

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: P590966

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590966
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7857.0 lumens
Efficiency: N/A
Efficacy: 118.0 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

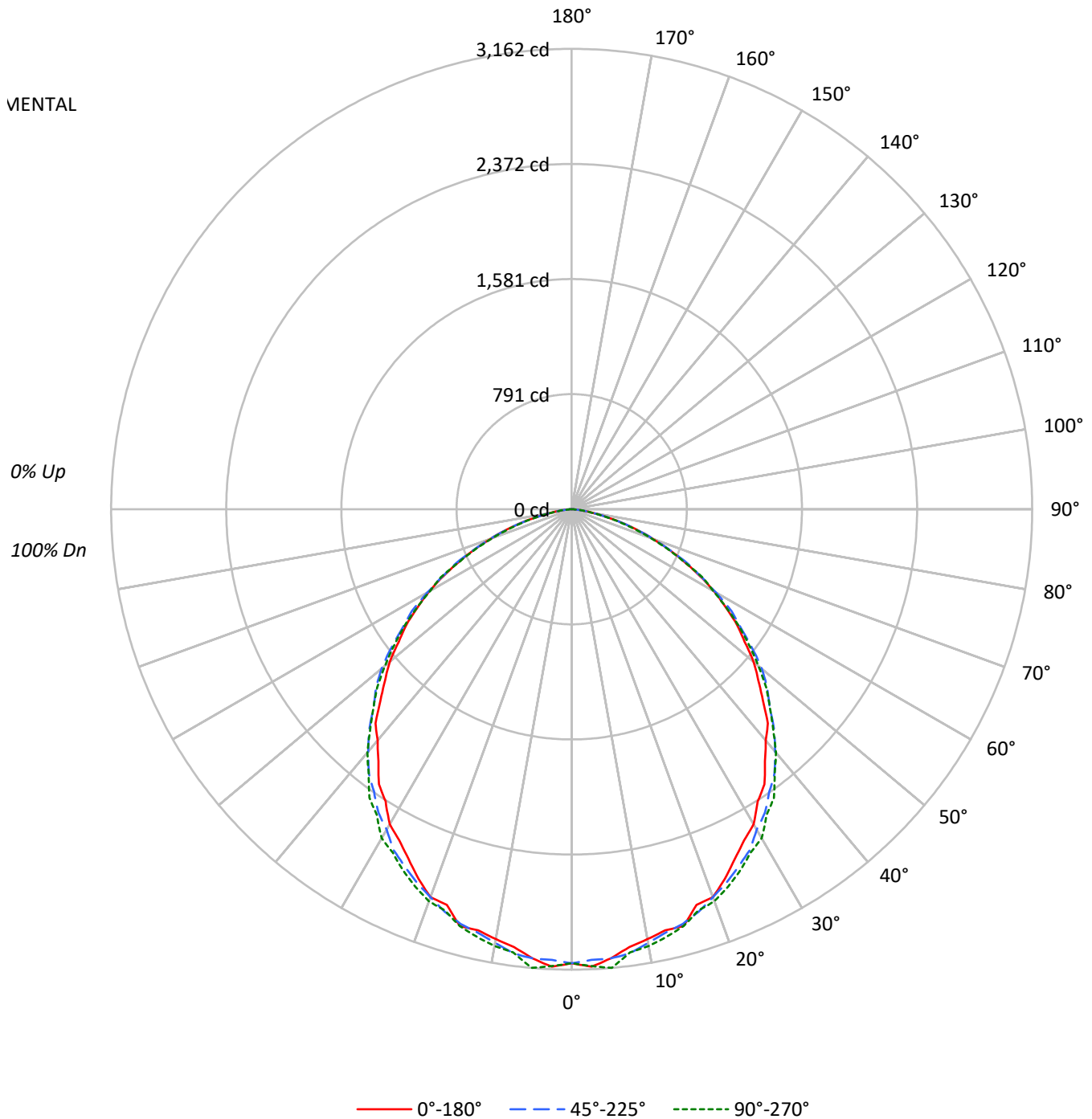
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8389	8389	8389
5°	8361	8364	8541
10°	8192	8263	8322
15°	8257	8212	8258
20°	8117	8117	8204
25°	7867	8040	8128
30°	7759	7896	8106
35°	7577	7775	7950
40°	7282	7633	7666
45°	7062	7313	7324
50°	6830	7138	7001
55°	6508	6634	6587
60°	6085	6146	6035
65°	5426	5564	5387
70°	4655	4671	4541
75°	3687	3679	3536
80°	2470	2402	2307
85°	1343	1331	1244

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7501 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.2	3.7
10°-20°	831.1	10.6
20°-30°	1245.1	15.8
30°-40°	1475.7	18.8
40°-50°	1478.5	18.8
50°-60°	1255.0	16.0
60°-70°	846.1	10.8
70°-80°	371.8	4.7
80°-90°	60.4	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°	2369.5	30.2
0°-40°	3845.2	48.9
0°-60°	6578.7	83.7
0°-90°	7857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3118	3118	3118	3118	3118	
5°	3095	3088	3096	3087	3162	292
15°	2964	2930	2948	2963	2964	826
25°	2650	2664	2708	2743	2738	1225
35°	2306	2313	2367	2422	2420	1432
45°	1856	1890	1922	1971	1924	1435
55°	1387	1378	1414	1404	1404	1234
65°	852	841	874	840	846	847
75°	355	347	354	329	340	380
85°	44	42	43	42	40	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3117.5	3117.5	3117.5	3117.5	3117.5
2.5°	3144.4	3120.7	3098.5	3124.3	3140.0
5°	3095.3	3088.1	3096.5	3087.3	3161.7
7.5°	3031.7	3059.5	3075.6	3065.5	3070.0
10°	2997.9	2988.3	3024.1	3049.0	3045.4
12.5°	2961.7	2976.2	2978.2	3005.2	3007.6
15°	2963.7	2929.5	2947.6	2962.9	2964.1
17.5°	2848.6	2885.6	2898.1	2933.1	2889.6
20°	2834.5	2807.5	2834.5	2870.3	2864.7
22.5°	2748.0	2717.8	2775.7	2807.5	2805.5
25°	2649.7	2664.2	2707.7	2743.1	2737.5
27.5°	2563.6	2580.5	2642.5	2691.2	2659.8
30°	2497.2	2488.7	2541.1	2584.5	2608.7
32.5°	2378.4	2409.0	2470.2	2513.3	2490.3
35°	2306.4	2313.2	2366.8	2421.5	2419.9
37.5°	2180.4	2212.2	2287.5	2302.8	2288.7
40°	2072.9	2104.7	2172.8	2189.3	2182.4
42.5°	1993.6	1999.3	2057.6	2076.6	2046.4
45°	1855.6	1890.2	1921.6	1971.1	1924.4
47.5°	1738.0	1754.1	1821.8	1835.1	1810.5
50°	1631.4	1637.0	1705.0	1688.5	1672.4
52.5°	1497.3	1521.1	1559.3	1556.1	1537.2
55°	1387.1	1377.8	1414.0	1404.4	1404.0
57.5°	1254.6	1270.7	1300.5	1285.2	1260.7
60°	1130.7	1131.1	1141.9	1124.6	1121.4
62.5°	992.6	997.4	999.8	978.5	1013.1
65°	852.1	840.8	873.9	840.4	846.1
67.5°	722.9	728.5	725.3	704.4	712.4
70°	591.7	598.9	593.7	570.0	577.2
72.5°	471.7	462.9	468.5	438.7	452.4
75°	354.6	347.4	353.8	328.9	340.1
77.5°	241.5	247.1	243.1	229.8	237.5
80°	159.4	155.0	155.0	147.3	148.9
82.5°	93.0	88.6	87.3	84.9	88.6
85°	43.5	42.3	43.1	41.9	40.3
87.5°	15.7	16.1	16.1	15.3	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)