

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: P562403

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562403
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-40-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3871.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

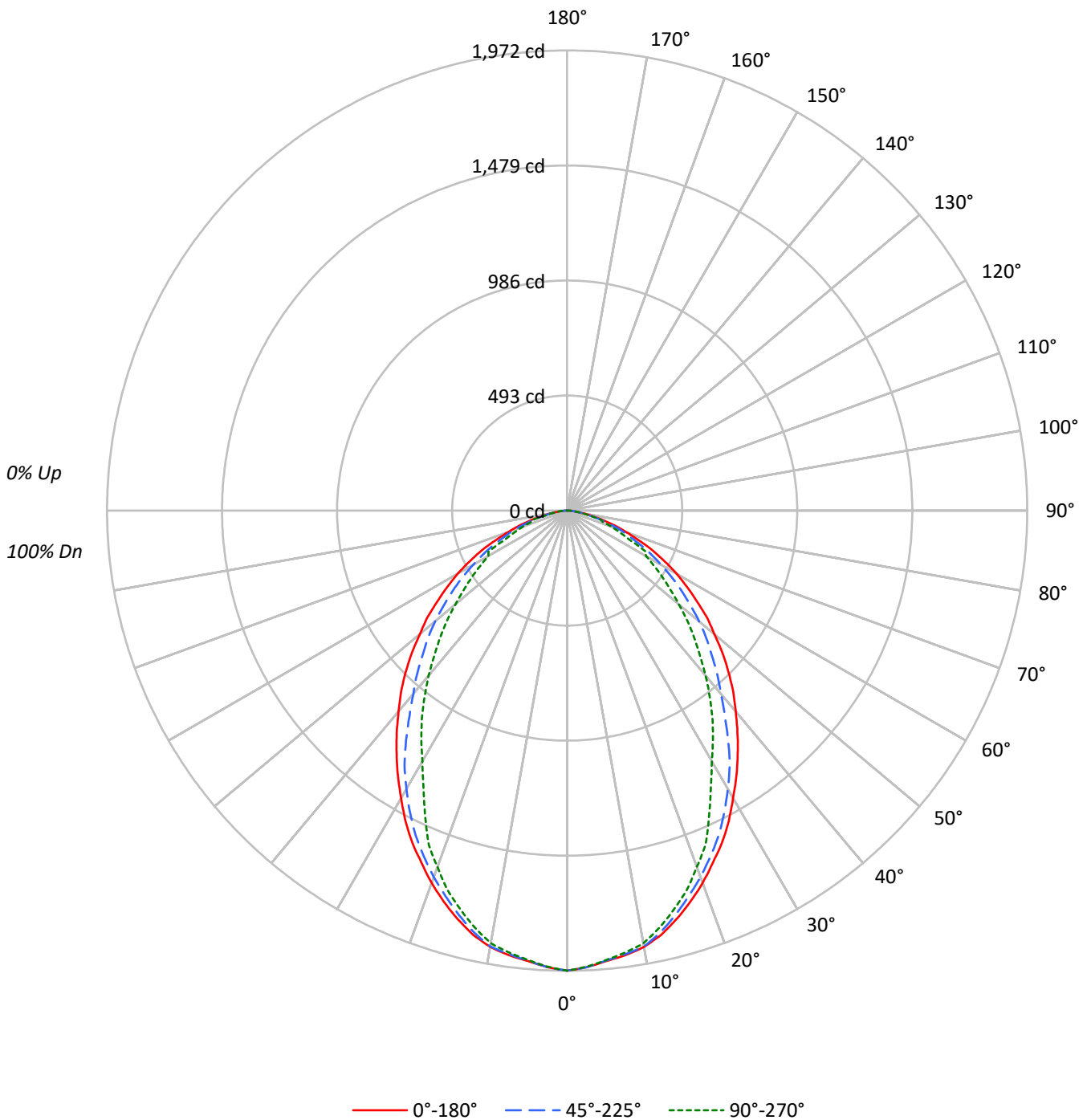
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2653	2653	2653
5°	2617	2614	2611
10°	2594	2591	2573
15°	2524	2499	2464
20°	2432	2392	2327
25°	2332	2281	2139
30°	2210	2139	1927
35°	2093	1977	1782
40°	1974	1802	1622
45°	1861	1666	1466
50°	1723	1546	1307
55°	1593	1401	1171
60°	1460	1251	1049
65°	1285	1096	929
70°	1058	959	789
75°	842	735	770
80°	565	530	494
85°	352	423	492

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1861 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.6	4.7
10°-20°	503.7	13.0
20°-30°	697.4	18.0
30°-40°	743.6	19.2
40°-50°	678.4	17.5
50°-60°	531.5	13.7
60°-70°	346.4	8.9
70°-80°	153.5	4.0
80°-90°	33.0	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°	1384.7	35.8
0°-40°	2128.3	55.0
0°-60°	3338.2	86.2
0°-90°	3871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1972	1972	1972	1972	1972	
5°	1938	1935	1935	1933	1933	184
15°	1812	1812	1794	1776	1769	509
25°	1571	1562	1536	1482	1441	721
35°	1274	1265	1204	1112	1085	797
45°	978	957	875	802	770	753
55°	679	659	597	527	499	609
65°	404	381	344	351	292	398
75°	162	150	141	134	148	173
85°	23	25	27	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1971.8	1971.8	1971.8	1971.8	1971.8
2.5°	1958.2	1958.2	1958.2	1955.9	1955.9
5°	1937.6	1935.4	1935.4	1933.1	1933.1
7.5°	1921.7	1919.4	1917.1	1914.8	1910.3
10°	1898.9	1898.9	1896.6	1885.2	1882.9
12.5°	1862.4	1860.1	1851.0	1835.1	1830.5
15°	1812.3	1812.3	1794.0	1775.8	1769.0
17.5°	1757.6	1755.3	1732.5	1714.2	1705.1
20°	1698.3	1693.7	1670.9	1641.3	1625.3
22.5°	1632.2	1632.2	1604.8	1566.1	1550.1
25°	1570.6	1561.5	1536.4	1481.7	1440.7
27.5°	1500.0	1486.3	1458.9	1381.4	1333.6
30°	1422.5	1415.6	1376.9	1276.6	1240.1
32.5°	1349.5	1338.1	1297.1	1192.2	1162.6
35°	1274.3	1265.2	1203.6	1112.4	1085.1
37.5°	1199.1	1187.7	1110.2	1037.2	1003.0
40°	1123.8	1110.2	1025.8	959.7	923.2
42.5°	1053.2	1034.9	952.9	882.2	841.2
45°	977.9	957.4	875.4	802.4	770.5
47.5°	902.7	884.5	809.3	734.0	697.6
50°	822.9	807.0	738.6	663.4	624.6
52.5°	756.8	731.7	665.6	590.4	558.5
55°	679.3	658.8	597.2	526.6	499.2
57.5°	608.6	588.1	531.1	465.0	442.2
60°	542.5	512.9	465.0	408.0	389.8
62.5°	469.6	446.8	405.8	357.9	380.7
65°	403.5	380.7	344.2	351.1	291.8
67.5°	330.5	319.1	287.2	255.3	246.2
70°	269.0	255.3	243.9	209.7	200.6
72.5°	214.3	200.6	184.6	166.4	159.6
75°	161.9	150.5	141.3	134.5	148.2
77.5°	111.7	107.1	100.3	93.5	91.2
80°	72.9	70.7	68.4	66.1	63.8
82.5°	43.3	43.3	43.3	43.3	43.3
85°	22.8	25.1	27.4	29.6	31.9
87.5°	13.7	13.7	16.0	18.2	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)