

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: P562730

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562730
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-35-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4898.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

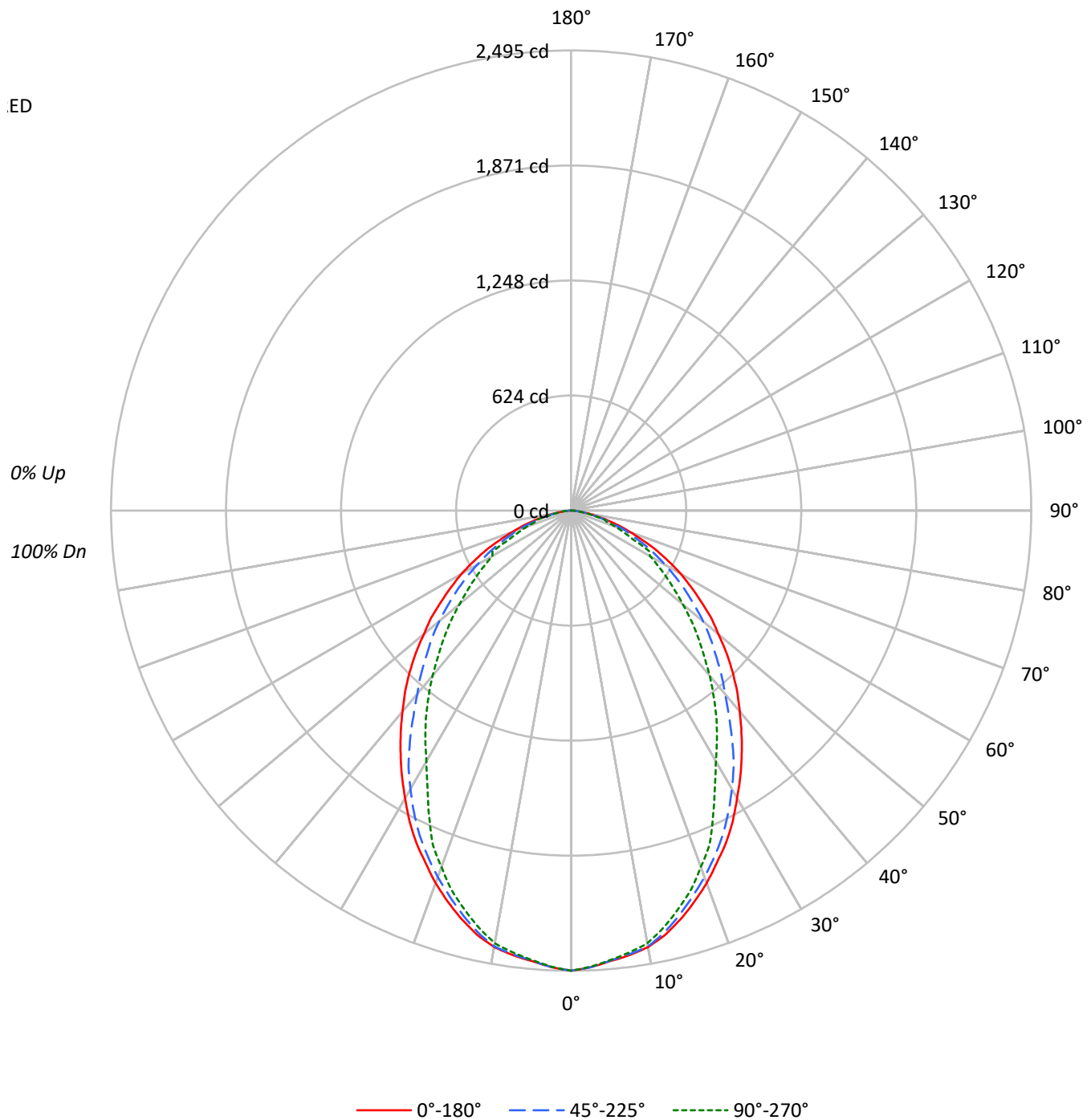
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562730

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-93-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562730

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-93-94-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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3357	3357	3357
5°	3311	3307	3304
10°	3283	3279	3255
15°	3194	3162	3118
20°	3077	3027	2945
25°	2950	2886	2706
30°	2796	2707	2438
35°	2648	2501	2255
40°	2498	2280	2052
45°	2355	2108	1855
50°	2180	1956	1654
55°	2016	1773	1482
60°	1847	1583	1327
65°	1625	1387	1175
70°	1339	1214	998
75°	1065	930	975
80°	715	670	626
85°	445	534	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2355 cd/sqm



TEST NUMBER: P562730

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-93-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.2	4.7
10°-20°	637.4	13.0
20°-30°	882.4	18.0
30°-40°	940.9	19.2
40°-50°	858.4	17.5
50°-60°	672.5	13.7
60°-70°	438.3	8.9
70°-80°	194.2	4.0
80°-90°	41.7	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°	1752.1	35.8
0°-40°	2693.0	55.0
0°-60°	4223.8	86.2
0°-90°	4898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2495	2495	2495	2495	2495	
5°	2452	2449	2449	2446	2446	233
15°	2293	2293	2270	2247	2238	645
25°	1987	1976	1944	1875	1823	912
35°	1612	1601	1523	1408	1373	1008
45°	1237	1211	1108	1015	975	953
55°	860	834	756	666	632	771
65°	510	482	436	444	369	503
75°	205	190	179	170	188	219
85°	29	32	35	38	40	40
90°	0	0	0	0	0	



TEST NUMBER: P562730

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-93-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2495.0	2495.0	2495.0	2495.0	2495.0
2.5°	2477.7	2477.7	2477.7	2474.8	2474.8
5°	2451.7	2448.8	2448.8	2445.9	2445.9
7.5°	2431.5	2428.6	2425.8	2422.9	2417.1
10°	2402.7	2402.7	2399.8	2385.4	2382.5
12.5°	2356.5	2353.6	2342.1	2321.9	2316.1
15°	2293.1	2293.1	2270.0	2246.9	2238.3
17.5°	2223.8	2221.0	2192.1	2169.0	2157.5
20°	2148.9	2143.1	2114.2	2076.7	2056.6
22.5°	2065.2	2065.2	2030.6	1981.6	1961.4
25°	1987.3	1975.8	1944.1	1874.8	1822.9
27.5°	1897.9	1880.6	1846.0	1747.9	1687.4
30°	1799.8	1791.2	1742.2	1615.2	1569.1
32.5°	1707.5	1693.1	1641.2	1508.5	1471.0
35°	1612.4	1600.8	1522.9	1407.6	1373.0
37.5°	1517.2	1502.8	1404.7	1312.4	1269.1
40°	1422.0	1404.7	1298.0	1214.3	1168.2
42.5°	1332.6	1309.5	1205.7	1116.2	1064.3
45°	1237.4	1211.4	1107.6	1015.3	974.9
47.5°	1142.2	1119.1	1023.9	928.8	882.6
50°	1041.3	1021.1	934.5	839.4	790.3
52.5°	957.6	925.9	842.2	747.1	706.7
55°	859.5	833.6	755.7	666.3	631.7
57.5°	770.1	744.2	672.1	588.4	559.6
60°	686.5	649.0	588.4	516.3	493.2
62.5°	594.2	565.3	513.4	452.8	481.7
65°	510.5	481.7	435.5	444.2	369.2
67.5°	418.2	403.8	363.4	323.0	311.5
70°	340.4	323.0	308.6	265.4	253.8
72.5°	271.1	253.8	233.6	210.6	201.9
75°	204.8	190.4	178.8	170.2	187.5
77.5°	141.3	135.6	126.9	118.3	115.4
80°	92.3	89.4	86.5	83.6	80.8
82.5°	54.8	54.8	54.8	54.8	54.8
85°	28.8	31.7	34.6	37.5	40.4
87.5°	17.3	17.3	20.2	23.1	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)