

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: P590759

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590759
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-LD4-4HI-40-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8714.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

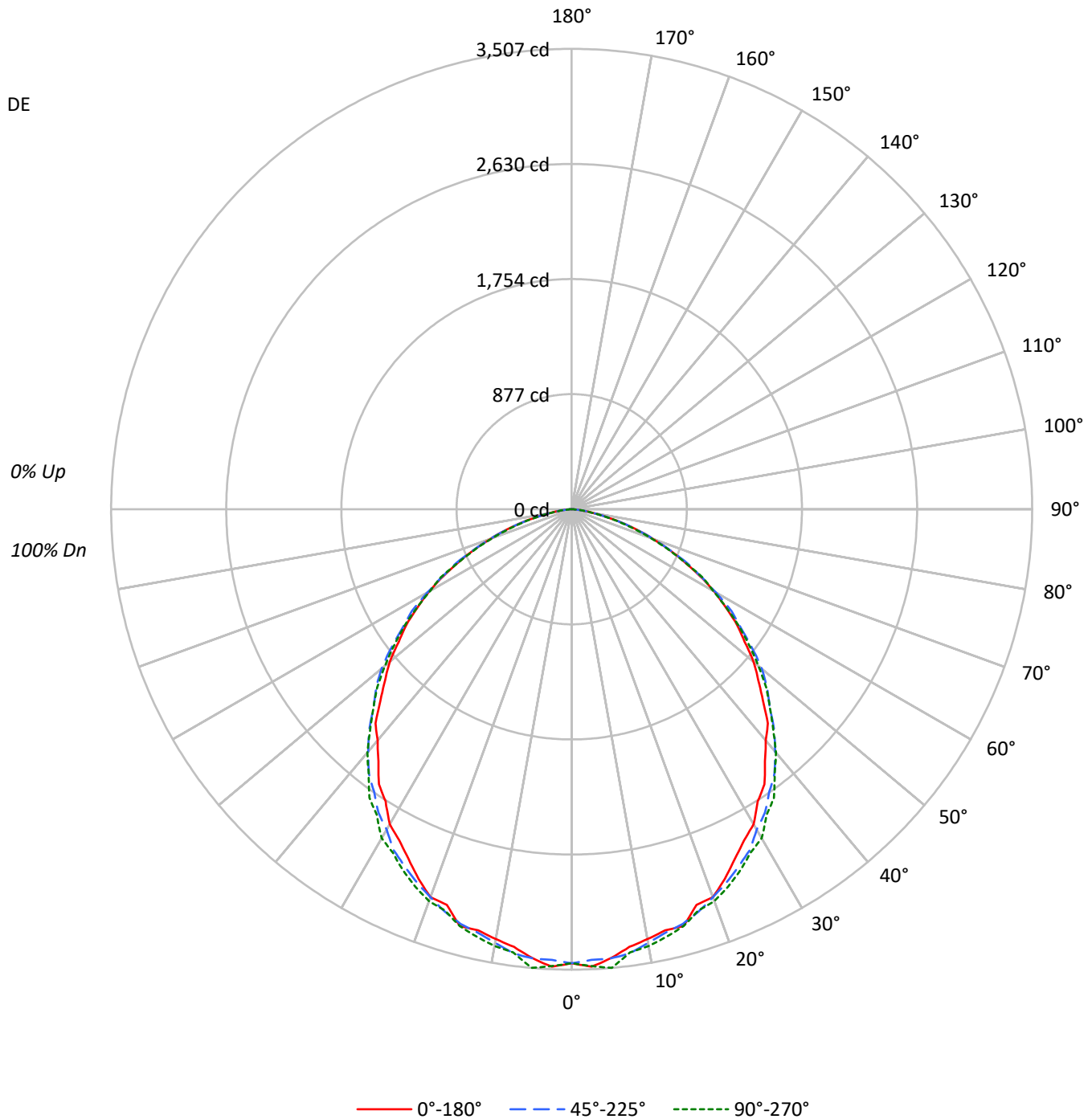
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9304	9304	9304
5°	9273	9277	9472
10°	9085	9165	9229
15°	9157	9107	9158
20°	9003	9003	9098
25°	8726	8916	9015
30°	8606	8757	8990
35°	8403	8623	8817
40°	8076	8465	8503
45°	7832	8111	8122
50°	7574	7917	7765
55°	7218	7358	7305
60°	6749	6816	6694
65°	6018	6171	5975
70°	5163	5181	5037
75°	4089	4080	3922
80°	2740	2664	2560
85°	1488	1476	1377

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8319 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.2	3.7
10°-20°	921.7	10.6
20°-30°	1381.0	15.8
30°-40°	1636.7	18.8
40°-50°	1639.8	18.8
50°-60°	1391.9	16.0
60°-70°	938.4	10.8
70°-80°	412.3	4.7
80°-90°	67.0	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°	2627.9	30.2
0°-40°	4264.6	48.9
0°-60°	7296.3	83.7
0°-90°	8714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8714.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3458	3458	3458	3458	3458	
5°	3433	3425	3434	3424	3507	324
15°	3287	3249	3269	3286	3287	916
25°	2939	2955	3003	3042	3036	1359
35°	2558	2566	2625	2686	2684	1588
45°	2058	2096	2131	2186	2134	1592
55°	1538	1528	1568	1558	1557	1368
65°	945	933	969	932	938	940
75°	393	385	392	365	377	421
85°	48	47	48	46	45	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3457.5	3457.5	3457.5	3457.5	3457.5
2.5°	3487.4	3461.1	3436.5	3465.1	3482.5
5°	3432.9	3424.9	3434.3	3424.0	3506.6
7.5°	3362.4	3393.2	3411.1	3399.9	3404.8
10°	3324.9	3314.2	3353.9	3381.6	3377.6
12.5°	3284.7	3300.8	3303.0	3332.9	3335.6
15°	3287.0	3249.0	3269.1	3286.1	3287.4
17.5°	3159.3	3200.4	3214.2	3253.0	3204.8
20°	3143.7	3113.8	3143.7	3183.4	3177.1
22.5°	3047.7	3014.2	3078.5	3113.8	3111.5
25°	2938.8	2954.8	3003.0	3042.3	3036.1
27.5°	2843.2	2862.0	2930.7	2984.7	2949.9
30°	2769.6	2760.2	2818.2	2866.4	2893.2
32.5°	2637.9	2671.8	2739.7	2787.4	2762.0
35°	2558.0	2565.6	2624.9	2685.6	2683.9
37.5°	2418.2	2453.5	2537.0	2553.9	2538.3
40°	2299.0	2334.3	2409.8	2428.1	2420.5
42.5°	2211.1	2217.4	2282.1	2303.1	2269.6
45°	2058.0	2096.4	2131.2	2186.1	2134.3
47.5°	1927.6	1945.5	2020.5	2035.2	2008.0
50°	1809.3	1815.6	1891.0	1872.7	1854.9
52.5°	1660.7	1687.0	1729.4	1725.8	1704.9
55°	1538.4	1528.1	1568.3	1557.5	1557.1
57.5°	1391.5	1409.3	1442.4	1425.4	1398.2
60°	1254.0	1254.4	1266.5	1247.3	1243.7
62.5°	1100.9	1106.2	1108.9	1085.2	1123.6
65°	945.1	932.6	969.2	932.1	938.4
67.5°	801.8	808.0	804.4	781.2	790.2
70°	656.2	664.3	658.5	632.1	640.2
72.5°	523.2	513.4	519.6	486.6	501.8
75°	393.3	385.3	392.4	364.7	377.2
77.5°	267.8	274.1	269.6	254.9	263.4
80°	176.8	171.9	171.9	163.4	165.2
82.5°	103.1	98.2	96.9	94.2	98.2
85°	48.2	46.9	47.8	46.4	44.6
87.5°	17.4	17.9	17.9	17.0	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)