

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: P590792

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590792
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-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 8574.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

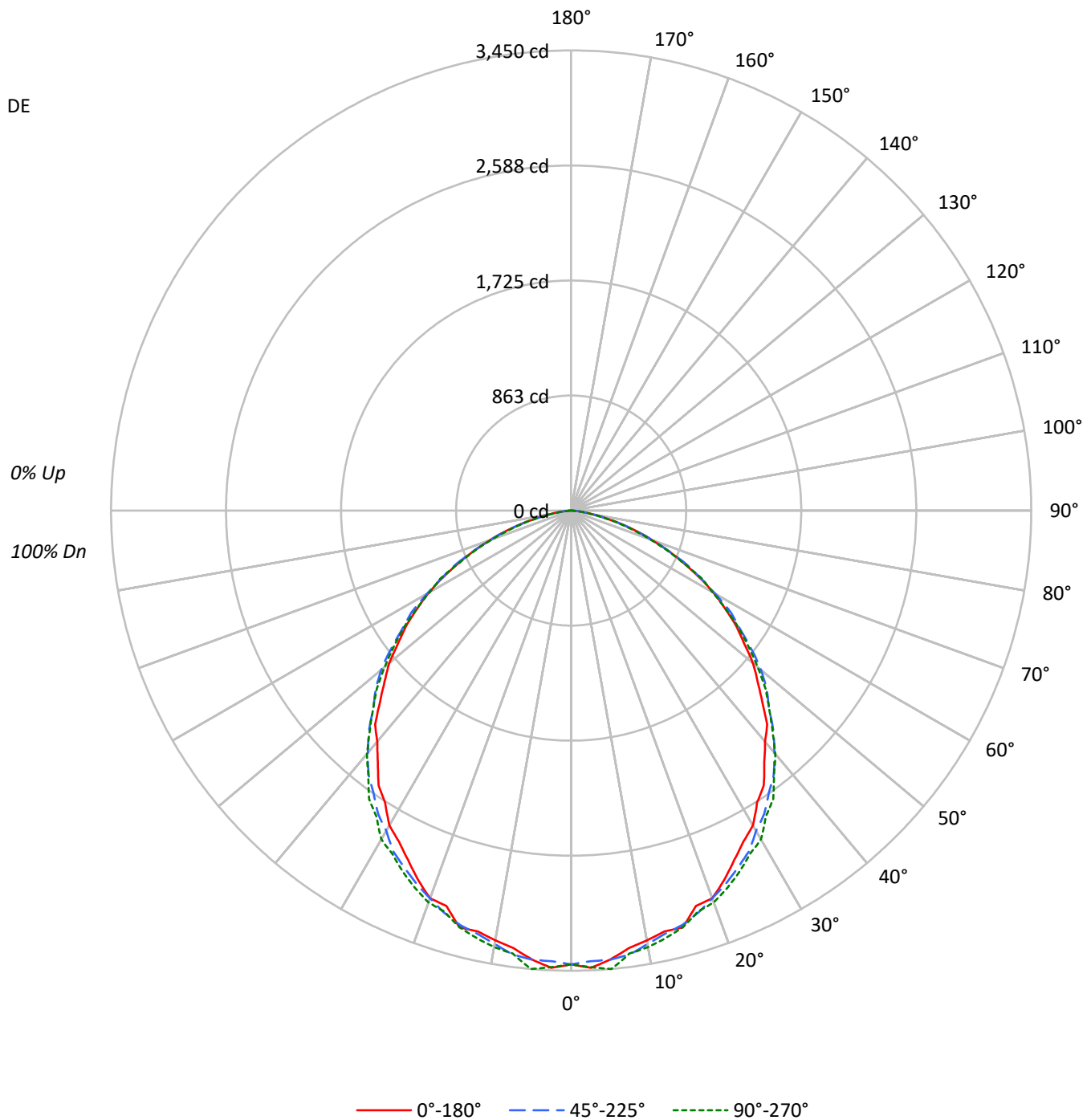
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9154	9154	9154
5°	9124	9128	9320
10°	8939	9017	9081
15°	9010	8961	9011
20°	8858	8858	8952
25°	8585	8773	8870
30°	8468	8616	8845
35°	8268	8485	8675
40°	7946	8329	8366
45°	7706	7980	7992
50°	7453	7789	7641
55°	7101	7240	7188
60°	6640	6706	6586
65°	5921	6072	5879
70°	5080	5098	4956
75°	4024	4014	3859
80°	2695	2620	2518
85°	1463	1451	1355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.0	3.7
10°-20°	906.9	10.6
20°-30°	1358.8	15.8
30°-40°	1610.4	18.8
40°-50°	1613.4	18.8
50°-60°	1369.5	16.0
60°-70°	923.3	10.8
70°-80°	405.7	4.7
80°-90°	65.9	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°	2585.7	30.2
0°-40°	4196.1	48.9
0°-60°	7179.0	83.7
0°-90°	8574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3402	3402	3402	3402	3402	
5°	3378	3370	3379	3369	3450	318
15°	3234	3197	3217	3233	3235	901
25°	2892	2907	2955	2993	2987	1337
35°	2517	2524	2583	2642	2641	1563
45°	2025	2063	2097	2151	2100	1566
55°	1514	1504	1543	1532	1532	1346
65°	930	918	954	917	923	925
75°	387	379	386	359	371	415
85°	47	46	47	46	44	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3401.9	3401.9	3401.9	3401.9	3401.9
2.5°	3431.4	3405.5	3381.3	3409.4	3426.5
5°	3377.8	3369.9	3379.1	3369.0	3450.3
7.5°	3308.4	3338.7	3356.3	3345.3	3350.1
10°	3271.5	3260.9	3300.0	3327.3	3323.3
12.5°	3232.0	3247.8	3250.0	3279.4	3282.0
15°	3234.2	3196.8	3216.6	3233.3	3234.6
17.5°	3108.5	3148.9	3162.6	3200.8	3153.3
20°	3093.2	3063.7	3093.2	3132.3	3126.1
22.5°	2998.7	2965.8	3029.0	3063.7	3061.5
25°	2891.5	2907.4	2954.8	2993.4	2987.3
27.5°	2797.5	2816.0	2883.6	2936.8	2902.5
30°	2725.1	2715.8	2772.9	2820.4	2846.7
32.5°	2595.5	2628.9	2695.6	2742.6	2717.6
35°	2516.9	2524.3	2582.8	2642.5	2640.7
37.5°	2379.4	2414.1	2496.2	2512.9	2497.5
40°	2262.1	2296.8	2371.0	2389.0	2381.6
42.5°	2175.6	2181.7	2245.4	2266.1	2233.1
45°	2024.9	2062.7	2097.0	2151.0	2100.0
47.5°	1896.7	1914.2	1988.0	2002.5	1975.7
50°	1780.3	1786.4	1860.6	1842.6	1825.1
52.5°	1634.0	1659.9	1701.6	1698.1	1677.5
55°	1513.6	1503.5	1543.1	1532.5	1532.1
57.5°	1369.1	1386.7	1419.2	1402.5	1375.7
60°	1233.8	1234.3	1246.1	1227.2	1223.7
62.5°	1083.2	1088.4	1091.1	1067.8	1105.6
65°	929.9	917.6	953.6	917.1	923.3
67.5°	788.9	795.0	791.5	768.7	777.5
70°	645.7	653.6	647.9	622.0	629.9
72.5°	514.8	505.1	511.3	478.8	493.7
75°	387.0	379.1	386.1	358.9	371.2
77.5°	263.5	269.7	265.3	250.8	259.2
80°	173.9	169.1	169.1	160.8	162.5
82.5°	101.5	96.6	95.3	92.7	96.6
85°	47.4	46.1	47.0	45.7	43.9
87.5°	17.1	17.6	17.6	16.7	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)