

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: P562251

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562251
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-LD4-1LO-50-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 2850.0 lumens
Efficiency: N/A
Efficacy: 121.8 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

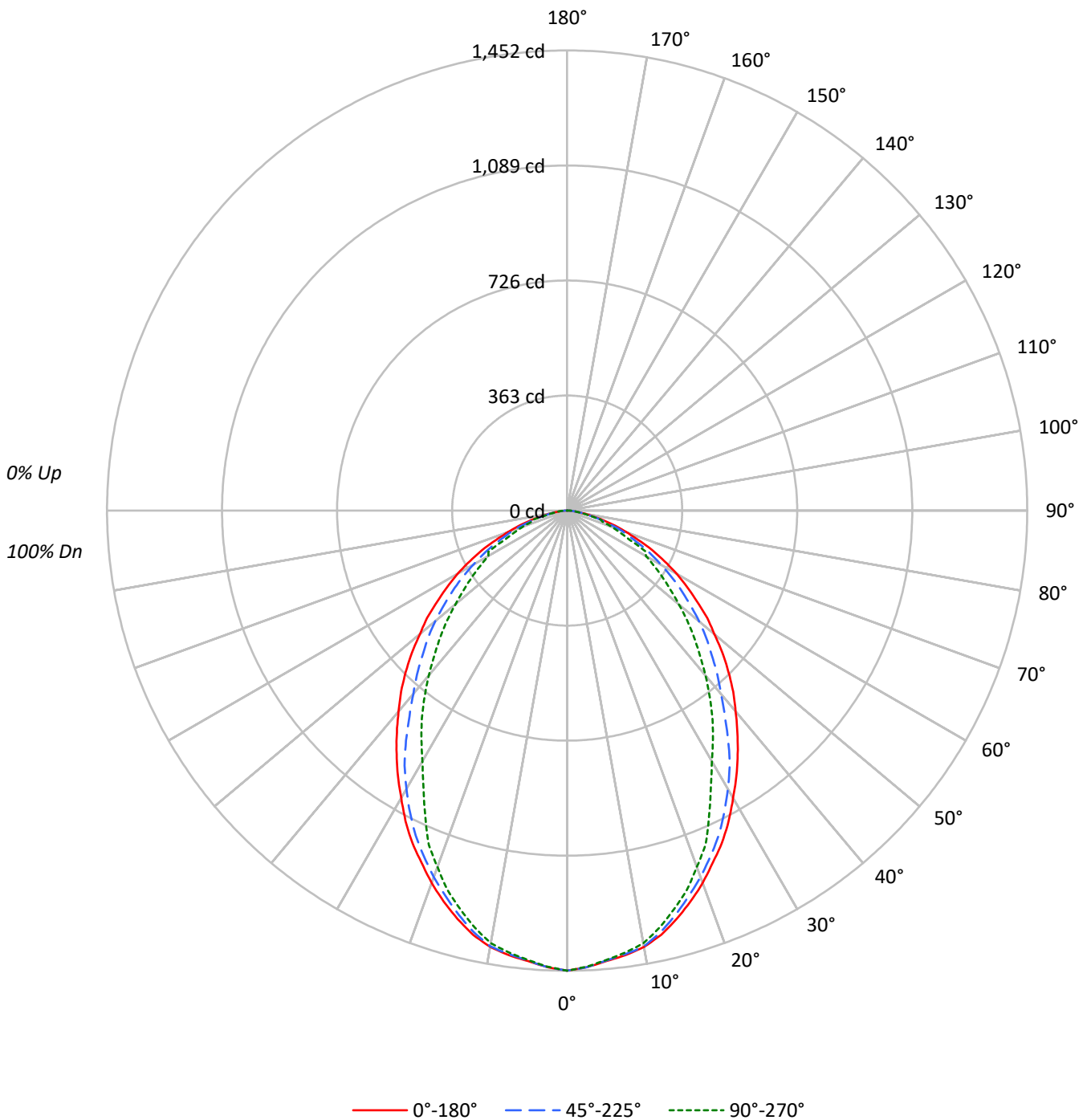
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1953	1953	1953
5°	1927	1925	1922
10°	1910	1908	1894
15°	1859	1840	1814
20°	1790	1761	1713
25°	1717	1679	1575
30°	1627	1575	1418
35°	1541	1456	1312
40°	1453	1326	1194
45°	1370	1226	1079
50°	1268	1138	963
55°	1173	1031	862
60°	1075	921	772
65°	946	807	684
70°	779	707	581
75°	620	541	567
80°	416	390	364
85°	259	310	363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.1	4.7
10°-20°	370.9	13.0
20°-30°	513.5	18.0
30°-40°	547.5	19.2
40°-50°	499.5	17.5
50°-60°	391.3	13.7
60°-70°	255.0	8.9
70°-80°	113.0	4.0
80°-90°	24.3	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°	1019.5	35.8
0°-40°	1567.0	55.0
0°-60°	2457.7	86.2
0°-90°	2850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1427	1425	1425	1423	1423	135
15°	1334	1334	1321	1307	1302	375
25°	1156	1150	1131	1091	1061	531
35°	938	932	886	819	799	587
45°	720	705	644	591	567	555
55°	500	485	440	388	368	449
65°	297	280	253	258	215	293
75°	119	111	104	99	109	128
85°	17	18	20	22	24	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1451.8	1451.8	1451.8	1451.8	1451.8
2.5°	1441.7	1441.7	1441.7	1440.0	1440.0
5°	1426.6	1424.9	1424.9	1423.2	1423.2
7.5°	1414.8	1413.2	1411.5	1409.8	1406.4
10°	1398.0	1398.0	1396.4	1388.0	1386.3
12.5°	1371.2	1369.5	1362.8	1351.1	1347.7
15°	1334.3	1334.3	1320.8	1307.4	1302.4
17.5°	1294.0	1292.3	1275.5	1262.1	1255.4
20°	1250.4	1247.0	1230.2	1208.4	1196.6
22.5°	1201.7	1201.7	1181.5	1153.0	1141.3
25°	1156.4	1149.7	1131.2	1090.9	1060.7
27.5°	1104.3	1094.3	1074.1	1017.1	981.8
30°	1047.3	1042.2	1013.7	939.9	913.0
32.5°	993.6	985.2	955.0	877.8	855.9
35°	938.2	931.5	886.2	819.0	798.9
37.5°	882.8	874.4	817.3	763.6	738.5
40°	827.4	817.3	755.2	706.6	679.7
42.5°	775.4	762.0	701.5	649.5	619.3
45°	720.0	704.9	644.5	590.8	567.3
47.5°	664.6	651.2	595.8	540.4	513.6
50°	605.9	594.1	543.8	488.4	459.9
52.5°	557.2	538.7	490.1	434.7	411.2
55°	500.1	485.0	439.7	387.7	367.6
57.5°	448.1	433.0	391.0	342.4	325.6
60°	399.4	377.6	342.4	300.4	287.0
62.5°	345.7	329.0	298.7	263.5	280.3
65°	297.1	280.3	253.4	258.5	214.8
67.5°	243.4	235.0	211.5	188.0	181.3
70°	198.0	188.0	179.6	154.4	147.7
72.5°	157.8	147.7	135.9	122.5	117.5
75°	119.2	110.8	104.1	99.0	109.1
77.5°	82.2	78.9	73.8	68.8	67.1
80°	53.7	52.0	50.3	48.7	47.0
82.5°	31.9	31.9	31.9	31.9	31.9
85°	16.8	18.5	20.1	21.8	23.5
87.5°	10.1	10.1	11.7	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)