

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: P590761

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590761
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-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

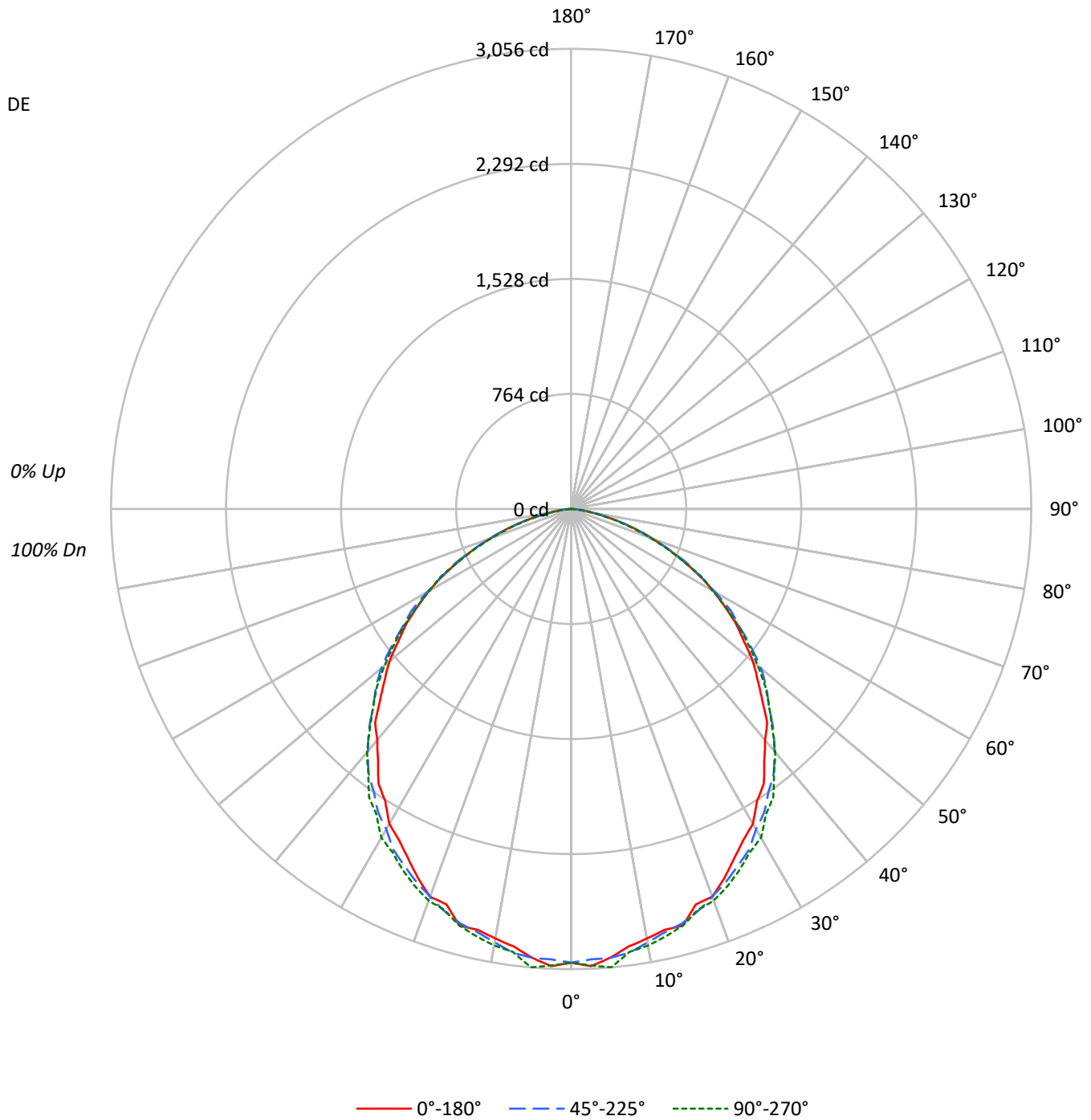
Lumens per Lamp: N/A
Luminaire Lumens: 7593.0 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	8107	8107	8107
5°	8080	8084	8254
10°	7917	7986	8042
15°	7979	7936	7980
20°	7844	7844	7928
25°	7603	7769	7855
30°	7499	7631	7833
35°	7322	7514	7682
40°	7037	7376	7409
45°	6824	7067	7078
50°	6600	6898	6766
55°	6289	6411	6366
60°	5881	5940	5832
65°	5244	5377	5207
70°	4499	4515	4389
75°	3563	3555	3418
80°	2386	2321	2230
85°	1297	1284	1201

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7249 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.4	3.7
10°-20°	803.2	10.6
20°-30°	1203.3	15.8
30°-40°	1426.2	18.8
40°-50°	1428.8	18.8
50°-60°	1212.8	16.0
60°-70°	817.7	10.8
70°-80°	359.3	4.7
80°-90°	58.4	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°	2289.9	30.2
0°-40°	3716.0	48.9
0°-60°	6357.6	83.7
0°-90°	7593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7593.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3013	3013	3013	3013	3013	
5°	2991	2984	2992	2984	3056	282
15°	2864	2831	2849	2863	2864	798
25°	2561	2575	2617	2651	2646	1184
35°	2229	2236	2287	2340	2339	1384
45°	1793	1827	1857	1905	1860	1387
55°	1340	1332	1366	1357	1357	1192
65°	824	813	844	812	818	819
75°	343	336	342	318	329	367
85°	42	41	42	40	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3012.7	3012.7	3012.7	3012.7	3012.7
2.5°	3038.8	3015.8	2994.4	3019.3	3034.5
5°	2991.3	2984.3	2992.5	2983.5	3055.5
7.5°	2929.9	2956.7	2972.3	2962.5	2966.8
10°	2897.2	2887.8	2922.5	2946.6	2943.1
12.5°	2862.2	2876.2	2878.1	2904.2	2906.5
15°	2864.1	2831.1	2848.6	2863.3	2864.5
17.5°	2752.9	2788.7	2800.7	2834.6	2792.5
20°	2739.3	2713.2	2739.3	2773.9	2768.4
22.5°	2655.6	2626.4	2682.5	2713.2	2711.2
25°	2560.7	2574.7	2616.7	2651.0	2645.5
27.5°	2477.5	2493.8	2553.7	2600.8	2570.4
30°	2413.3	2405.1	2455.7	2497.7	2521.0
32.5°	2298.5	2328.1	2387.2	2428.8	2406.7
35°	2228.9	2235.5	2287.2	2340.2	2338.6
37.5°	2107.1	2137.9	2210.6	2225.4	2211.8
40°	2003.3	2034.0	2099.8	2115.7	2109.1
42.5°	1926.7	1932.1	1988.5	2006.8	1977.6
45°	1793.2	1826.7	1857.0	1904.9	1859.8
47.5°	1679.6	1695.2	1760.6	1773.4	1749.7
50°	1576.6	1582.0	1647.8	1631.8	1616.2
52.5°	1447.0	1470.0	1506.9	1503.8	1485.5
55°	1340.5	1331.5	1366.5	1357.2	1356.8
57.5°	1212.5	1228.0	1256.8	1242.0	1218.3
60°	1092.7	1093.1	1103.6	1086.8	1083.7
62.5°	959.2	963.9	966.2	945.6	979.1
65°	823.5	812.6	844.5	812.2	817.7
67.5°	698.6	704.1	701.0	680.7	688.5
70°	571.8	578.8	573.8	550.8	557.8
72.5°	455.9	447.3	452.8	424.0	437.2
75°	342.7	335.7	341.9	317.8	328.7
77.5°	233.4	238.8	234.9	222.1	229.5
80°	154.0	149.8	149.8	142.4	143.9
82.5°	89.9	85.6	84.4	82.1	85.6
85°	42.0	40.8	41.6	40.5	38.9
87.5°	15.2	15.6	15.6	14.8	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)