

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: P562473

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562473
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3391.0 lumens
Efficiency: N/A
Efficacy: 101.8 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

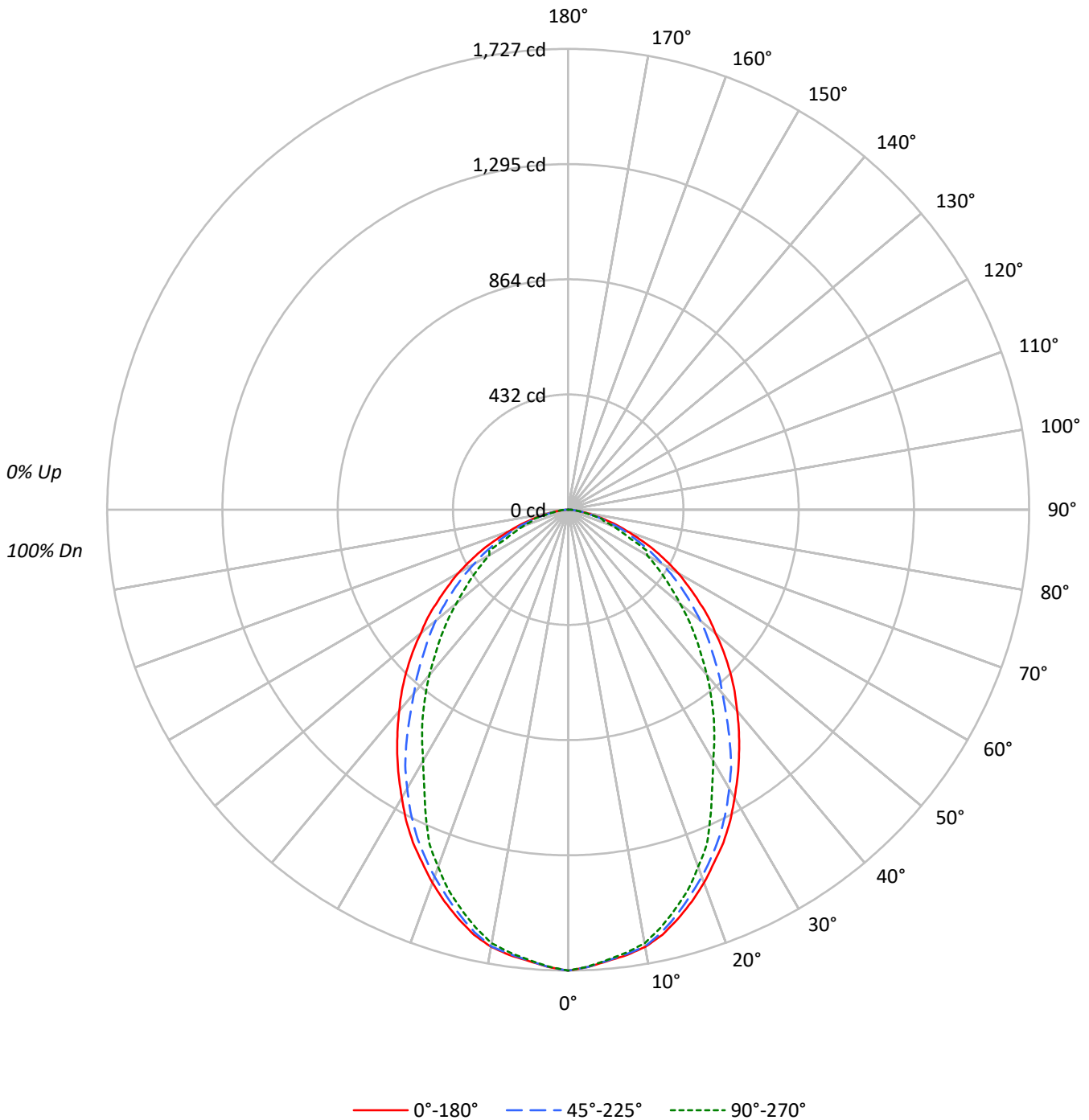
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2324	2324	2324
5°	2293	2290	2287
10°	2273	2270	2254
15°	2211	2189	2159
20°	2130	2096	2039
25°	2043	1998	1874
30°	1936	1874	1688
35°	1834	1732	1561
40°	1729	1578	1420
45°	1630	1459	1284
50°	1509	1354	1145
55°	1396	1227	1026
60°	1279	1096	919
65°	1125	960	814
70°	927	841	691
75°	737	644	675
80°	495	464	433
85°	309	371	432

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.8	4.7
10°-20°	441.3	13.0
20°-30°	610.9	18.0
30°-40°	651.4	19.2
40°-50°	594.3	17.5
50°-60°	465.6	13.7
60°-70°	303.4	8.9
70°-80°	134.4	4.0
80°-90°	28.9	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°	1213.0	35.8
0°-40°	1864.4	55.0
0°-60°	2924.3	86.2
0°-90°	3391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1727	1727	1727	1727	1727	
5°	1697	1695	1695	1693	1693	161
15°	1588	1588	1572	1556	1550	446
25°	1376	1368	1346	1298	1262	632
35°	1116	1108	1054	974	950	698
45°	857	839	767	703	675	660
55°	595	577	523	461	437	534
65°	354	334	302	308	256	348
75°	142	132	124	118	130	152
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1727.3	1727.3	1727.3	1727.3	1727.3
2.5°	1715.3	1715.3	1715.3	1713.4	1713.4
5°	1697.4	1695.4	1695.4	1693.4	1693.4
7.5°	1683.4	1681.4	1679.4	1677.4	1673.4
10°	1663.4	1663.4	1661.4	1651.4	1649.5
12.5°	1631.5	1629.5	1621.5	1607.5	1603.5
15°	1587.5	1587.5	1571.6	1555.6	1549.6
17.5°	1539.6	1537.6	1517.7	1501.7	1493.7
20°	1487.7	1483.7	1463.7	1437.8	1423.8
22.5°	1429.8	1429.8	1405.8	1371.9	1357.9
25°	1375.9	1367.9	1345.9	1298.0	1262.0
27.5°	1314.0	1302.0	1278.0	1210.1	1168.2
30°	1246.1	1240.1	1206.1	1118.3	1086.3
32.5°	1182.2	1172.2	1136.2	1044.4	1018.4
35°	1116.3	1108.3	1054.4	974.5	950.5
37.5°	1050.4	1040.4	972.5	908.6	878.6
40°	984.5	972.5	898.6	840.7	808.7
42.5°	922.6	906.6	834.7	772.8	736.9
45°	856.7	838.7	766.8	702.9	675.0
47.5°	790.8	774.8	708.9	643.0	611.1
50°	720.9	706.9	647.0	581.1	547.2
52.5°	663.0	641.0	583.1	517.2	489.2
55°	595.1	577.1	523.2	461.3	437.3
57.5°	533.2	515.2	465.3	407.4	387.4
60°	475.3	449.3	407.4	357.4	341.5
62.5°	411.4	391.4	355.5	313.5	333.5
65°	353.5	333.5	301.5	307.5	255.6
67.5°	289.6	279.6	251.6	223.7	215.7
70°	235.6	223.7	213.7	183.7	175.7
72.5°	187.7	175.7	161.7	145.8	139.8
75°	141.8	131.8	123.8	117.8	129.8
77.5°	97.8	93.9	87.9	81.9	79.9
80°	63.9	61.9	59.9	57.9	55.9
82.5°	37.9	37.9	37.9	37.9	37.9
85°	20.0	22.0	24.0	26.0	28.0
87.5°	12.0	12.0	14.0	16.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)