

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: P562277

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562277
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2906.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

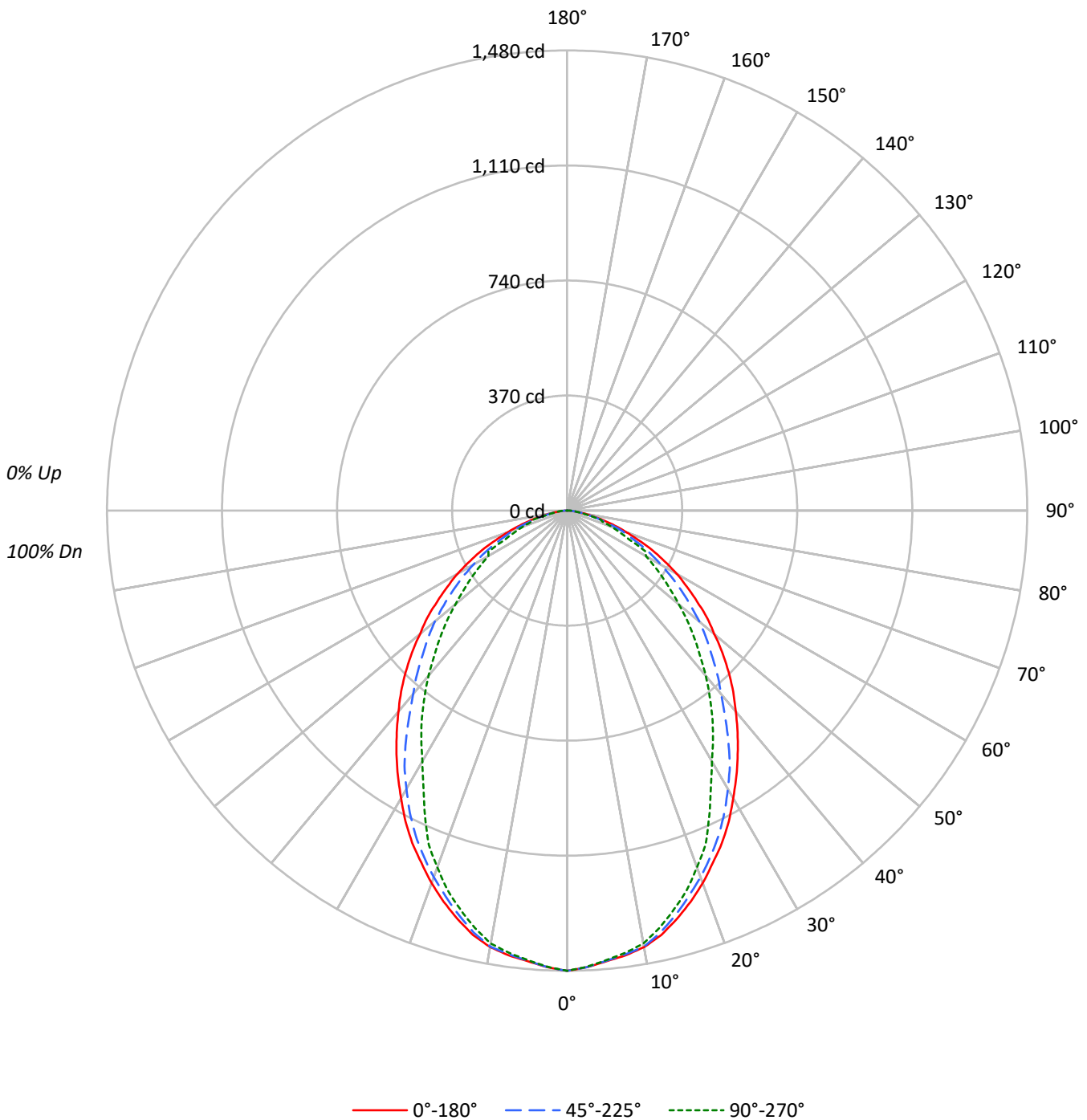
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1992	1992	1992
5°	1965	1962	1960
10°	1948	1945	1931
15°	1895	1876	1850
20°	1825	1796	1747
25°	1750	1712	1606
30°	1659	1606	1446
35°	1571	1484	1338
40°	1482	1353	1217
45°	1397	1250	1101
50°	1293	1161	982
55°	1196	1052	879
60°	1096	939	787
65°	964	823	697
70°	794	720	592
75°	632	552	578
80°	425	397	371
85°	264	316	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1397 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.8	4.7
10°-20°	378.2	13.0
20°-30°	523.5	18.0
30°-40°	558.2	19.2
40°-50°	509.3	17.5
50°-60°	399.0	13.7
60°-70°	260.0	8.9
70°-80°	115.2	4.0
80°-90°	24.7	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°	1039.5	35.8
0°-40°	1597.7	55.0
0°-60°	2506.0	86.2
0°-90°	2906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1455	1453	1453	1451	1451	138
15°	1360	1360	1347	1333	1328	382
25°	1179	1172	1153	1112	1082	541
35°	957	950	904	835	815	598
45°	734	719	657	602	578	566
55°	510	495	448	395	375	457
65°	303	286	258	264	219	298
75°	122	113	106	101	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1480.3	1480.3	1480.3	1480.3	1480.3
2.5°	1470.0	1470.0	1470.0	1468.3	1468.3
5°	1454.6	1452.9	1452.9	1451.2	1451.2
7.5°	1442.6	1440.9	1439.2	1437.5	1434.1
10°	1425.5	1425.5	1423.8	1415.2	1413.5
12.5°	1398.1	1396.4	1389.6	1377.6	1374.2
15°	1360.5	1360.5	1346.8	1333.1	1328.0
17.5°	1319.4	1317.7	1300.6	1286.9	1280.1
20°	1274.9	1271.5	1254.4	1232.1	1220.2
22.5°	1225.3	1225.3	1204.8	1175.7	1163.7
25°	1179.1	1172.2	1153.4	1112.3	1081.5
27.5°	1126.0	1115.8	1095.2	1037.0	1001.1
30°	1067.9	1062.7	1033.6	958.3	930.9
32.5°	1013.1	1004.5	973.7	895.0	872.8
35°	956.6	949.8	903.6	835.1	814.6
37.5°	900.1	891.6	833.4	778.6	753.0
40°	843.7	833.4	770.1	720.5	693.1
42.5°	790.6	776.9	715.3	662.3	631.5
45°	734.1	718.7	657.1	602.4	578.4
47.5°	677.7	664.0	607.5	551.0	523.7
50°	617.8	605.8	554.5	498.0	468.9
52.5°	568.2	549.3	499.7	443.2	419.3
55°	510.0	494.6	448.4	395.3	374.8
57.5°	456.9	441.5	398.7	349.1	332.0
60°	407.3	385.0	349.1	306.3	292.6
62.5°	352.5	335.4	304.6	268.7	285.8
65°	302.9	285.8	258.4	263.5	219.0
67.5°	248.1	239.6	215.6	191.7	184.8
70°	201.9	191.7	183.1	157.4	150.6
72.5°	160.9	150.6	138.6	124.9	119.8
75°	121.5	112.9	106.1	101.0	111.2
77.5°	83.9	80.4	75.3	70.2	68.5
80°	54.8	53.1	51.3	49.6	47.9
82.5°	32.5	32.5	32.5	32.5	32.5
85°	17.1	18.8	20.5	22.2	24.0
87.5°	10.3	10.3	12.0	13.7	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)