

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: P562726

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562726
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-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4582.0 lumens
Efficiency: N/A
Efficacy: 97.9 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

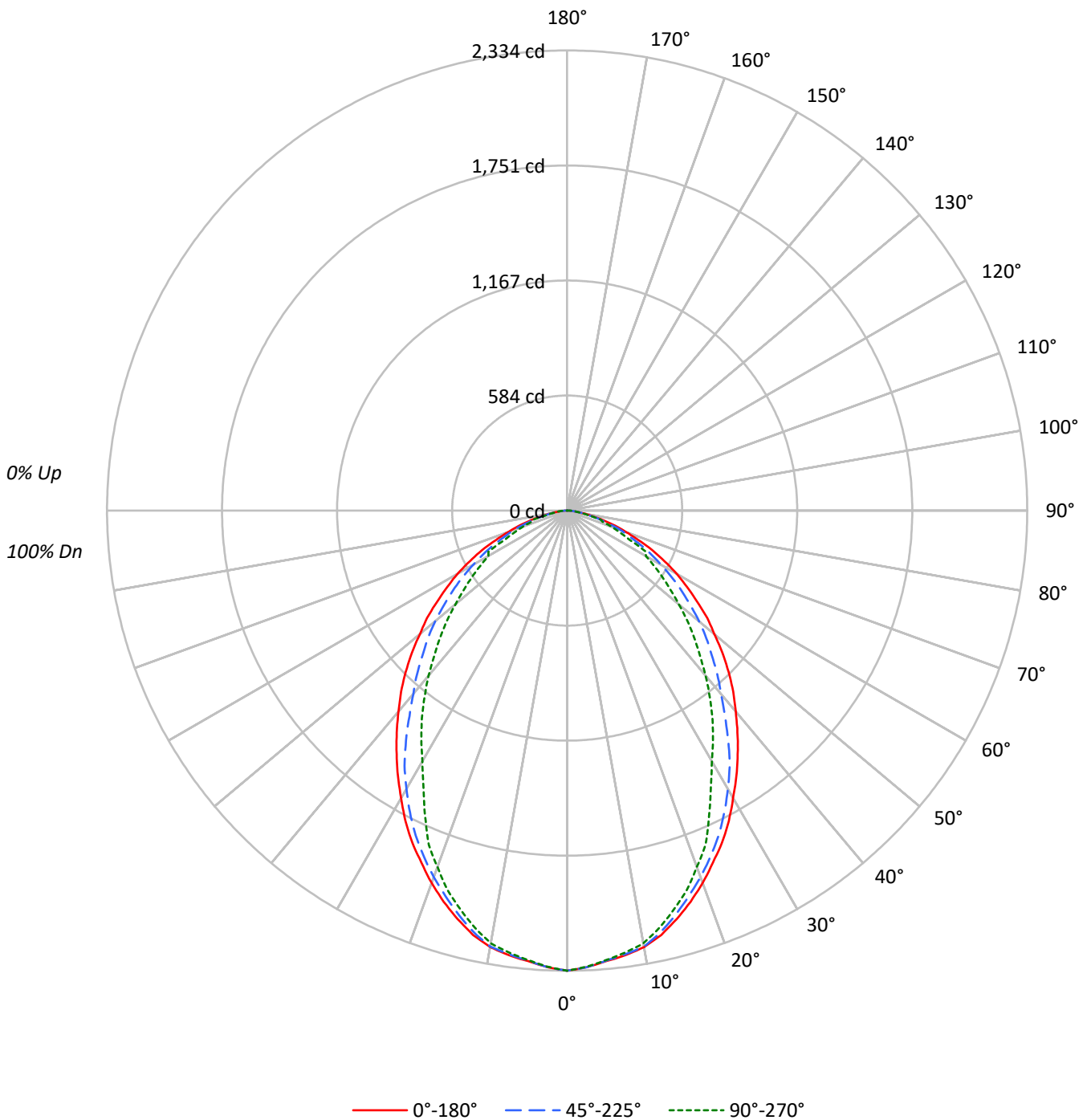
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	3140	3140	3140
5°	3098	3094	3090
10°	3071	3067	3045
15°	2988	2958	2917
20°	2878	2832	2755
25°	2760	2700	2532
30°	2616	2532	2281
35°	2477	2340	2110
40°	2337	2133	1919
45°	2203	1972	1735
50°	2039	1830	1548
55°	1886	1658	1386
60°	1728	1481	1242
65°	1521	1297	1100
70°	1253	1136	934
75°	996	870	912
80°	669	627	586
85°	417	500	584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2203 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	4.7
10°-20°	596.3	13.0
20°-30°	825.5	18.0
30°-40°	880.2	19.2
40°-50°	803.0	17.5
50°-60°	629.1	13.7
60°-70°	410.0	8.9
70°-80°	181.6	4.0
80°-90°	39.0	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°	1639.0	35.8
0°-40°	2519.2	55.0
0°-60°	3951.3	86.2
0°-90°	4582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2334	2334	2334	2334	2334	
5°	2294	2291	2291	2288	2288	218
15°	2145	2145	2124	2102	2094	603
25°	1859	1848	1819	1754	1705	854
35°	1508	1498	1425	1317	1284	943
45°	1158	1133	1036	950	912	892
55°	804	780	707	623	591	721
65°	478	451	407	416	345	471
75°	192	178	167	159	175	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2334.0	2334.0	2334.0	2334.0	2334.0
2.5°	2317.8	2317.8	2317.8	2315.1	2315.1
5°	2293.5	2290.8	2290.8	2288.1	2288.1
7.5°	2274.6	2271.9	2269.3	2266.6	2261.2
10°	2247.7	2247.7	2245.0	2231.5	2228.8
12.5°	2204.5	2201.8	2191.0	2172.1	2166.7
15°	2145.1	2145.1	2123.5	2102.0	2093.9
17.5°	2080.4	2077.7	2050.7	2029.1	2018.3
20°	2010.2	2004.8	1977.8	1942.8	1923.9
22.5°	1932.0	1932.0	1899.6	1853.7	1834.8
25°	1859.1	1848.3	1818.6	1753.9	1705.3
27.5°	1775.5	1759.3	1726.9	1635.2	1578.5
30°	1683.7	1675.6	1629.8	1511.0	1467.9
32.5°	1597.4	1583.9	1535.3	1411.2	1376.1
35°	1508.3	1497.5	1424.7	1316.8	1284.4
37.5°	1419.3	1405.8	1314.1	1227.7	1187.2
40°	1330.3	1314.1	1214.2	1136.0	1092.8
42.5°	1246.6	1225.0	1127.9	1044.2	995.7
45°	1157.6	1133.3	1036.1	949.8	912.0
47.5°	1068.5	1046.9	957.9	868.8	825.7
50°	974.1	955.2	874.2	785.2	739.3
52.5°	895.8	866.1	787.9	698.9	661.1
55°	804.1	779.8	706.9	623.3	590.9
57.5°	720.4	696.2	628.7	550.4	523.5
60°	642.2	607.1	550.4	483.0	461.4
62.5°	555.8	528.9	480.3	423.6	450.6
65°	477.6	450.6	407.4	415.5	345.4
67.5°	391.3	377.8	340.0	302.2	291.4
70°	318.4	302.2	288.7	248.2	237.4
72.5°	253.6	237.4	218.6	197.0	188.9
75°	191.6	178.1	167.3	159.2	175.4
77.5°	132.2	126.8	118.7	110.6	107.9
80°	86.3	83.6	80.9	78.3	75.6
82.5°	51.3	51.3	51.3	51.3	51.3
85°	27.0	29.7	32.4	35.1	37.8
87.5°	16.2	16.2	18.9	21.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)