

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: P562213

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562213
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-40-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2858.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

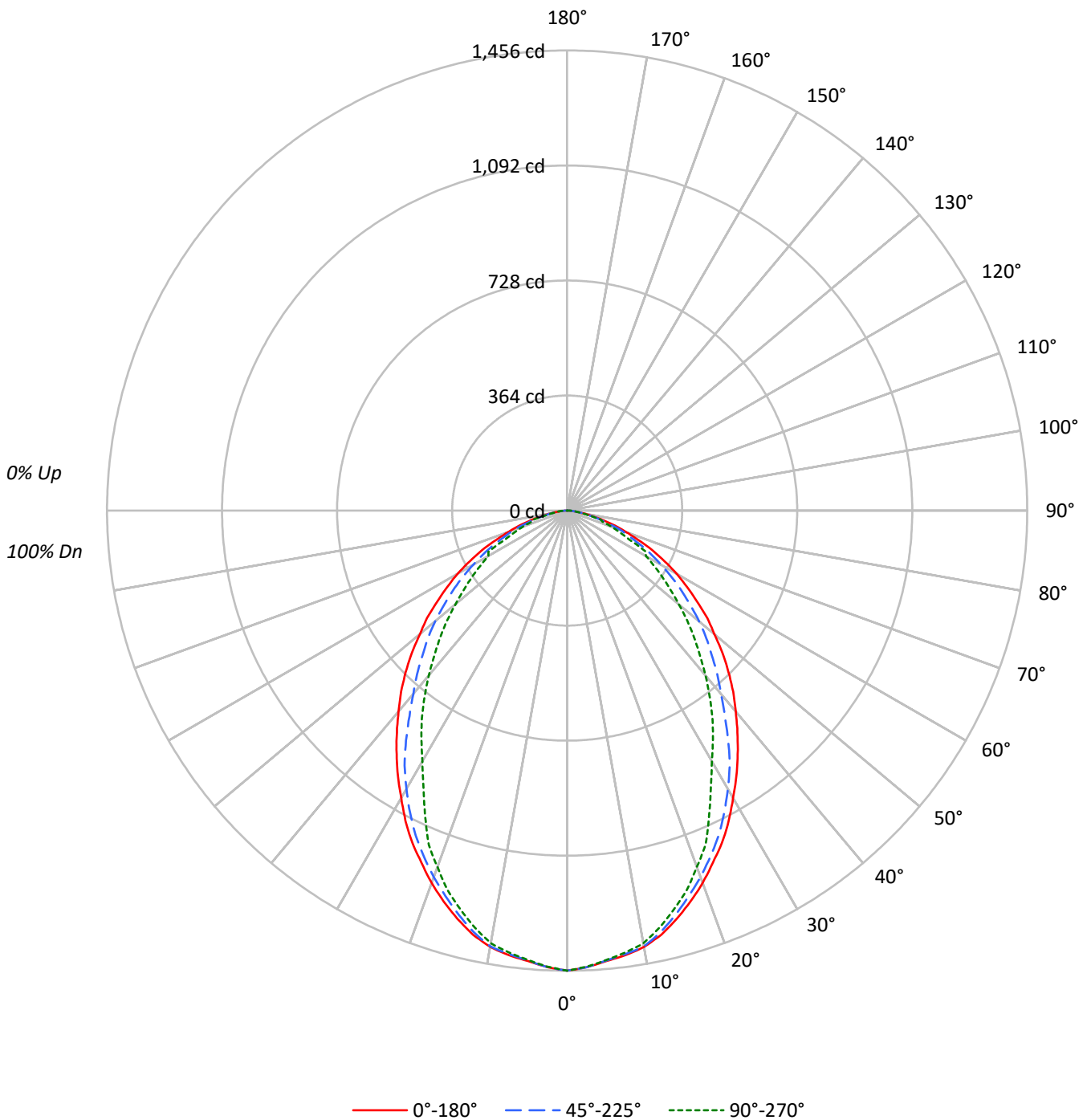
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1959	1959	1959
5°	1932	1930	1928
10°	1915	1913	1899
15°	1864	1845	1819
20°	1795	1766	1718
25°	1722	1684	1579
30°	1632	1579	1423
35°	1545	1460	1316
40°	1457	1330	1197
45°	1374	1230	1083
50°	1272	1141	965
55°	1176	1034	865
60°	1078	924	774
65°	948	809	686
70°	781	709	583
75°	621	542	569
80°	418	391	365
85°	259	312	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1374 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.5	4.7
10°-20°	371.9	13.0
20°-30°	514.9	18.0
30°-40°	549.0	19.2
40°-50°	500.9	17.5
50°-60°	392.4	13.7
60°-70°	255.7	8.9
70°-80°	113.3	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°	1022.3	35.8
0°-40°	1571.4	55.0
0°-60°	2464.6	86.2
0°-90°	2858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1431	1429	1429	1427	1427	136
15°	1338	1338	1325	1311	1306	376
25°	1160	1153	1134	1094	1064	532
35°	941	934	889	821	801	588
45°	722	707	646	592	569	556
55°	502	486	441	389	369	450
65°	298	281	254	259	215	294
75°	120	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°	1455.8	1455.8	1455.8	1455.8	1455.8
2.5°	1445.7	1445.7	1445.7	1444.0	1444.0
5°	1430.6	1428.9	1428.9	1427.2	1427.2
7.5°	1418.8	1417.1	1415.4	1413.8	1410.4
10°	1402.0	1402.0	1400.3	1391.9	1390.2
12.5°	1375.0	1373.4	1366.6	1354.8	1351.5
15°	1338.0	1338.0	1324.6	1311.1	1306.0
17.5°	1297.6	1295.9	1279.1	1265.6	1258.9
20°	1253.9	1250.5	1233.7	1211.8	1200.0
22.5°	1205.1	1205.1	1184.9	1156.2	1144.5
25°	1159.6	1152.9	1134.4	1094.0	1063.7
27.5°	1107.4	1097.3	1077.1	1019.9	984.6
30°	1050.2	1045.2	1016.6	942.5	915.6
32.5°	996.4	987.9	957.6	880.2	858.3
35°	940.8	934.1	888.6	821.3	801.1
37.5°	885.3	876.9	819.6	765.8	740.5
40°	829.7	819.6	757.4	708.6	681.6
42.5°	777.6	764.1	703.5	651.3	621.0
45°	722.0	706.9	646.3	592.4	568.9
47.5°	666.5	653.0	597.5	541.9	515.0
50°	607.6	595.8	545.3	489.8	461.2
52.5°	558.8	540.3	491.4	435.9	412.3
55°	501.5	486.4	441.0	388.8	368.6
57.5°	449.4	434.2	392.1	343.3	326.5
60°	400.6	378.7	343.3	301.3	287.8
62.5°	346.7	329.9	299.6	264.2	281.1
65°	297.9	281.1	254.1	259.2	215.4
67.5°	244.0	235.6	212.1	188.5	181.8
70°	198.6	188.5	180.1	154.8	148.1
72.5°	158.2	148.1	136.3	122.9	117.8
75°	119.5	111.1	104.3	99.3	109.4
77.5°	82.5	79.1	74.1	69.0	67.3
80°	53.9	52.2	50.5	48.8	47.1
82.5°	32.0	32.0	32.0	32.0	32.0
85°	16.8	18.5	20.2	21.9	23.6
87.5°	10.1	10.1	11.8	13.5	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)