

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: P562696

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562696
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3912.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

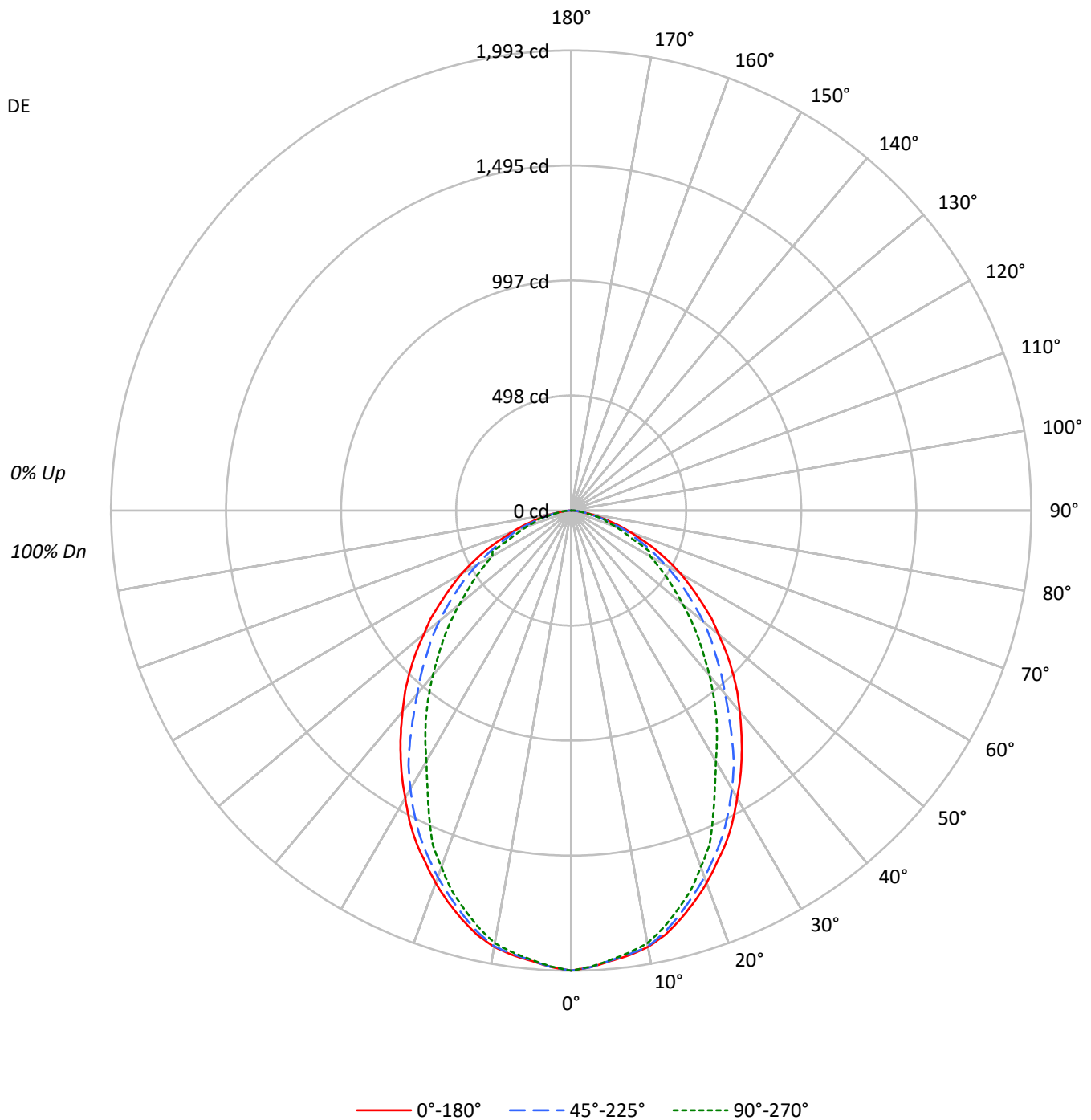
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2681	2681	2681
5°	2645	2642	2639
10°	2622	2619	2600
15°	2551	2525	2490
20°	2457	2418	2352
25°	2356	2305	2162
30°	2233	2162	1947
35°	2115	1998	1801
40°	1995	1821	1639
45°	1881	1683	1482
50°	1741	1562	1321
55°	1610	1416	1183
60°	1475	1265	1060
65°	1298	1108	939
70°	1069	970	797
75°	850	742	778
80°	571	535	500
85°	355	426	499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1881 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.5	4.7
10°-20°	509.1	13.0
20°-30°	704.8	18.0
30°-40°	751.5	19.2
40°-50°	685.6	17.5
50°-60°	537.1	13.7
60°-70°	350.1	8.9
70°-80°	155.1	4.0
80°-90°	33.3	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°	1399.4	35.8
0°-40°	2150.9	55.0
0°-60°	3373.6	86.2
0°-90°	3912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1993	1993	1993	1993	1993	
5°	1958	1956	1956	1954	1954	186
15°	1832	1832	1813	1795	1788	515
25°	1587	1578	1553	1497	1456	729
35°	1288	1279	1216	1124	1097	805
45°	988	968	885	811	779	761
55°	686	666	604	532	504	616
65°	408	385	348	355	295	402
75°	164	152	143	136	150	175
85°	23	25	28	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1992.7	1992.7	1992.7	1992.7	1992.7
2.5°	1978.9	1978.9	1978.9	1976.6	1976.6
5°	1958.2	1955.9	1955.9	1953.6	1953.6
7.5°	1942.0	1939.7	1937.4	1935.1	1930.5
10°	1919.0	1919.0	1916.7	1905.2	1902.9
12.5°	1882.1	1879.8	1870.6	1854.5	1849.9
15°	1831.5	1831.5	1813.0	1794.6	1787.7
17.5°	1776.2	1773.9	1750.8	1732.4	1723.2
20°	1716.3	1711.7	1688.6	1658.7	1642.6
22.5°	1649.5	1649.5	1621.8	1582.7	1566.5
25°	1587.3	1578.1	1552.7	1497.4	1456.0
27.5°	1515.8	1502.0	1474.4	1396.1	1347.7
30°	1437.5	1430.6	1391.4	1290.1	1253.2
32.5°	1363.8	1352.3	1310.8	1204.8	1174.9
35°	1287.8	1278.6	1216.4	1124.2	1096.6
37.5°	1211.8	1200.2	1121.9	1048.2	1013.6
40°	1135.7	1121.9	1036.7	969.9	933.0
42.5°	1064.3	1045.9	963.0	891.5	850.1
45°	988.3	967.6	884.6	810.9	778.7
47.5°	912.3	893.8	817.8	741.8	704.9
50°	831.6	815.5	746.4	670.4	631.2
52.5°	764.8	739.5	672.7	596.7	564.4
55°	686.5	665.8	603.6	532.2	504.5
57.5°	615.1	594.4	536.8	470.0	446.9
60°	548.3	518.3	470.0	412.4	393.9
62.5°	474.6	451.5	410.1	361.7	384.7
65°	407.8	384.7	347.9	354.8	294.9
67.5°	334.0	322.5	290.3	258.0	248.8
70°	271.8	258.0	246.5	211.9	202.7
72.5°	216.5	202.7	186.6	168.2	161.3
75°	163.6	152.0	142.8	135.9	149.7
77.5°	112.9	108.3	101.4	94.5	92.1
80°	73.7	71.4	69.1	66.8	64.5
82.5°	43.8	43.8	43.8	43.8	43.8
85°	23.0	25.3	27.6	29.9	32.3
87.5°	13.8	13.8	16.1	18.4	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)