

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: P590924

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-82-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-35-UNV-82-97-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7086.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

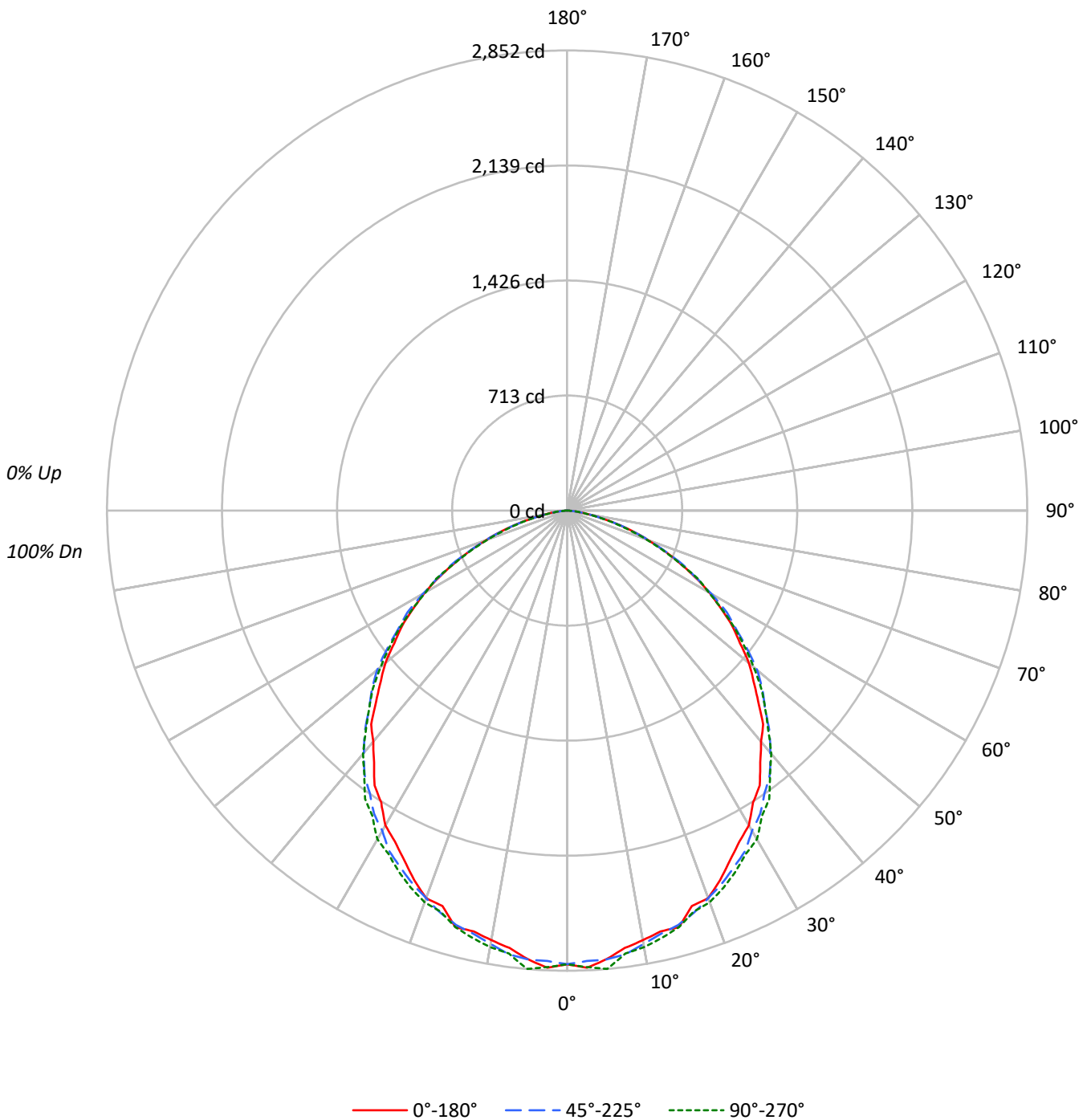
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7566	7566	7566
5°	7541	7544	7703
10°	7388	7452	7505
15°	7446	7406	7447
20°	7320	7320	7399
25°	7095	7251	7331
30°	6998	7121	7310
35°	6833	7012	7169
40°	6567	6884	6914
45°	6369	6595	6605
50°	6159	6437	6314
55°	5869	5983	5940
60°	5488	5543	5443
65°	4893	5018	4859
70°	4198	4212	4096
75°	3325	3318	3189
80°	2228	2166	2081
85°	1210	1198	1121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6765 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.5	3.7
10°-20°	749.5	10.6
20°-30°	1123.0	15.8
30°-40°	1330.9	18.8
40°-50°	1333.4	18.8
50°-60°	1131.8	16.0
60°-70°	763.1	10.8
70°-80°	335.3	4.7
80°-90°	54.5	0.8
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°	2137.0	30.2
0°-40°	3467.9	48.9
0°-60°	5933.1	83.7
0°-90°	7086.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7086.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2812	2812	2812	2812	2812	
5°	2792	2785	2793	2784	2852	263
15°	2673	2642	2658	2672	2673	745
25°	2390	2403	2442	2474	2469	1105
35°	2080	2086	2134	2184	2182	1291
45°	1674	1705	1733	1778	1736	1295
55°	1251	1243	1275	1267	1266	1113
65°	768	758	788	758	763	764
75°	320	313	319	297	307	343
85°	39	38	39	38	36	57
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2811.5	2811.5	2811.5	2811.5	2811.5
2.5°	2835.9	2814.4	2794.5	2817.7	2831.9
5°	2791.6	2785.0	2792.7	2784.3	2851.5
7.5°	2734.2	2759.3	2773.8	2764.7	2768.7
10°	2703.7	2695.0	2727.3	2749.8	2746.6
12.5°	2671.1	2684.1	2685.9	2710.3	2712.4
15°	2672.9	2642.0	2658.4	2672.1	2673.2
17.5°	2569.1	2602.4	2613.7	2645.3	2606.1
20°	2556.3	2532.0	2556.3	2588.7	2583.6
22.5°	2478.3	2451.1	2503.3	2532.0	2530.2
25°	2389.7	2402.8	2442.0	2473.9	2468.9
27.5°	2312.0	2327.3	2383.2	2427.1	2398.8
30°	2252.1	2244.5	2291.7	2330.9	2352.7
32.5°	2145.1	2172.6	2227.8	2266.7	2246.0
35°	2080.1	2086.2	2134.5	2183.9	2182.4
37.5°	1966.4	1995.1	2063.0	2076.8	2064.1
40°	1869.5	1898.2	1959.6	1974.4	1968.3
42.5°	1798.0	1803.1	1855.7	1872.8	1845.6
45°	1673.5	1704.7	1733.0	1777.7	1735.6
47.5°	1567.5	1582.0	1643.0	1655.0	1632.8
50°	1471.3	1476.4	1537.7	1522.8	1508.3
52.5°	1350.4	1371.8	1406.3	1403.4	1386.4
55°	1250.9	1242.6	1275.3	1266.6	1266.2
57.5°	1131.5	1146.0	1172.9	1159.1	1137.0
60°	1019.7	1020.1	1029.9	1014.3	1011.4
62.5°	895.2	899.5	901.7	882.5	913.7
65°	768.5	758.3	788.1	758.0	763.1
67.5°	652.0	657.1	654.2	635.3	642.5
70°	533.6	540.2	535.4	514.0	520.6
72.5°	425.5	417.5	422.5	395.7	408.0
75°	319.8	313.3	319.1	296.6	306.7
77.5°	217.8	222.9	219.3	207.3	214.2
80°	143.8	139.8	139.8	132.9	134.3
82.5°	83.9	79.9	78.8	76.6	79.9
85°	39.2	38.1	38.8	37.8	36.3
87.5°	14.2	14.5	14.5	13.8	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)