

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: P562477

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562477
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-LD4-1STD-50-UNV-93-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3981.0 lumens
Efficiency: N/A
Efficacy: 119.5 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

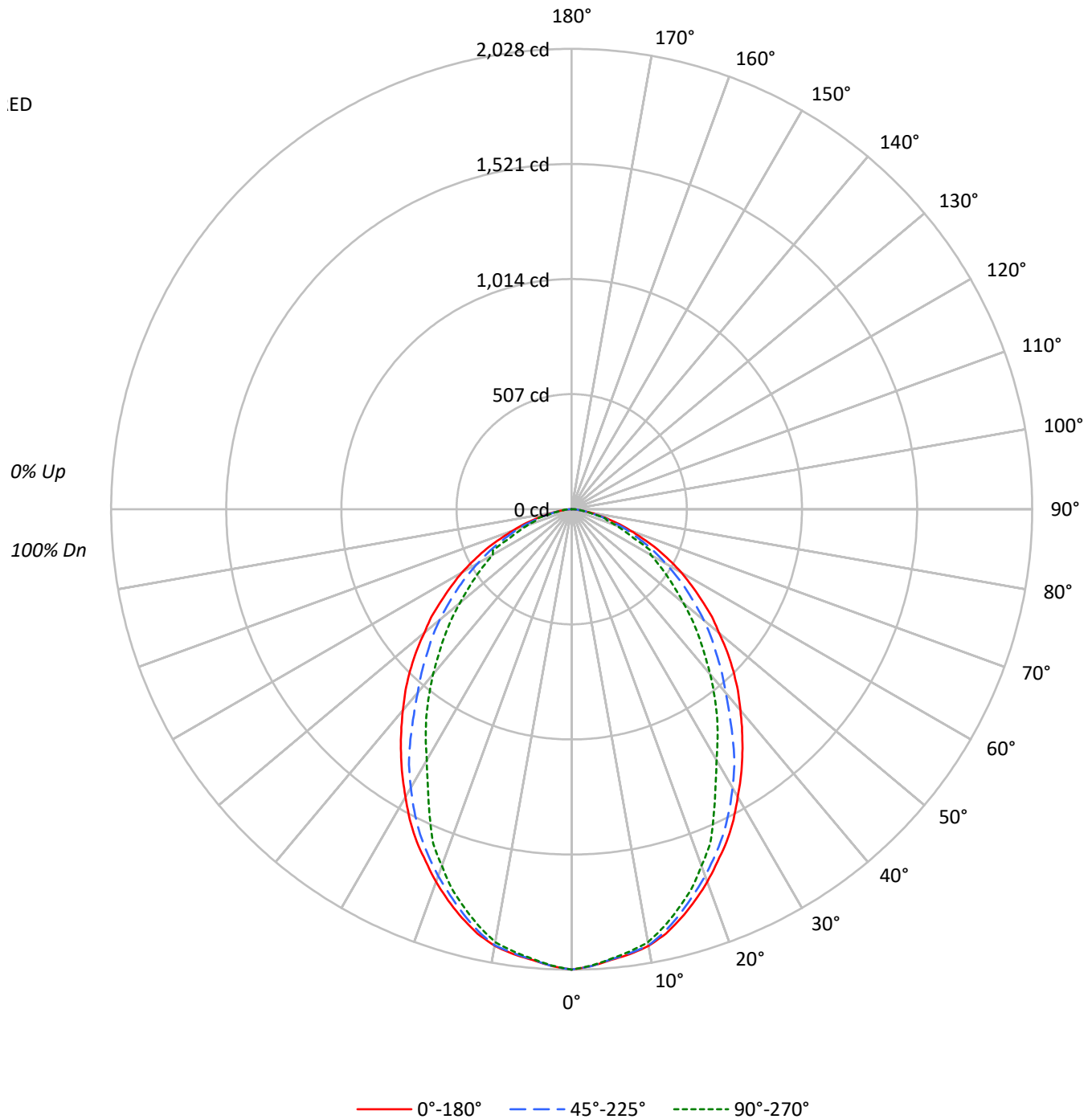
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2729	2729	2729
5°	2691	2688	2685
10°	2668	2665	2646
15°	2596	2570	2534
20°	2501	2460	2393
25°	2398	2346	2200
30°	2273	2200	1981
35°	2153	2033	1833
40°	2030	1853	1668
45°	1914	1713	1508
50°	1771	1590	1345
55°	1639	1441	1204
60°	1502	1287	1079
65°	1321	1127	955
70°	1088	987	812
75°	865	756	792
80°	581	545	508
85°	361	434	506

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1914 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	4.7
10°-20°	518.1	13.0
20°-30°	717.2	18.0
30°-40°	764.8	19.2
40°-50°	697.7	17.5
50°-60°	546.6	13.7
60°-70°	356.2	8.9
70°-80°	157.8	4.0
80°-90°	33.9	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°	1424.0	35.8
0°-40°	2188.8	55.0
0°-60°	3433.0	86.2
0°-90°	3981.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3981.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2028	2028	2028	2028	2028	
5°	1993	1990	1990	1988	1988	189
15°	1864	1864	1845	1826	1819	524
25°	1615	1606	1580	1524	1482	742
35°	1310	1301	1238	1144	1116	819
45°	1006	985	900	825	792	775
55°	699	678	614	542	513	627
65°	415	392	354	361	300	409
75°	166	155	145	138	152	178
85°	23	26	28	30	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2027.9	2027.9	2027.9	2027.9	2027.9
2.5°	2013.8	2013.8	2013.8	2011.5	2011.5
5°	1992.7	1990.4	1990.4	1988.0	1988.0
7.5°	1976.3	1973.9	1971.6	1969.3	1964.6
10°	1952.8	1952.8	1950.5	1938.8	1936.4
12.5°	1915.3	1913.0	1903.6	1887.2	1882.5
15°	1863.8	1863.8	1845.0	1826.3	1819.2
17.5°	1807.5	1805.2	1781.7	1763.0	1753.6
20°	1746.5	1741.9	1718.4	1687.9	1671.5
22.5°	1678.6	1678.6	1650.4	1610.6	1594.2
25°	1615.3	1605.9	1580.1	1523.8	1481.6
27.5°	1542.6	1528.5	1500.4	1420.7	1371.4
30°	1462.9	1455.8	1416.0	1312.8	1275.3
32.5°	1387.9	1376.1	1333.9	1226.1	1195.6
35°	1310.5	1301.1	1237.8	1144.0	1115.9
37.5°	1233.1	1221.4	1141.7	1066.7	1031.5
40°	1155.8	1141.7	1055.0	987.0	949.5
42.5°	1083.1	1064.3	979.9	907.3	865.1
45°	1005.7	984.6	900.2	825.2	792.4
47.5°	928.4	909.6	832.2	754.9	717.4
50°	846.3	829.9	759.6	682.2	642.4
52.5°	778.3	752.5	684.6	607.2	574.4
55°	698.6	677.5	614.2	541.5	513.4
57.5°	625.9	604.8	546.2	478.2	454.8
60°	558.0	527.5	478.2	419.6	400.9
62.5°	482.9	459.5	417.3	368.1	391.5
65°	415.0	391.5	354.0	361.0	300.1
67.5°	339.9	328.2	295.4	262.6	253.2
70°	276.6	262.6	250.8	215.7	206.3
72.5°	220.4	206.3	189.9	171.1	164.1
75°	166.4	154.7	145.4	138.3	152.4
77.5°	114.9	110.2	103.2	96.1	93.8
80°	75.0	72.7	70.3	68.0	65.6
82.5°	44.5	44.5	44.5	44.5	44.5
85°	23.4	25.8	28.1	30.5	32.8
87.5°	14.1	14.1	16.4	18.8	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)