

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: P562947

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562947
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-LD4-2STD-40-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7340.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

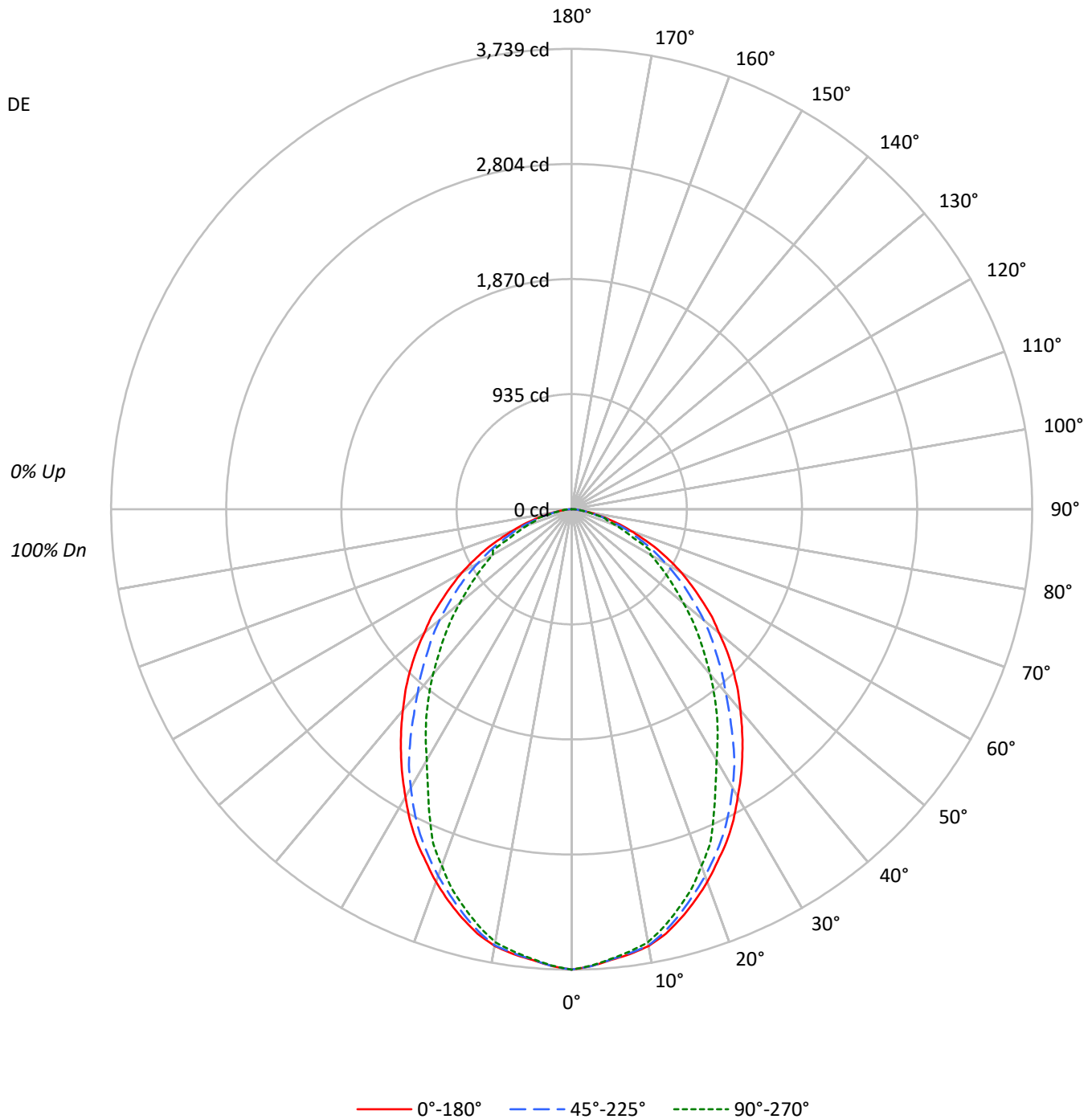
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5031	5031	5031
5°	4962	4956	4951
10°	4919	4913	4878
15°	4787	4738	4672
20°	4611	4536	4413
25°	4421	4325	4056
30°	4190	4056	3653
35°	3969	3749	3380
40°	3743	3416	3075
45°	3528	3158	2780
50°	3266	2932	2479
55°	3022	2657	2221
60°	2768	2373	1989
65°	2436	2078	1762
70°	2006	1819	1496
75°	1595	1393	1461
80°	1072	1005	938
85°	667	801	934

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3528 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.0	4.7
10°-20°	955.2	13.0
20°-30°	1322.4	18.0
30°-40°	1410.0	19.2
40°-50°	1286.4	17.5
50°-60°	1007.8	13.7
60°-70°	656.8	8.9
70°-80°	291.0	4.0
80°-90°	62.5	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°	2625.6	35.8
0°-40°	4035.6	55.0
0°-60°	6329.7	86.2
0°-90°	7340.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7340.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3739	3739	3739	3739	3739	
5°	3674	3670	3670	3665	3665	349
15°	3436	3436	3402	3367	3354	966
25°	2978	2961	2913	2810	2732	1367
35°	2416	2399	2282	2109	2058	1511
45°	1854	1815	1660	1522	1461	1428
55°	1288	1249	1132	998	947	1155
65°	765	722	653	666	553	754
75°	307	285	268	255	281	329
85°	43	48	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3738.9	3738.9	3738.9	3738.9	3738.9
2.5°	3713.0	3713.0	3713.0	3708.6	3708.6
5°	3674.1	3669.7	3669.7	3665.4	3665.4
7.5°	3643.8	3639.5	3635.2	3630.8	3622.2
10°	3600.6	3600.6	3596.3	3574.6	3570.3
12.5°	3531.4	3527.1	3509.8	3479.6	3470.9
15°	3436.3	3436.3	3401.7	3367.2	3354.2
17.5°	3332.6	3328.3	3285.0	3250.5	3233.2
20°	3220.2	3211.6	3168.3	3112.1	3081.9
22.5°	3094.9	3094.9	3043.0	2969.5	2939.2
25°	2978.2	2960.9	2913.3	2809.6	2731.8
27.5°	2844.2	2818.2	2766.4	2619.4	2528.6
30°	2697.2	2684.2	2610.7	2420.6	2351.4
32.5°	2558.9	2537.3	2459.5	2260.6	2204.4
35°	2416.2	2398.9	2282.2	2109.3	2057.5
37.5°	2273.6	2252.0	2105.0	1966.7	1901.9
40°	2131.0	2105.0	1945.1	1819.7	1750.6
42.5°	1997.0	1962.4	1806.8	1672.8	1595.0
45°	1854.3	1815.4	1659.8	1521.5	1461.0
47.5°	1711.7	1677.1	1534.5	1391.8	1322.7
50°	1560.4	1530.1	1400.5	1257.8	1184.3
52.5°	1435.0	1387.5	1262.1	1119.5	1059.0
55°	1288.1	1249.2	1132.5	998.5	946.6
57.5°	1154.1	1115.2	1007.1	881.8	838.6
60°	1028.7	972.5	881.8	773.7	739.1
62.5°	890.4	847.2	769.4	678.6	721.8
65°	765.1	721.8	652.7	665.7	553.3
67.5°	626.8	605.1	544.6	484.1	466.8
70°	510.0	484.1	462.5	397.7	380.4
72.5°	406.3	380.4	350.1	315.5	302.6
75°	306.9	285.3	268.0	255.0	281.0
77.5°	211.8	203.2	190.2	177.2	172.9
80°	138.3	134.0	129.7	125.4	121.0
82.5°	82.1	82.1	82.1	82.1	82.1
85°	43.2	47.5	51.9	56.2	60.5
87.5°	25.9	25.9	30.3	34.6	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)