

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: P590973

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590973
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-50-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7616.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

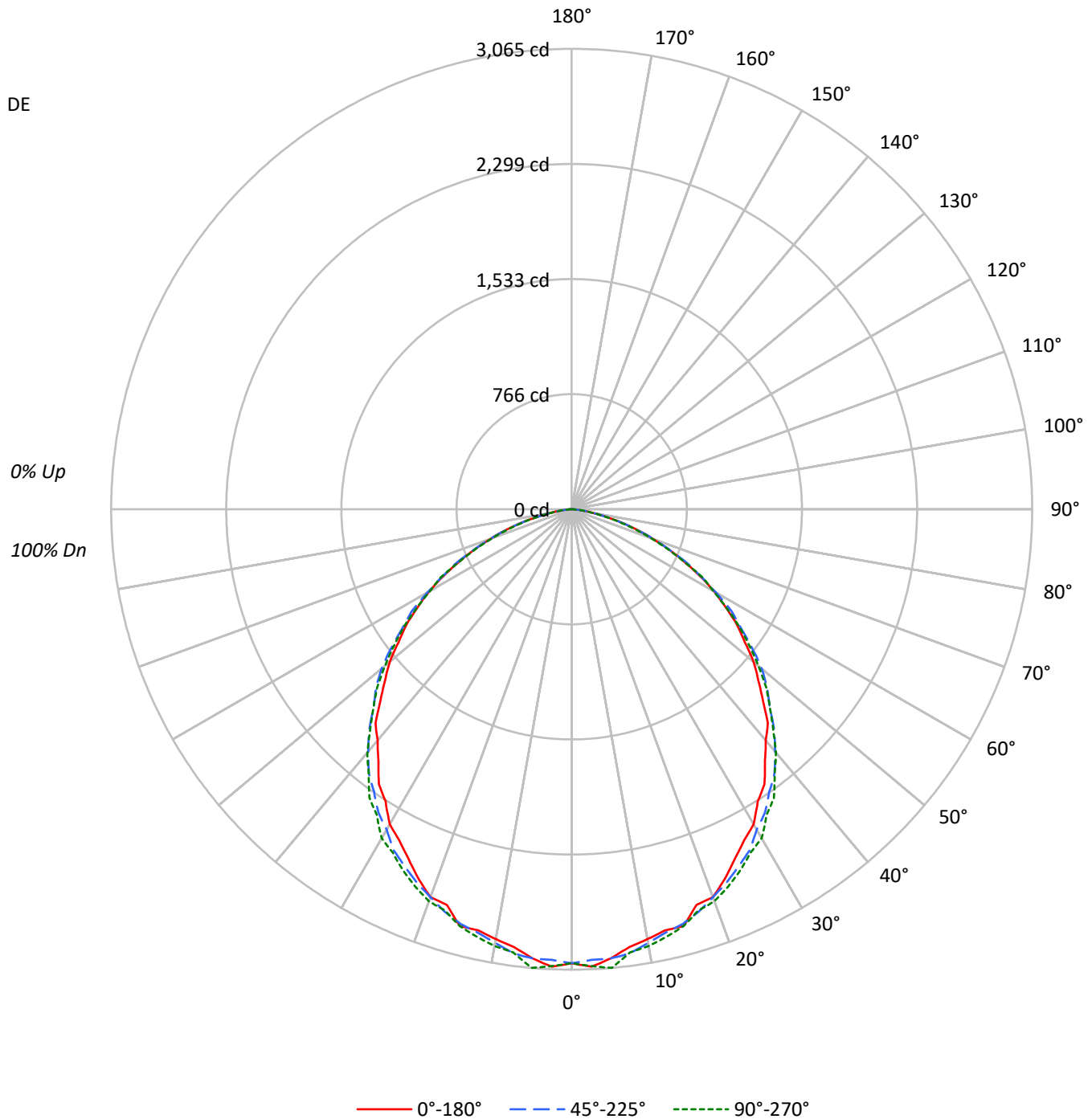
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8132	8132	8132
5°	8105	8108	8279
10°	7941	8010	8066
15°	8003	7960	8004
20°	7868	7868	7952
25°	7626	7793	7879
30°	7521	7654	7857
35°	7344	7537	7706
40°	7059	7398	7431
45°	6845	7089	7099
50°	6620	6919	6787
55°	6308	6431	6385
60°	5899	5957	5850
65°	5259	5394	5222
70°	4512	4528	4402
75°	3573	3566	3428
80°	2394	2328	2238
85°	1300	1288	1204

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7271 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.2	3.7
10°-20°	805.6	10.6
20°-30°	1207.0	15.8
30°-40°	1430.5	18.8
40°-50°	1433.1	18.8
50°-60°	1216.5	16.0
60°-70°	820.2	10.8
70°-80°	360.4	4.7
80°-90°	58.6	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°	2296.8	30.2
0°-40°	3727.3	48.9
0°-60°	6376.9	83.7
0°-90°	7616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7616.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3022	3022	3022	3022	3022	
5°	3000	2993	3002	2993	3065	283
15°	2873	2840	2857	2872	2873	800
25°	2568	2582	2625	2659	2654	1187
35°	2236	2242	2294	2347	2346	1388
45°	1799	1832	1863	1911	1865	1391
55°	1344	1336	1371	1361	1361	1196
65°	826	815	847	815	820	821
75°	344	337	343	319	330	368
85°	42	41	42	41	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3021.8	3021.8	3021.8	3021.8	3021.8
2.5°	3048.0	3025.0	3003.5	3028.5	3043.7
5°	3000.4	2993.4	3001.5	2992.6	3064.8
7.5°	2938.7	2965.7	2981.3	2971.5	2975.8
10°	2906.0	2896.6	2931.3	2955.5	2952.0
12.5°	2870.8	2884.9	2886.8	2913.0	2915.3
15°	2872.8	2839.6	2857.2	2872.0	2873.2
17.5°	2761.2	2797.1	2809.2	2843.1	2801.0
20°	2747.5	2721.4	2747.5	2782.3	2776.8
22.5°	2663.7	2634.4	2690.6	2721.4	2719.5
25°	2568.5	2582.5	2624.6	2659.0	2653.5
27.5°	2485.0	2501.4	2561.4	2608.7	2578.2
30°	2420.6	2412.4	2463.1	2505.3	2528.7
32.5°	2305.5	2335.1	2394.4	2436.2	2414.0
35°	2235.7	2242.3	2294.2	2347.2	2345.7
37.5°	2113.5	2144.4	2217.3	2232.1	2218.5
40°	2009.4	2040.2	2106.1	2122.1	2115.5
42.5°	1932.5	1938.0	1994.5	2012.9	1983.6
45°	1798.7	1832.2	1862.7	1910.6	1865.4
47.5°	1684.7	1700.3	1765.9	1778.8	1755.0
50°	1581.3	1586.8	1652.7	1636.7	1621.1
52.5°	1451.4	1474.4	1511.5	1508.4	1490.0
55°	1344.5	1335.5	1370.7	1361.3	1360.9
57.5°	1216.1	1231.8	1260.6	1245.8	1222.0
60°	1096.0	1096.4	1106.9	1090.1	1087.0
62.5°	962.1	966.8	969.2	948.5	982.0
65°	826.0	815.1	847.1	814.7	820.1
67.5°	700.7	706.2	703.1	682.8	690.6
70°	573.5	580.6	575.5	552.5	559.5
72.5°	457.3	448.7	454.2	425.3	438.5
75°	343.7	336.7	343.0	318.8	329.7
77.5°	234.1	239.6	235.7	222.8	230.2
80°	154.5	150.2	150.2	142.8	144.4
82.5°	90.1	85.8	84.7	82.3	85.8
85°	42.1	41.0	41.7	40.6	39.0
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)