

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: P562463

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562463
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-50-UNV-82-97-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3639.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

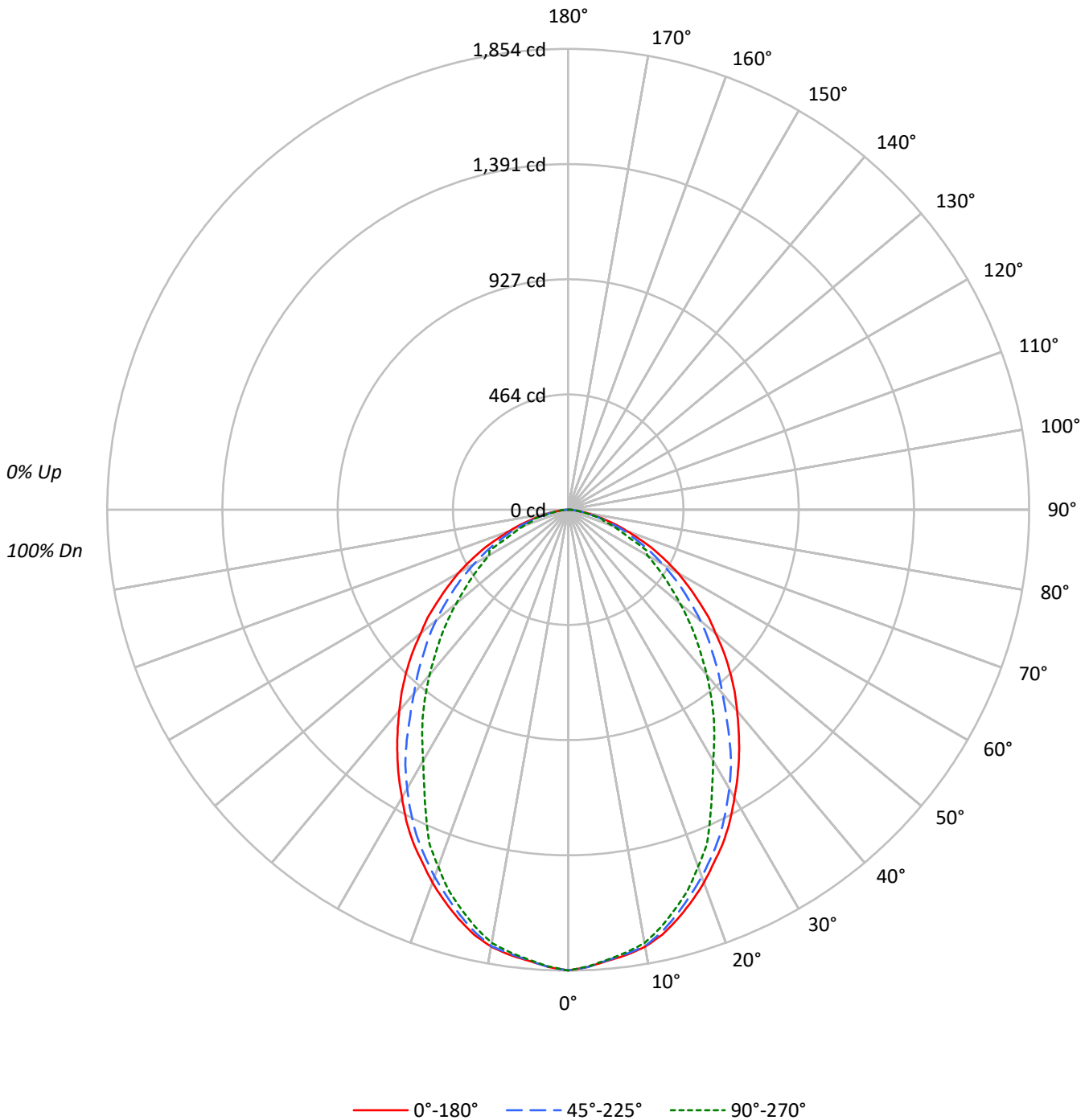
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2494	2494	2494
5°	2460	2457	2454
10°	2439	2436	2418
15°	2373	2349	2316
20°	2286	2249	2188
25°	2192	2144	2011
30°	2078	2011	1811
35°	1968	1859	1675
40°	1856	1694	1524
45°	1749	1566	1378
50°	1619	1453	1229
55°	1498	1317	1101
60°	1372	1176	986
65°	1208	1030	873
70°	995	902	742
75°	791	691	724
80°	532	498	465
85°	330	397	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1749 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.6	4.7
10°-20°	473.6	13.0
20°-30°	655.6	18.0
30°-40°	699.1	19.2
40°-50°	637.7	17.5
50°-60°	499.6	13.7
60°-70°	325.6	8.9
70°-80°	144.3	4.0
80°-90°	31.0	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°	1301.7	35.8
0°-40°	2000.8	55.0
0°-60°	3138.1	86.2
0°-90°	3639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1854	1854	1854	1854	1854	
5°	1822	1819	1819	1817	1817	173
15°	1704	1704	1686	1669	1663	479
25°	1476	1468	1444	1393	1354	678
35°	1198	1189	1132	1046	1020	749
45°	919	900	823	754	724	708
55°	639	619	562	495	469	573
65°	379	358	324	330	274	374
75°	152	141	133	126	139	163
85°	21	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1853.7	1853.7	1853.7	1853.7	1853.7
2.5°	1840.8	1840.8	1840.8	1838.7	1838.7
5°	1821.5	1819.4	1819.4	1817.2	1817.2
7.5°	1806.5	1804.4	1802.2	1800.1	1795.8
10°	1785.1	1785.1	1782.9	1772.2	1770.1
12.5°	1750.8	1748.7	1740.1	1725.1	1720.8
15°	1703.7	1703.7	1686.5	1669.4	1662.9
17.5°	1652.2	1650.1	1628.6	1611.5	1602.9
20°	1596.5	1592.2	1570.8	1542.9	1527.9
22.5°	1534.4	1534.4	1508.6	1472.2	1457.2
25°	1476.5	1467.9	1444.4	1392.9	1354.3
27.5°	1410.1	1397.2	1371.5	1298.6	1253.6
30°	1337.2	1330.8	1294.3	1200.1	1165.8
32.5°	1268.6	1257.9	1219.3	1120.8	1092.9
35°	1197.9	1189.3	1131.5	1045.8	1020.0
37.5°	1127.2	1116.5	1043.6	975.0	942.9
40°	1056.5	1043.6	964.3	902.2	867.9
42.5°	990.0	972.9	895.8	829.3	790.8
45°	919.3	900.0	822.9	754.3	724.3
47.5°	848.6	831.5	760.7	690.0	655.7
50°	773.6	758.6	694.3	623.6	587.2
52.5°	711.5	687.9	625.7	555.0	525.0
55°	638.6	619.3	561.5	495.0	469.3
57.5°	572.2	552.9	499.3	437.2	415.7
60°	510.0	482.2	437.2	383.6	366.4
62.5°	441.4	420.0	381.4	336.4	357.9
65°	379.3	357.9	323.6	330.0	274.3
67.5°	310.7	300.0	270.0	240.0	231.4
70°	252.9	240.0	229.3	197.2	188.6
72.5°	201.4	188.6	173.6	156.4	150.0
75°	152.1	141.4	132.9	126.4	139.3
77.5°	105.0	100.7	94.3	87.9	85.7
80°	68.6	66.4	64.3	62.1	60.0
82.5°	40.7	40.7	40.7	40.7	40.7
85°	21.4	23.6	25.7	27.9	30.0
87.5°	12.9	12.9	15.0	17.1	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)