

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: P562604

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562604
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-LD4-2HI-40-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8069.0 lumens
Efficiency: N/A
Efficacy: 93.4 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

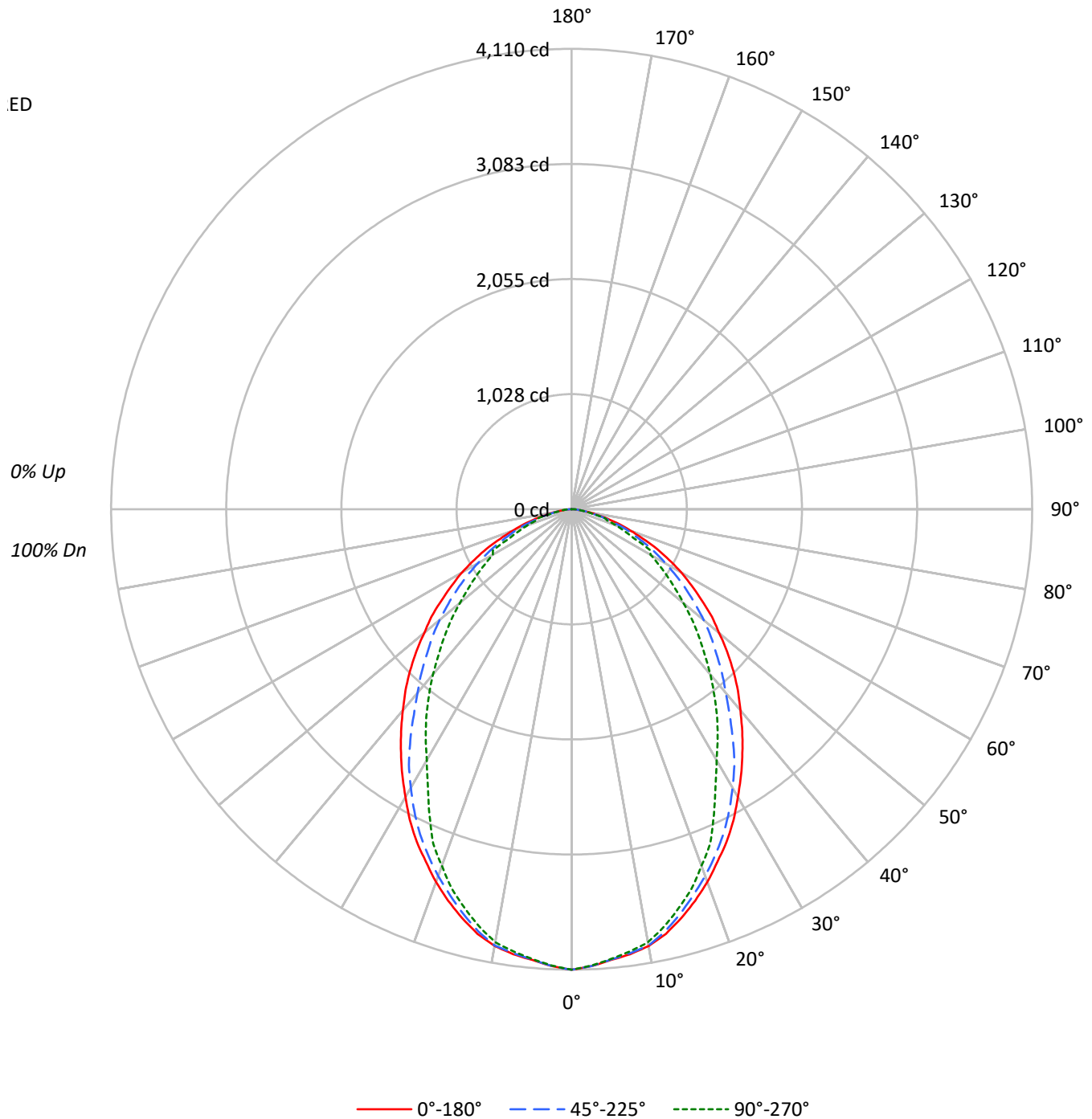
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5530	5530	5530
5°	5455	5449	5442
10°	5408	5401	5362
15°	5262	5209	5136
20°	5069	4987	4851
25°	4860	4755	4458
30°	4607	4459	4016
35°	4363	4121	3715
40°	4115	3756	3380
45°	3879	3472	3056
50°	3591	3223	2725
55°	3322	2921	2441
60°	3043	2609	2186
65°	2678	2284	1936
70°	2206	2000	1645
75°	1754	1531	1606
80°	1179	1105	1031
85°	733	880	1027

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3879 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	382.6	4.7
10°-20°	1050.0	13.0
20°-30°	1453.7	18.0
30°-40°	1550.1	19.2
40°-50°	1414.1	17.5
50°-60°	1107.9	13.7
60°-70°	722.0	8.9
70°-80°	319.9	4.0
80°-90°	68.7	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°	2886.3	35.8
0°-40°	4436.4	55.0
0°-60°	6958.4	86.2
0°-90°	8069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4110	4110	4110	4110	4110	
5°	4039	4034	4034	4030	4030	383
15°	3778	3778	3740	3702	3687	1062
25°	3274	3255	3203	3089	3003	1503
35°	2656	2637	2509	2319	2262	1661
45°	2038	1996	1825	1673	1606	1570
55°	1416	1373	1245	1098	1041	1270
65°	841	794	718	732	608	829
75°	337	314	295	280	309	362
85°	48	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4110.2	4110.2	4110.2	4110.2	4110.2
2.5°	4081.7	4081.7	4081.7	4077.0	4077.0
5°	4039.0	4034.2	4034.2	4029.5	4029.5
7.5°	4005.7	4001.0	3996.2	3991.4	3981.9
10°	3958.2	3958.2	3953.4	3929.7	3924.9
12.5°	3882.2	3877.4	3858.4	3825.1	3815.6
15°	3777.6	3777.6	3739.6	3701.6	3687.3
17.5°	3663.6	3658.8	3611.3	3573.3	3554.3
20°	3540.0	3530.5	3483.0	3421.2	3388.0
22.5°	3402.2	3402.2	3345.2	3264.4	3231.2
25°	3273.9	3254.9	3202.7	3088.6	3003.1
27.5°	3126.6	3098.1	3041.1	2879.5	2779.8
30°	2965.1	2950.8	2870.0	2661.0	2584.9
32.5°	2813.0	2789.3	2703.7	2485.2	2423.4
35°	2656.2	2637.2	2508.9	2318.8	2261.8
37.5°	2499.4	2475.6	2314.1	2162.0	2090.8
40°	2342.6	2314.1	2138.3	2000.5	1924.4
42.5°	2195.3	2157.3	1986.2	1838.9	1753.4
45°	2038.5	1995.7	1824.7	1672.6	1606.1
47.5°	1881.7	1843.7	1686.9	1530.1	1454.0
50°	1715.4	1682.1	1539.6	1382.8	1302.0
52.5°	1577.6	1525.3	1387.5	1230.7	1164.2
55°	1416.0	1373.2	1245.0	1097.6	1040.6
57.5°	1268.7	1225.9	1107.2	969.4	921.8
60°	1130.9	1069.1	969.4	850.6	812.5
62.5°	978.9	931.3	845.8	746.0	793.5
65°	841.1	793.5	717.5	731.8	608.2
67.5°	689.0	665.2	598.7	532.2	513.2
70°	560.7	532.2	508.4	437.2	418.2
72.5°	446.7	418.2	384.9	346.9	332.6
75°	337.4	313.6	294.6	280.4	308.9
77.5°	232.8	223.3	209.1	194.8	190.1
80°	152.1	147.3	142.6	137.8	133.0
82.5°	90.3	90.3	90.3	90.3	90.3
85°	47.5	52.3	57.0	61.8	66.5
87.5°	28.5	28.5	33.3	38.0	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)