

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: P562816

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562816
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-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4948.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

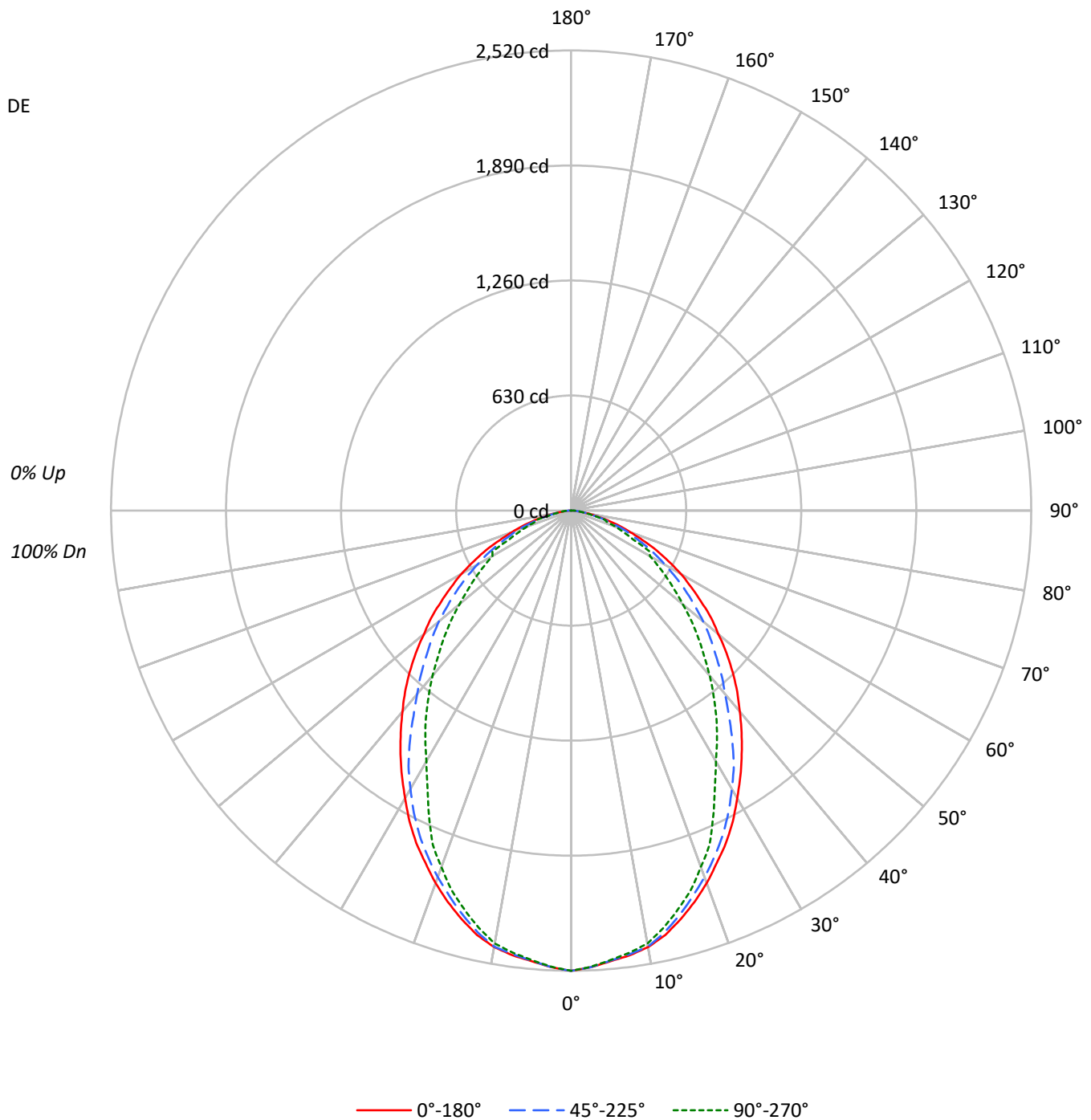
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562816

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-81-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562816

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-81-84-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	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°	3391	3391	3391
5°	3345	3341	3337
10°	3316	3312	3288
15°	3227	3194	3150
20°	3108	3058	2975
25°	2980	2916	2734
30°	2825	2734	2463
35°	2675	2527	2278
40°	2523	2303	2073
45°	2379	2129	1874
50°	2202	1976	1671
55°	2037	1791	1497
60°	1866	1600	1341
65°	1642	1401	1188
70°	1352	1227	1009
75°	1076	939	985
80°	722	677	632
85°	449	540	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2379 cd/sqm



TEST NUMBER: P562816

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-81-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.6	4.7
10°-20°	643.9	13.0
20°-30°	891.4	18.0
30°-40°	950.5	19.2
40°-50°	867.2	17.5
50°-60°	679.3	13.7
60°-70°	442.8	8.9
70°-80°	196.2	4.0
80°-90°	42.1	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°	1769.9	35.8
0°-40°	2720.5	55.0
0°-60°	4267.0	86.2
0°-90°	4948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2520	2520	2520	2520	2520	
5°	2477	2474	2474	2471	2471	235
15°	2316	2316	2293	2270	2261	651
25°	2008	1996	1964	1894	1842	922
35°	1629	1617	1538	1422	1387	1018
45°	1250	1224	1119	1026	985	963
55°	868	842	763	673	638	779
65°	516	487	440	449	373	508
75°	207	192	181	172	189	222
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



TEST NUMBER: P562816

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-81-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2520.4	2520.4	2520.4	2520.4	2520.4
2.5°	2503.0	2503.0	2503.0	2500.0	2500.0
5°	2476.7	2473.8	2473.8	2470.9	2470.9
7.5°	2456.3	2453.4	2450.5	2447.6	2441.8
10°	2427.2	2427.2	2424.3	2409.7	2406.8
12.5°	2380.6	2377.7	2366.0	2345.6	2339.8
15°	2316.5	2316.5	2293.2	2269.9	2261.1
17.5°	2246.5	2243.6	2214.5	2191.2	2179.5
20°	2170.8	2165.0	2135.8	2097.9	2077.5
22.5°	2086.3	2086.3	2051.3	2001.8	1981.4
25°	2007.6	1996.0	1963.9	1894.0	1841.5
27.5°	1917.3	1899.8	1864.8	1765.8	1704.6
30°	1818.2	1809.5	1759.9	1631.7	1585.1
32.5°	1725.0	1710.4	1658.0	1523.9	1486.0
35°	1628.8	1617.2	1538.5	1421.9	1387.0
37.5°	1532.7	1518.1	1419.0	1325.8	1282.1
40°	1436.5	1419.0	1311.2	1226.7	1180.1
42.5°	1346.2	1322.9	1218.0	1127.6	1075.2
45°	1250.0	1223.8	1118.9	1025.7	984.9
47.5°	1153.9	1130.6	1034.4	938.2	891.6
50°	1051.9	1031.5	944.1	847.9	798.4
52.5°	967.4	935.3	850.8	754.7	713.9
55°	868.3	842.1	763.4	673.1	638.1
57.5°	778.0	751.8	678.9	594.4	565.3
60°	693.5	655.6	594.4	521.6	498.3
62.5°	600.2	571.1	518.7	457.5	486.6
65°	515.7	486.6	440.0	448.7	373.0
67.5°	422.5	407.9	367.1	326.3	314.7
70°	343.8	326.3	311.8	268.1	256.4
72.5°	273.9	256.4	236.0	212.7	204.0
75°	206.9	192.3	180.7	171.9	189.4
77.5°	142.8	136.9	128.2	119.5	116.6
80°	93.2	90.3	87.4	84.5	81.6
82.5°	55.4	55.4	55.4	55.4	55.4
85°	29.1	32.1	35.0	37.9	40.8
87.5°	17.5	17.5	20.4	23.3	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)