

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: P562860

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5173.0 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

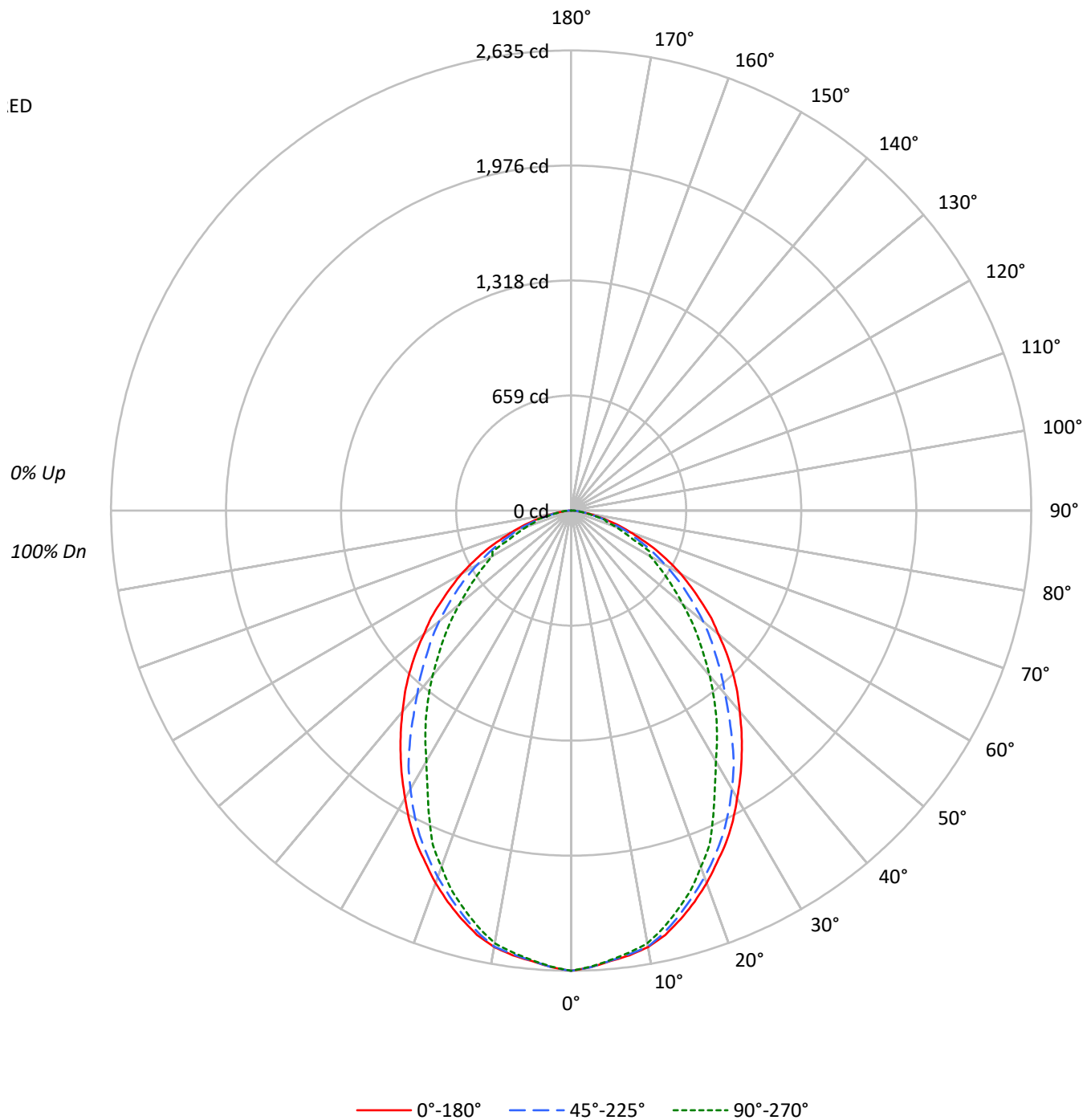
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562860

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562860

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90

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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3545	3545	3545
5°	3497	3493	3489
10°	3467	3463	3438
15°	3373	3339	3293
20°	3250	3197	3110
25°	3116	3048	2858
30°	2953	2859	2575
35°	2797	2642	2382
40°	2638	2408	2167
45°	2487	2226	1959
50°	2302	2066	1747
55°	2130	1872	1565
60°	1951	1672	1402
65°	1717	1465	1241
70°	1414	1282	1055
75°	1124	982	1029
80°	755	708	661
85°	471	565	658

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2487 cd/sqm



TEST NUMBER: P562860

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.3	4.7
10°-20°	673.2	13.0
20°-30°	932.0	18.0
30°-40°	993.7	19.2
40°-50°	906.6	17.5
50°-60°	710.2	13.7
60°-70°	462.9	8.9
70°-80°	205.1	4.0
80°-90°	44.0	0.9
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°	1850.4	35.8
0°-40°	2844.2	55.0
0°-60°	4461.0	86.2
0°-90°	5173.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5173.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2635	2635	2635	2635	2635	
5°	2589	2586	2586	2583	2583	246
15°	2422	2422	2397	2373	2364	681
25°	2099	2087	2053	1980	1925	964
35°	1703	1691	1608	1487	1450	1065
45°	1307	1279	1170	1072	1030	1007
55°	908	880	798	704	667	814
65°	539	509	460	469	390	531
75°	216	201	189	180	198	232
85°	30	34	37	40	43	42
90°	0	0	0	0	0	



TEST NUMBER: P562860

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-93-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2635.1	2635.1	2635.1	2635.1	2635.1
2.5°	2616.8	2616.8	2616.8	2613.7	2613.7
5°	2589.4	2586.3	2586.3	2583.3	2583.3
7.5°	2568.0	2565.0	2561.9	2558.9	2552.8
10°	2537.6	2537.6	2534.5	2519.3	2516.3
12.5°	2488.8	2485.8	2473.6	2452.3	2446.2
15°	2421.8	2421.8	2397.4	2373.1	2363.9
17.5°	2348.7	2345.7	2315.2	2290.8	2278.6
20°	2269.5	2263.4	2232.9	2193.3	2172.0
22.5°	2181.2	2181.2	2144.6	2092.8	2071.5
25°	2098.9	2086.7	2053.2	1980.1	1925.3
27.5°	2004.5	1986.2	1949.6	1846.1	1782.1
30°	1900.9	1891.8	1840.0	1705.9	1657.2
32.5°	1803.4	1788.2	1733.3	1593.2	1553.6
35°	1702.9	1690.7	1608.5	1486.6	1450.0
37.5°	1602.4	1587.1	1483.6	1386.1	1340.4
40°	1501.8	1483.6	1370.8	1282.5	1233.8
42.5°	1407.4	1383.0	1273.4	1178.9	1124.1
45°	1306.9	1279.4	1169.8	1072.3	1029.7
47.5°	1206.3	1182.0	1081.4	980.9	932.2
50°	1099.7	1078.4	987.0	886.5	834.7
52.5°	1011.4	977.9	889.5	789.0	746.3
55°	907.8	880.4	798.1	703.7	667.1
57.5°	813.4	785.9	709.8	621.4	591.0
60°	725.0	685.4	621.4	545.3	520.9
62.5°	627.5	597.1	542.2	478.3	508.7
65°	539.2	508.7	460.0	469.1	389.9
67.5°	441.7	426.5	383.8	341.2	329.0
70°	359.5	341.2	326.0	280.3	268.1
72.5°	286.4	268.1	246.8	222.4	213.2
75°	216.3	201.1	188.9	179.7	198.0
77.5°	149.3	143.2	134.0	124.9	121.9
80°	97.5	94.4	91.4	88.3	85.3
82.5°	57.9	57.9	57.9	57.9	57.9
85°	30.5	33.5	36.6	39.6	42.6
87.5°	18.3	18.3	21.3	24.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)