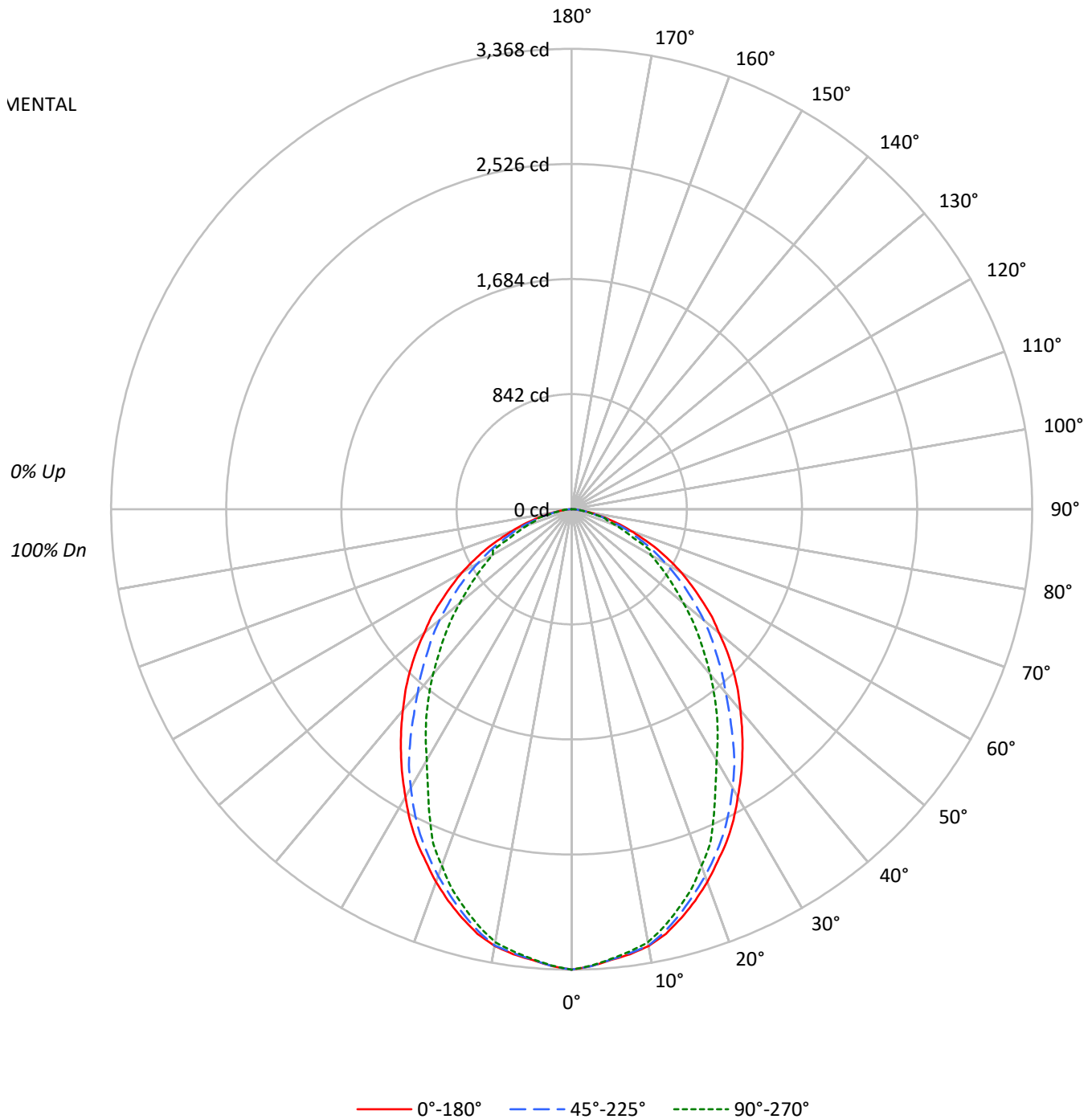
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9063	9063	9063
5°	8940	8930	8919
10°	8863	8852	8788
15°	8624	8537	8418
20°	8307	8173	7950
25°	7966	7792	7307
30°	7550	7308	6582
35°	7150	6754	6089
40°	6743	6155	5540
45°	6357	5690	5009
50°	5884	5282	4466
55°	5444	4786	4001
60°	4987	4275	3583
65°	4388	3744	3174
70°	3615	3278	2696
75°	2875	2510	2632
80°	1931	1810	1689
85°	1201	1442	1683

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6357 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.5	4.7
10°-20°	860.4	13.0
20°-30°	1191.2	18.0
30°-40°	1270.2	19.2
40°-50°	1158.8	17.5
50°-60°	907.8	13.7
60°-70°	591.7	8.9
70°-80°	262.1	4.0
80°-90°	56.3	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°	2365.2	35.8
0°-40°	3635.3	55.0
0°-60°	5701.9	86.2
0°-90°	6612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3368	3368	3368	3368	3368	
5°	3310	3306	3306	3302	3302	314
15°	3096	3096	3064	3033	3022	870
25°	2683	2667	2624	2531	2461	1232
35°	2177	2161	2056	1900	1853	1361
45°	1670	1635	1495	1371	1316	1287
55°	1160	1125	1020	899	853	1041
65°	689	650	588	600	498	679
75°	276	257	241	230	253	296
85°	39	43	47	51	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3368.1	3368.1	3368.1	3368.1	3368.1
2.5°	3344.7	3344.7	3344.7	3340.8	3340.8
5°	3309.7	3305.8	3305.8	3301.9	3301.9
7.5°	3282.4	3278.5	3274.6	3270.7	3262.9
10°	3243.5	3243.5	3239.6	3220.1	3216.2
12.5°	3181.2	3177.3	3161.7	3134.4	3126.7
15°	3095.5	3095.5	3064.4	3033.2	3021.5
17.5°	3002.1	2998.2	2959.2	2928.1	2912.5
20°	2900.8	2893.0	2854.1	2803.5	2776.2
22.5°	2787.9	2787.9	2741.2	2675.0	2647.7
25°	2682.8	2667.2	2624.4	2530.9	2460.8
27.5°	2562.1	2538.7	2492.0	2359.6	2277.8
30°	2429.7	2418.0	2351.8	2180.5	2118.2
32.5°	2305.1	2285.6	2215.5	2036.4	1985.8
35°	2176.6	2161.0	2055.9	1900.1	1853.4
37.5°	2048.1	2028.6	1896.2	1771.6	1713.2
40°	1919.6	1896.2	1752.2	1639.3	1577.0
42.5°	1798.9	1767.7	1627.6	1506.9	1436.8
45°	1670.4	1635.4	1495.2	1370.6	1316.1
47.5°	1541.9	1510.8	1382.3	1253.8	1191.5
50°	1405.6	1378.4	1261.6	1133.1	1066.9
52.5°	1292.7	1249.9	1137.0	1008.5	954.0
55°	1160.3	1125.3	1020.2	899.4	852.7
57.5°	1039.6	1004.6	907.2	794.3	755.4
60°	926.7	876.1	794.3	697.0	665.8
62.5°	802.1	763.2	693.1	611.3	650.3
65°	689.2	650.3	588.0	599.6	498.4
67.5°	564.6	545.1	490.6	436.1	420.5
70°	459.5	436.1	416.6	358.2	342.6
72.5°	366.0	342.6	315.4	284.2	272.6
75°	276.5	257.0	241.4	229.7	253.1
77.5°	190.8	183.0	171.3	159.6	155.7
80°	124.6	120.7	116.8	112.9	109.0
82.5°	74.0	74.0	74.0	74.0	74.0
85°	38.9	42.8	46.7	50.6	54.5
87.5°	23.4	23.4	27.3	31.1	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)