

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: P590674

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590674
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3STD-40-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5938.0 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

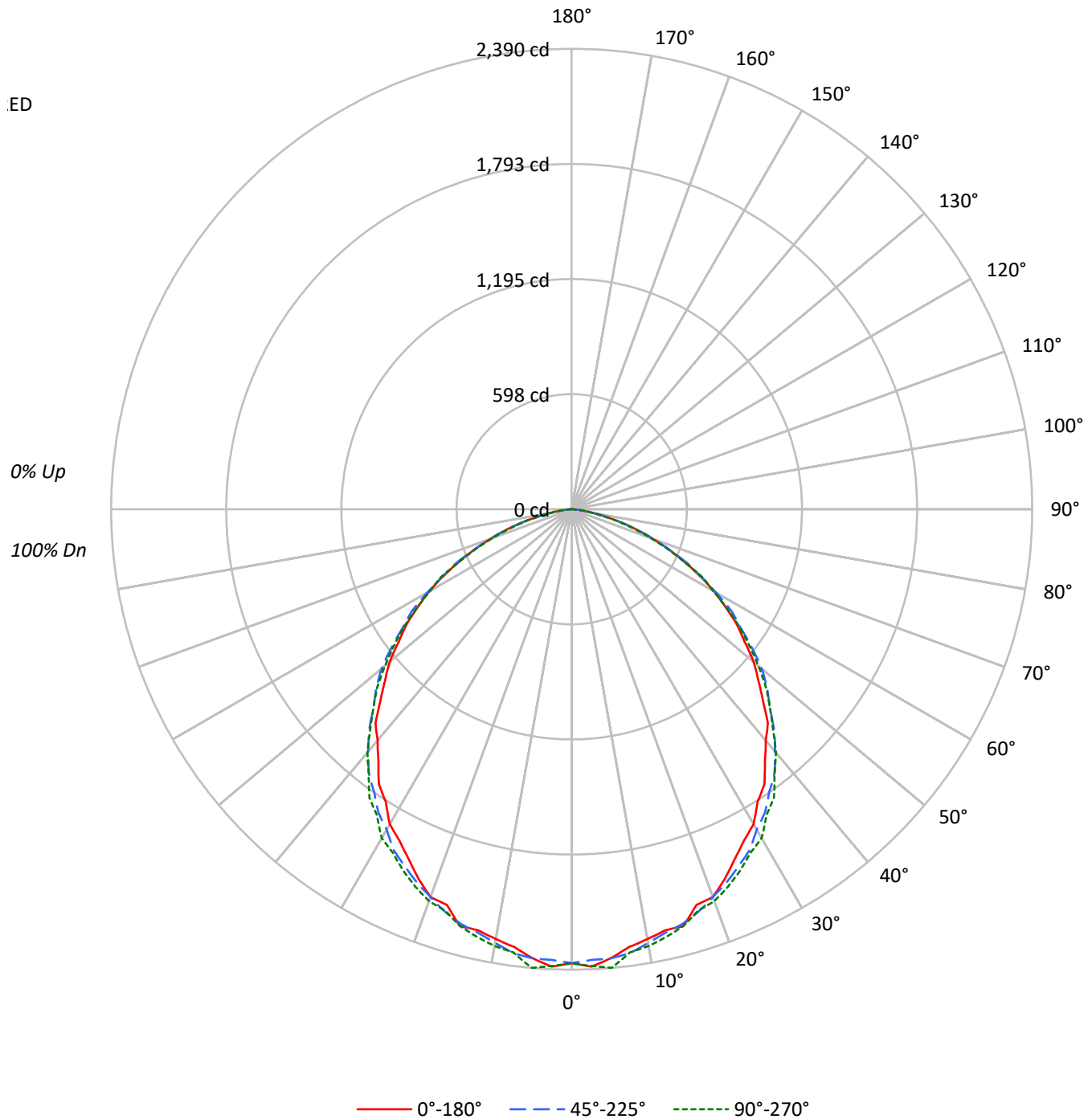
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6340	6340	6340
5°	6319	6321	6455
10°	6191	6245	6289
15°	6240	6206	6241
20°	6135	6135	6200
25°	5946	6076	6143
30°	5864	5967	6126
35°	5726	5876	6008
40°	5503	5768	5794
45°	5337	5527	5535
50°	5161	5395	5292
55°	4918	5014	4978
60°	4599	4645	4561
65°	4101	4205	4071
70°	3519	3530	3432
75°	2786	2780	2673
80°	1867	1815	1745
85°	1016	1003	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5669 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.6	3.7
10°-20°	628.1	10.6
20°-30°	941.0	15.8
30°-40°	1115.3	18.8
40°-50°	1117.4	18.8
50°-60°	948.5	16.0
60°-70°	639.5	10.8
70°-80°	281.0	4.7
80°-90°	45.7	0.8
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°	1790.8	30.2
0°-40°	2906.1	48.9
0°-60°	4971.9	83.7
0°-90°	5938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2356	2356	2356	2356	2356	
5°	2339	2334	2340	2333	2390	221
15°	2240	2214	2228	2239	2240	624
25°	2003	2014	2046	2073	2069	926
35°	1743	1748	1789	1830	1829	1082
45°	1402	1428	1452	1490	1454	1085
55°	1048	1041	1069	1061	1061	932
65°	644	636	660	635	639	640
75°	268	262	267	248	257	287
85°	33	32	32	32	30	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2356.0	2356.0	2356.0	2356.0	2356.0
2.5°	2376.4	2358.5	2341.8	2361.2	2373.1
5°	2339.3	2333.8	2340.2	2333.2	2389.5
7.5°	2291.3	2312.2	2324.4	2316.8	2320.2
10°	2265.7	2258.4	2285.5	2304.3	2301.6
12.5°	2238.3	2249.3	2250.8	2271.2	2273.0
15°	2239.8	2214.0	2227.7	2239.2	2240.1
17.5°	2152.8	2180.8	2190.3	2216.7	2183.9
20°	2142.2	2121.8	2142.2	2169.3	2165.0
22.5°	2076.8	2054.0	2097.8	2121.8	2120.3
25°	2002.6	2013.5	2046.4	2073.1	2068.9
27.5°	1937.5	1950.2	1997.1	2033.9	2010.2
30°	1887.3	1880.9	1920.4	1953.3	1971.5
32.5°	1797.5	1820.7	1866.9	1899.4	1882.1
35°	1743.1	1748.3	1788.7	1830.1	1828.9
37.5°	1647.9	1671.9	1728.8	1740.3	1729.7
40°	1566.6	1590.7	1642.1	1654.6	1649.4
42.5°	1506.7	1511.0	1555.1	1569.4	1546.6
45°	1402.4	1428.5	1452.3	1489.7	1454.4
47.5°	1313.5	1325.7	1376.8	1386.9	1368.3
50°	1232.9	1237.2	1288.6	1276.1	1264.0
52.5°	1131.6	1149.6	1178.5	1176.0	1161.7
55°	1048.3	1041.3	1068.7	1061.4	1061.1
57.5°	948.2	960.4	982.9	971.3	952.8
60°	854.5	854.8	863.0	849.9	847.5
62.5°	750.2	753.8	755.6	739.5	765.7
65°	644.0	635.5	660.4	635.2	639.4
67.5°	546.3	550.6	548.2	532.4	538.4
70°	447.2	452.7	448.7	430.8	436.2
72.5°	356.5	349.8	354.1	331.6	341.9
75°	268.0	262.5	267.4	248.5	257.1
77.5°	182.5	186.8	183.7	173.7	179.5
80°	120.5	117.1	117.1	111.3	112.6
82.5°	70.3	66.9	66.0	64.2	66.9
85°	32.9	31.9	32.5	31.6	30.4
87.5°	11.9	12.2	12.2	11.6	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)