

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: P562781

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562781
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-40-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5426.0 lumens
Efficiency: N/A
Efficacy: 115.9 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

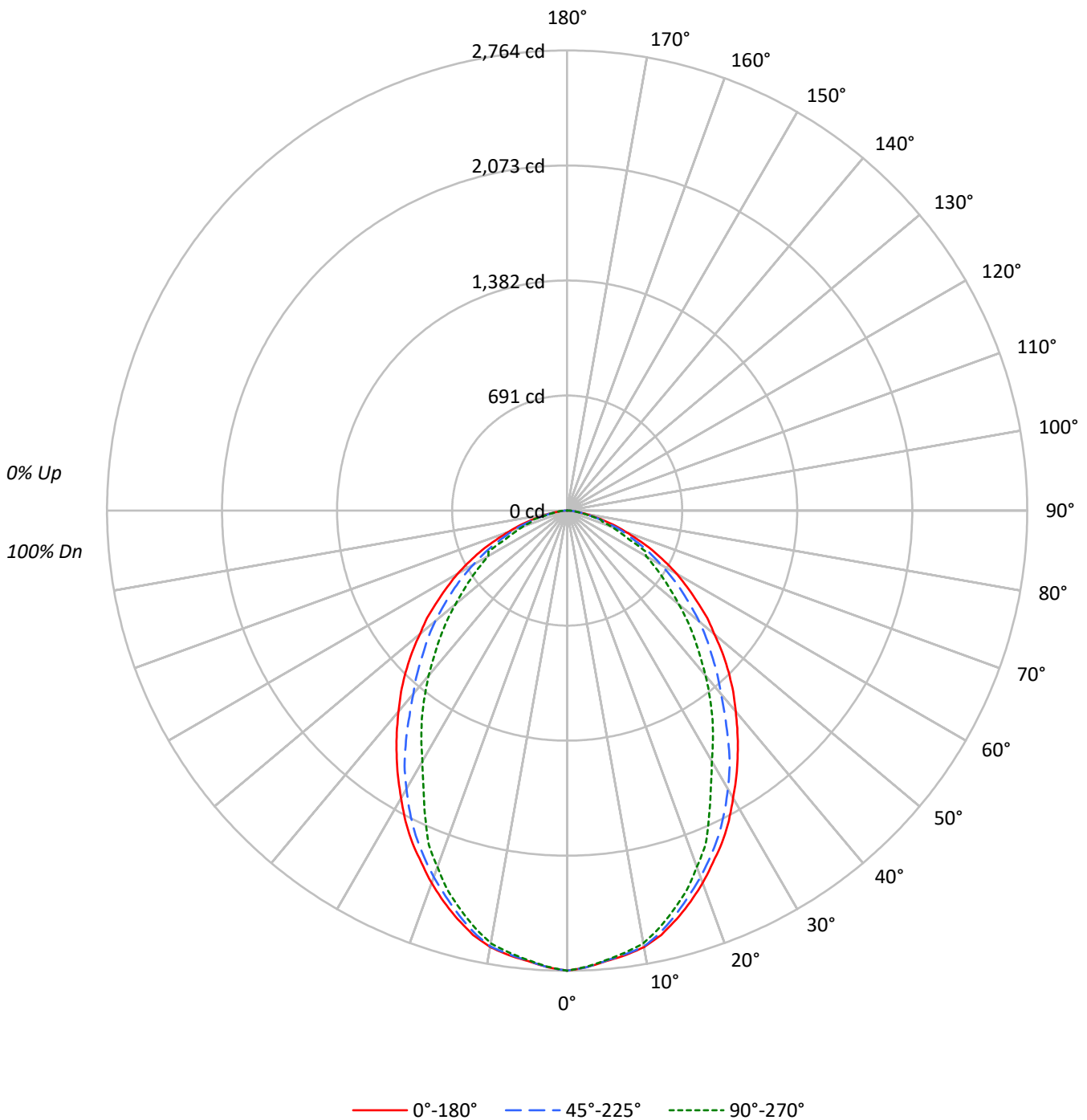
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562781

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562781

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-82-96-EDD

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	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	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°	3719	3719	3719
5°	3668	3664	3660
10°	3637	3632	3606
15°	3539	3503	3454
20°	3408	3354	3262
25°	3268	3197	2998
30°	3098	2999	2701
35°	2934	2771	2498
40°	2767	2526	2273
45°	2608	2335	2055
50°	2415	2167	1833
55°	2234	1964	1642
60°	2046	1754	1470
65°	1801	1536	1302
70°	1483	1345	1106
75°	1180	1030	1080
80°	792	743	693
85°	494	591	690

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2608 cd/sqm



TEST NUMBER: P562781

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.3	4.7
10°-20°	706.1	13.0
20°-30°	977.5	18.0
30°-40°	1042.3	19.2
40°-50°	950.9	17.5
50°-60°	745.0	13.7
60°-70°	485.5	8.9
70°-80°	215.1	4.0
80°-90°	46.2	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°	1940.9	35.8
0°-40°	2983.3	55.0
0°-60°	4679.2	86.2
0°-90°	5426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5426.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2764	2764	2764	2764	2764	
5°	2716	2713	2713	2710	2710	258
15°	2540	2540	2515	2489	2480	714
25°	2202	2189	2154	2077	2019	1011
35°	1786	1773	1687	1559	1521	1117
45°	1371	1342	1227	1125	1080	1056
55°	952	923	837	738	700	854
65°	566	534	482	492	409	557
75°	227	211	198	188	208	243
85°	32	35	38	42	45	44
90°	0	0	0	0	0	



TEST NUMBER: P562781

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2763.9	2763.9	2763.9	2763.9	2763.9
2.5°	2744.8	2744.8	2744.8	2741.6	2741.6
5°	2716.0	2712.8	2712.8	2709.6	2709.6
7.5°	2693.6	2690.4	2687.2	2684.0	2677.7
10°	2661.7	2661.7	2658.5	2642.5	2639.3
12.5°	2610.6	2607.4	2594.6	2572.2	2565.8
15°	2540.3	2540.3	2514.7	2489.1	2479.6
17.5°	2463.6	2460.4	2428.4	2402.9	2390.1
20°	2380.5	2374.1	2342.2	2300.6	2278.2
22.5°	2287.8	2287.8	2249.5	2195.2	2172.8
25°	2201.6	2188.8	2153.6	2076.9	2019.4
27.5°	2102.5	2083.3	2045.0	1936.3	1869.2
30°	1993.9	1984.3	1930.0	1789.4	1738.2
32.5°	1891.6	1875.6	1818.1	1671.1	1629.6
35°	1786.2	1773.4	1687.1	1559.3	1521.0
37.5°	1680.7	1664.7	1556.1	1453.9	1405.9
40°	1575.3	1556.1	1437.9	1345.2	1294.1
42.5°	1476.2	1450.7	1335.6	1236.6	1179.1
45°	1370.8	1342.0	1227.0	1124.7	1080.0
47.5°	1265.3	1239.8	1134.3	1028.9	977.8
50°	1153.5	1131.1	1035.3	929.8	875.5
52.5°	1060.8	1025.7	933.0	827.6	782.8
55°	952.2	923.4	837.2	738.1	699.8
57.5°	853.1	824.4	744.5	651.8	619.9
60°	760.5	718.9	651.8	572.0	546.4
62.5°	658.2	626.3	568.8	501.7	533.6
65°	565.6	533.6	482.5	492.1	409.0
67.5°	463.3	447.3	402.6	357.9	345.1
70°	377.0	357.9	341.9	294.0	281.2
72.5°	300.4	281.2	258.8	233.3	223.7
75°	226.9	210.9	198.1	188.5	207.7
77.5°	156.6	150.2	140.6	131.0	127.8
80°	102.2	99.1	95.9	92.7	89.5
82.5°	60.7	60.7	60.7	60.7	60.7
85°	32.0	35.1	38.3	41.5	44.7
87.5°	19.2	19.2	22.4	25.6	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)