

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: P590784

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590784
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-50-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8759.0 lumens
Efficiency: N/A
Efficacy: 101.4 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

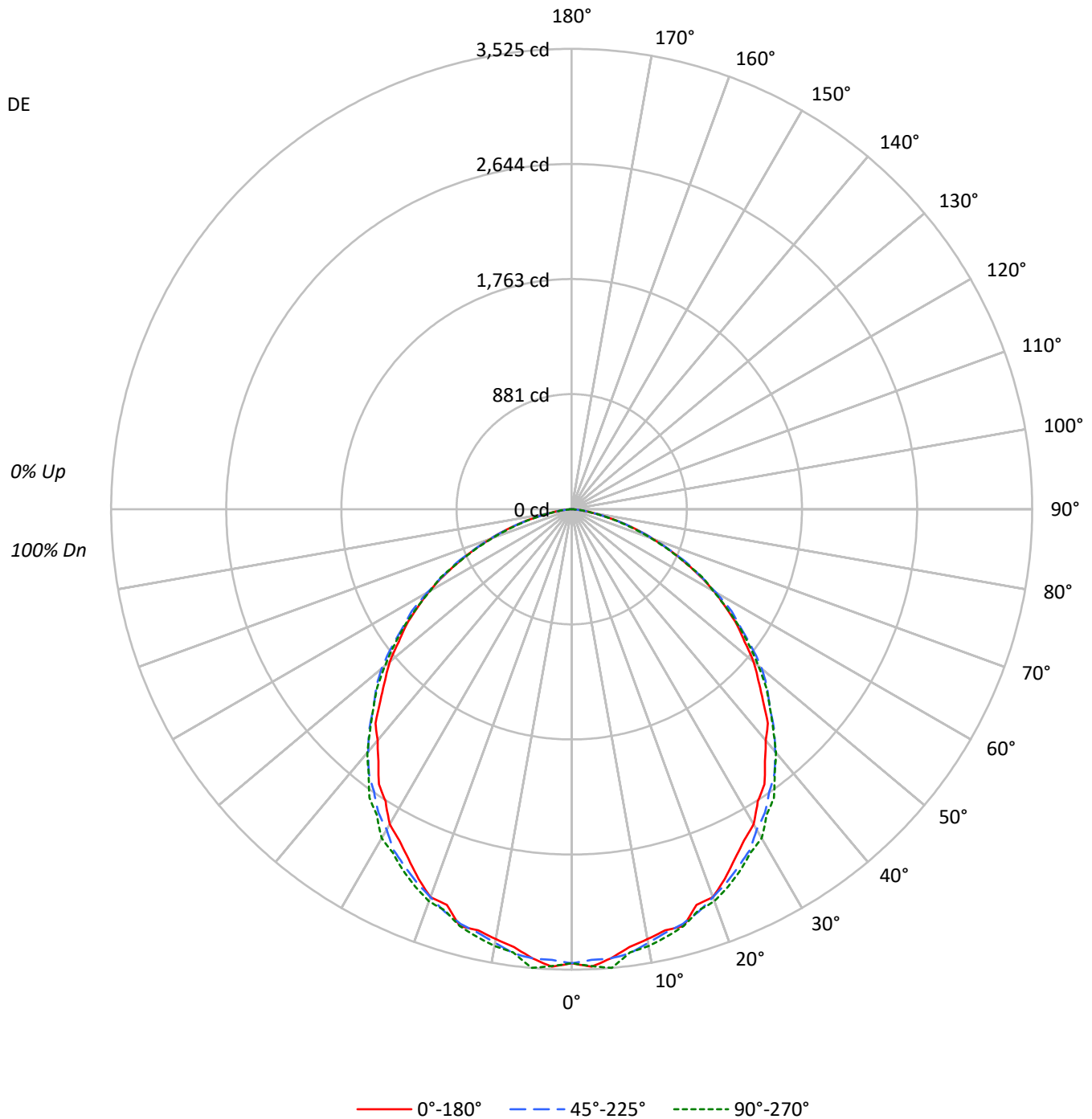
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	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°	9352	9352	9352
5°	9321	9325	9521
10°	9132	9212	9277
15°	9204	9154	9206
20°	9049	9049	9145
25°	8771	8963	9061
30°	8650	8802	9037
35°	8447	8668	8862
40°	8118	8509	8547
45°	7872	8152	8164
50°	7614	7958	7805
55°	7255	7396	7343
60°	6784	6851	6728
65°	6048	6203	6006
70°	5190	5208	5063
75°	4110	4101	3943
80°	2754	2678	2572
85°	1497	1482	1386

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8362 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.9	3.7
10°-20°	926.5	10.6
20°-30°	1388.1	15.8
30°-40°	1645.2	18.8
40°-50°	1648.2	18.8
50°-60°	1399.1	16.0
60°-70°	943.2	10.8
70°-80°	414.5	4.7
80°-90°	67.4	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°	2641.5	30.2
0°-40°	4286.7	48.9
0°-60°	7333.9	83.7
0°-90°	8759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3475	3475	3475	3475	3475	
5°	3451	3443	3452	3442	3525	325
15°	3304	3266	3286	3303	3304	921
25°	2954	2970	3019	3058	3052	1366
35°	2571	2579	2638	2700	2698	1596
45°	2069	2107	2142	2197	2145	1600
55°	1546	1536	1576	1566	1565	1376
65°	950	937	974	937	943	945
75°	395	387	394	367	379	424
85°	48	47	48	47	45	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3475.3	3475.3	3475.3	3475.3	3475.3
2.5°	3505.4	3478.9	3454.3	3483.0	3500.5
5°	3450.7	3442.6	3452.0	3441.7	3524.7
7.5°	3379.8	3410.7	3428.7	3417.5	3422.4
10°	3342.1	3331.3	3371.2	3399.1	3395.0
12.5°	3301.7	3317.8	3320.1	3350.2	3352.8
15°	3303.9	3265.8	3286.0	3303.0	3304.4
17.5°	3175.6	3216.9	3230.8	3269.8	3221.4
20°	3159.9	3129.8	3159.9	3199.8	3193.6
22.5°	3063.4	3029.8	3094.4	3129.8	3127.6
25°	2953.9	2970.1	3018.6	3058.0	3051.8
27.5°	2857.9	2876.8	2945.9	3000.2	2965.2
30°	2783.9	2774.4	2832.8	2881.2	2908.2
32.5°	2651.5	2685.6	2753.8	2801.8	2776.2
35°	2571.2	2578.8	2638.5	2699.5	2697.7
37.5°	2430.7	2466.2	2550.1	2567.1	2551.4
40°	2310.9	2346.4	2422.2	2440.6	2433.0
42.5°	2222.5	2228.8	2293.9	2315.0	2281.3
45°	2068.6	2107.2	2142.2	2197.4	2145.3
47.5°	1937.6	1955.5	2030.9	2045.7	2018.4
50°	1818.7	1825.0	1900.8	1882.4	1864.4
52.5°	1669.2	1695.7	1738.3	1734.8	1713.7
55°	1546.3	1536.0	1576.4	1565.6	1565.1
57.5°	1398.7	1416.6	1449.8	1432.8	1405.4
60°	1260.5	1260.9	1273.0	1253.7	1250.1
62.5°	1106.5	1111.9	1114.6	1090.8	1129.4
65°	949.9	937.4	974.2	936.9	943.2
67.5°	805.9	812.2	808.6	785.3	794.2
70°	659.6	667.7	661.9	635.4	643.5
72.5°	525.9	516.0	522.3	489.1	504.4
75°	395.3	387.2	394.4	366.6	379.2
77.5°	269.2	275.5	271.0	256.2	264.7
80°	177.7	172.8	172.8	164.2	166.0
82.5°	103.7	98.7	97.4	94.7	98.7
85°	48.5	47.1	48.0	46.7	44.9
87.5°	17.5	17.9	17.9	17.1	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)