

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: P562474

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562474
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-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3502.0 lumens
Efficiency: N/A
Efficacy: 105.2 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

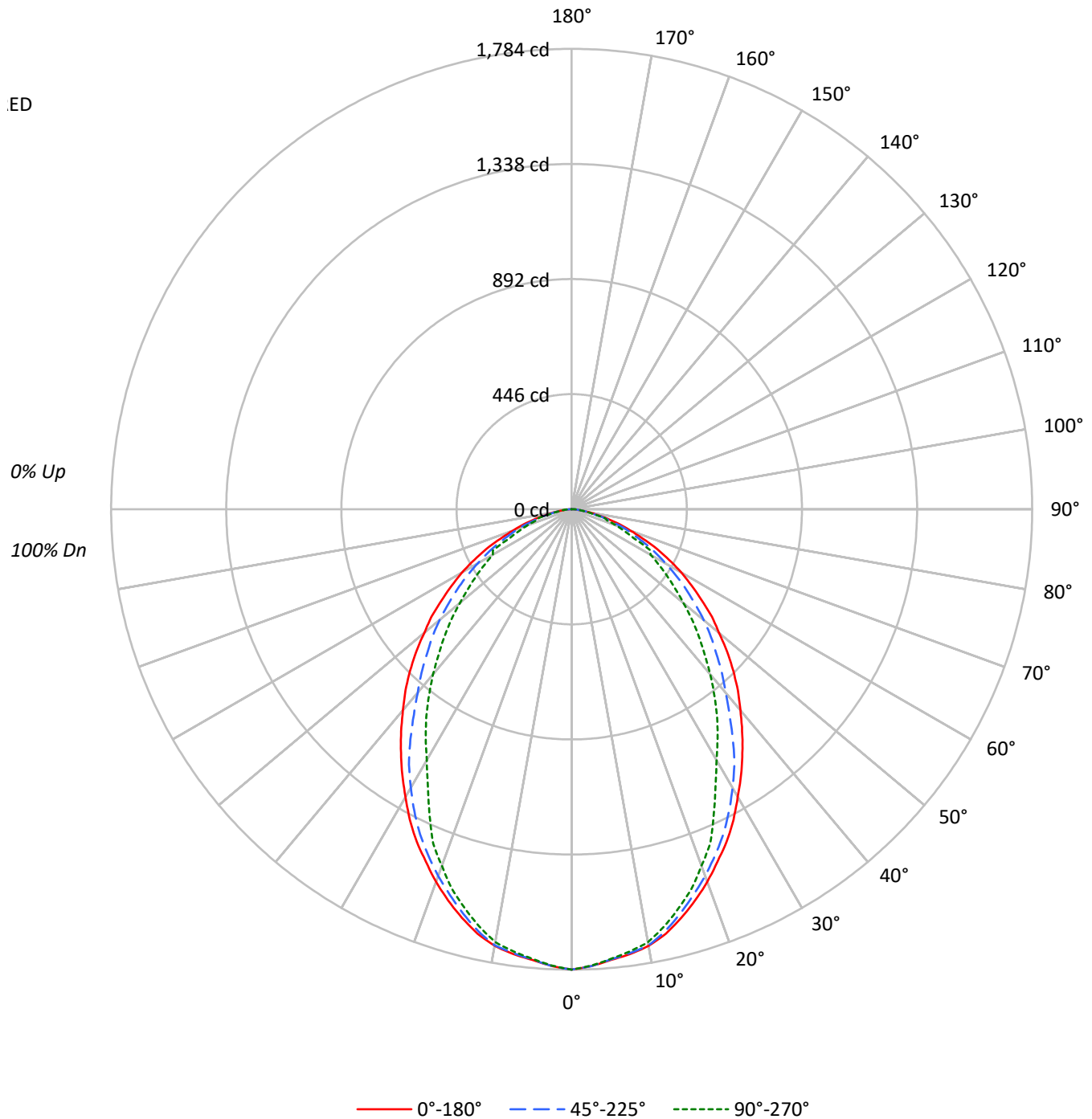
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2400	2400	2400
5°	2368	2365	2362
10°	2347	2344	2327
15°	2284	2261	2229
20°	2200	2165	2105
25°	2109	2064	1935
30°	1999	1935	1743
35°	1894	1789	1612
40°	1786	1630	1467
45°	1683	1507	1326
50°	1558	1399	1183
55°	1442	1267	1059
60°	1321	1132	949
65°	1162	991	840
70°	957	868	714
75°	761	665	697
80°	511	480	447
85°	318	381	446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1683 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.1	4.7
10°-20°	455.7	13.0
20°-30°	630.9	18.0
30°-40°	672.7	19.2
40°-50°	613.7	17.5
50°-60°	480.8	13.7
60°-70°	313.4	8.9
70°-80°	138.8	4.0
80°-90°	29.8	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°	1252.7	35.8
0°-40°	1925.4	55.0
0°-60°	3020.0	86.2
0°-90°	3502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1784	1784	1784	1784	1784	
5°	1753	1751	1751	1749	1749	166
15°	1640	1640	1623	1606	1600	461
25°	1421	1413	1390	1340	1303	652
35°	1153	1145	1089	1006	982	721
45°	885	866	792	726	697	682
55°	615	596	540	476	452	551
65°	365	344	311	318	264	360
75°	146	136	128	122	134	157
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1783.9	1783.9	1783.9	1783.9	1783.9
2.5°	1771.5	1771.5	1771.5	1769.4	1769.4
5°	1752.9	1750.9	1750.9	1748.8	1748.8
7.5°	1738.5	1736.4	1734.4	1732.3	1728.2
10°	1717.9	1717.9	1715.8	1705.5	1703.4
12.5°	1684.9	1682.8	1674.6	1660.1	1656.0
15°	1639.5	1639.5	1623.0	1606.5	1600.3
17.5°	1590.0	1588.0	1567.3	1550.8	1542.6
20°	1536.4	1532.3	1511.7	1484.8	1470.4
22.5°	1476.6	1476.6	1451.8	1416.8	1402.4
25°	1420.9	1412.7	1390.0	1340.5	1303.4
27.5°	1357.0	1344.6	1319.9	1249.7	1206.4
30°	1286.9	1280.7	1245.6	1154.9	1121.9
32.5°	1220.9	1210.6	1173.4	1078.6	1051.8
35°	1152.8	1144.6	1088.9	1006.4	981.6
37.5°	1084.8	1074.4	1004.3	938.3	907.4
40°	1016.7	1004.3	928.0	868.2	835.2
42.5°	952.8	936.3	862.0	798.1	761.0
45°	884.7	866.2	791.9	725.9	697.1
47.5°	816.7	800.2	732.1	664.1	631.1
50°	744.5	730.0	668.2	600.1	565.1
52.5°	684.7	662.0	602.2	534.1	505.3
55°	614.6	596.0	540.3	476.4	451.6
57.5°	550.6	532.1	480.5	420.7	400.1
60°	490.8	464.0	420.7	369.1	352.6
62.5°	424.8	404.2	367.1	323.8	344.4
65°	365.0	344.4	311.4	317.6	264.0
67.5°	299.0	288.7	259.8	231.0	222.7
70°	243.3	231.0	220.7	189.7	181.5
72.5°	193.9	181.5	167.0	150.5	144.4
75°	146.4	136.1	127.9	121.7	134.0
77.5°	101.1	96.9	90.7	84.6	82.5
80°	66.0	63.9	61.9	59.8	57.7
82.5°	39.2	39.2	39.2	39.2	39.2
85°	20.6	22.7	24.7	26.8	28.9
87.5°	12.4	12.4	14.4	16.5	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)