

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: P590976

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590976
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-81-87-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: 7141.0 lumens
Efficiency: N/A
Efficacy: 107.2 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

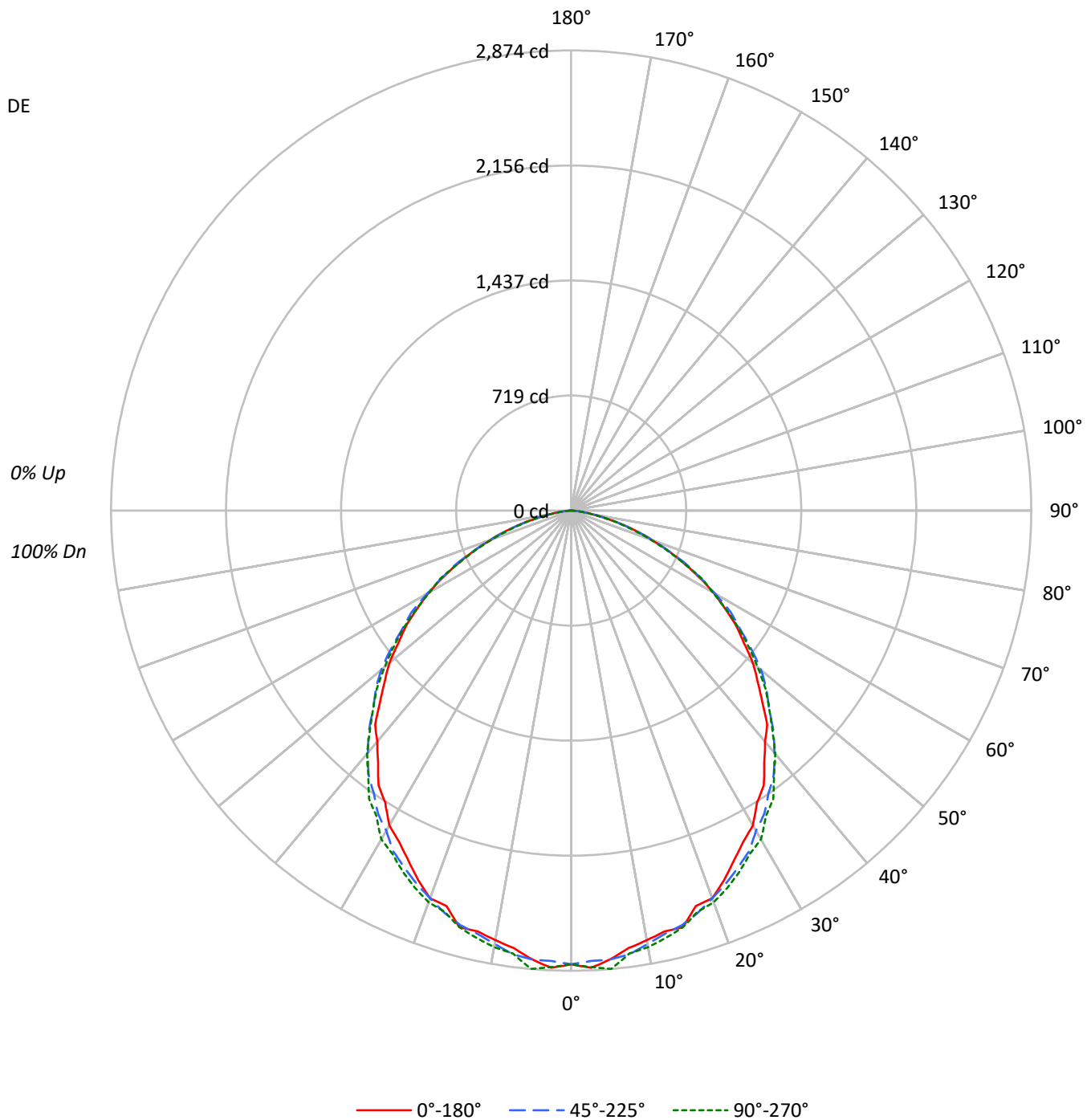
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7625	7625	7625
5°	7599	7602	7762
10°	7445	7510	7563
15°	7504	7463	7505
20°	7377	7377	7456
25°	7151	7307	7387
30°	7052	7176	7367
35°	6886	7067	7225
40°	6618	6937	6968
45°	6418	6647	6656
50°	6207	6488	6363
55°	5915	6030	5986
60°	5530	5586	5485
65°	4932	5057	4897
70°	4231	4246	4127
75°	3351	3344	3214
80°	2245	2182	2098
85°	1220	1207	1130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6818 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.5	3.7
10°-20°	755.4	10.6
20°-30°	1131.7	15.8
30°-40°	1341.3	18.8
40°-50°	1343.7	18.8
50°-60°	1140.6	16.0
60°-70°	769.0	10.8
70°-80°	337.9	4.7
80°-90°	54.9	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°	2153.5	30.2
0°-40°	3494.8	48.9
0°-60°	5979.2	83.7
0°-90°	7141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7141.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2833	2833	2833	2833	2833	
5°	2813	2807	2814	2806	2874	265
15°	2694	2662	2679	2693	2694	750
25°	2408	2421	2461	2493	2488	1113
35°	2096	2102	2151	2201	2199	1301
45°	1686	1718	1746	1792	1749	1305
55°	1261	1252	1285	1276	1276	1121
65°	774	764	794	764	769	770
75°	322	316	322	299	309	345
85°	40	38	39	38	37	57
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2833.4	2833.4	2833.4	2833.4	2833.4
2.5°	2857.9	2836.3	2816.2	2839.6	2853.9
5°	2813.2	2806.7	2814.3	2805.9	2873.6
7.5°	2755.4	2780.7	2795.3	2786.2	2790.2
10°	2724.7	2715.9	2748.5	2771.2	2767.9
12.5°	2691.8	2705.0	2706.8	2731.3	2733.5
15°	2693.6	2662.5	2679.0	2692.9	2694.0
17.5°	2589.0	2622.6	2634.0	2665.8	2626.3
20°	2576.2	2551.7	2576.2	2608.7	2603.6
22.5°	2497.5	2470.1	2522.8	2551.7	2549.8
25°	2408.3	2421.4	2461.0	2493.1	2488.0
27.5°	2330.0	2345.3	2401.7	2446.0	2417.4
30°	2269.6	2261.9	2309.5	2349.0	2371.0
32.5°	2161.7	2189.5	2245.1	2284.3	2263.4
35°	2096.2	2102.4	2151.1	2200.8	2199.4
37.5°	1981.7	2010.6	2079.0	2092.9	2080.1
40°	1884.0	1912.9	1974.8	1989.8	1983.5
42.5°	1812.0	1817.1	1870.1	1887.3	1859.9
45°	1686.5	1717.9	1746.5	1791.5	1749.0
47.5°	1579.7	1594.3	1655.8	1667.8	1645.5
50°	1482.7	1487.8	1549.7	1534.7	1520.0
52.5°	1360.9	1382.5	1417.2	1414.3	1397.1
55°	1260.7	1252.2	1285.2	1276.4	1276.0
57.5°	1140.3	1154.9	1182.0	1168.1	1145.8
60°	1027.6	1028.0	1037.9	1022.1	1019.2
62.5°	902.1	906.5	908.7	889.3	920.8
65°	774.5	764.2	794.2	763.9	769.0
67.5°	657.0	662.2	659.2	640.2	647.5
70°	537.8	544.4	539.6	518.0	524.6
72.5°	428.8	420.7	425.8	398.8	411.2
75°	322.3	315.7	321.6	298.9	309.1
77.5°	219.5	224.6	221.0	208.9	215.8
80°	144.9	140.8	140.8	133.9	135.4
82.5°	84.5	80.5	79.4	77.2	80.5
85°	39.5	38.4	39.1	38.0	36.6
87.5°	14.3	14.6	14.6	13.9	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)