

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: P590830

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590830
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-LD4-4LO-35-UNV-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5724.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

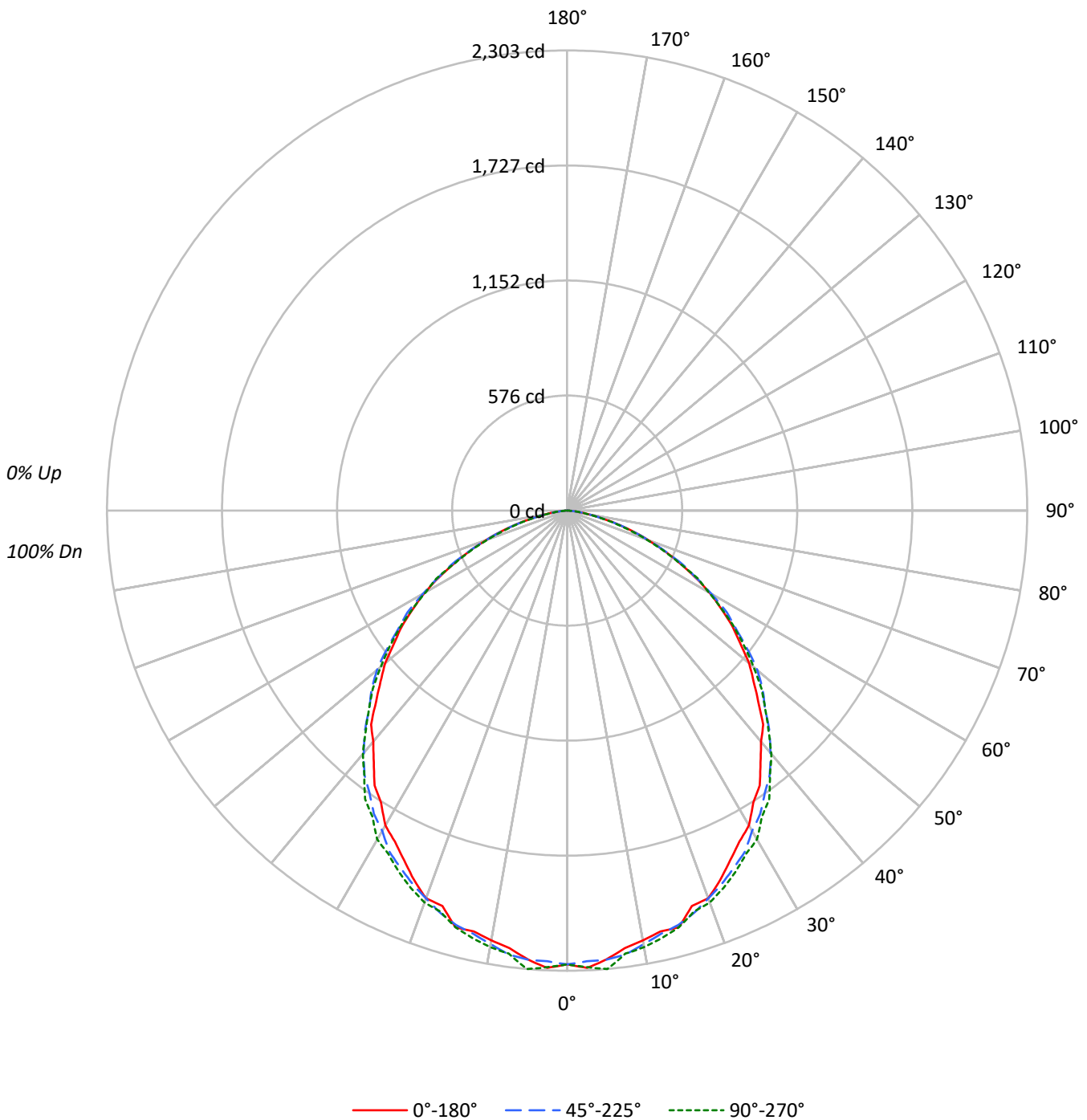
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6111	6111	6111
5°	6091	6094	6222
10°	5968	6020	6062
15°	6015	5982	6016
20°	5913	5913	5976
25°	5732	5857	5921
30°	5653	5752	5905
35°	5520	5664	5792
40°	5305	5560	5585
45°	5144	5327	5335
50°	4976	5200	5101
55°	4741	4833	4799
60°	4433	4477	4397
65°	3953	4053	3925
70°	3392	3403	3308
75°	2686	2680	2576
80°	1799	1750	1681
85°	979	969	905

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.6	3.7
10°-20°	605.5	10.6
20°-30°	907.1	15.8
30°-40°	1075.1	18.8
40°-50°	1077.1	18.8
50°-60°	914.3	16.0
60°-70°	616.4	10.8
70°-80°	270.8	4.7
80°-90°	44.0	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°	1726.2	30.2
0°-40°	2801.3	48.9
0°-60°	4792.7	83.7
0°-90°	5724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2271	2271	2271	2271	2271	
5°	2255	2250	2256	2249	2303	213
15°	2159	2134	2147	2158	2159	602
25°	1930	1941	1973	1998	1994	892
35°	1680	1685	1724	1764	1763	1043
45°	1352	1377	1400	1436	1402	1046
55°	1010	1004	1030	1023	1023	899
65°	621	613	637	612	616	617
75°	258	253	258	240	248	277
85°	32	31	31	30	29	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2271.1	2271.1	2271.1	2271.1	2271.1
2.5°	2290.8	2273.5	2257.4	2276.1	2287.6
5°	2255.0	2249.7	2255.9	2249.1	2303.4
7.5°	2208.7	2228.9	2240.6	2233.3	2236.5
10°	2184.0	2177.0	2203.1	2221.3	2218.6
12.5°	2157.7	2168.2	2169.7	2189.3	2191.1
15°	2159.1	2134.2	2147.4	2158.5	2159.4
17.5°	2075.3	2102.2	2111.3	2136.8	2105.2
20°	2065.0	2045.3	2065.0	2091.1	2087.0
22.5°	2001.9	1980.0	2022.2	2045.3	2043.9
25°	1930.4	1941.0	1972.6	1998.4	1994.3
27.5°	1867.6	1880.0	1925.1	1960.6	1937.7
30°	1819.3	1813.1	1851.2	1882.9	1900.5
32.5°	1732.8	1755.0	1799.6	1831.0	1814.3
35°	1680.3	1685.2	1724.2	1764.1	1763.0
37.5°	1588.5	1611.6	1666.5	1677.6	1667.4
40°	1510.2	1533.3	1582.9	1594.9	1589.9
42.5°	1452.4	1456.5	1499.0	1512.8	1490.8
45°	1351.8	1377.1	1399.9	1436.0	1402.0
47.5°	1266.2	1277.9	1327.2	1336.9	1319.0
50°	1188.5	1192.6	1242.2	1230.1	1218.4
52.5°	1090.9	1108.2	1136.0	1133.7	1119.9
55°	1010.5	1003.8	1030.1	1023.1	1022.8
57.5°	914.0	925.8	947.5	936.3	918.4
60°	823.7	824.0	831.9	819.3	817.0
62.5°	723.1	726.6	728.4	712.9	738.1
65°	620.8	612.6	636.6	612.3	616.4
67.5°	526.7	530.8	528.4	513.2	519.0
70°	431.1	436.3	432.5	415.2	420.5
72.5°	343.7	337.2	341.3	319.6	329.6
75°	258.3	253.1	257.8	239.6	247.8
77.5°	175.9	180.0	177.1	167.4	173.0
80°	116.1	112.9	112.9	107.3	108.5
82.5°	67.7	64.5	63.6	61.9	64.5
85°	31.7	30.8	31.4	30.5	29.3
87.5°	11.4	11.7	11.7	11.1	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)