

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: P563484

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563484
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-LD4-3STD-35-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9030.0 lumens
Efficiency: N/A
Efficacy: 90.4 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

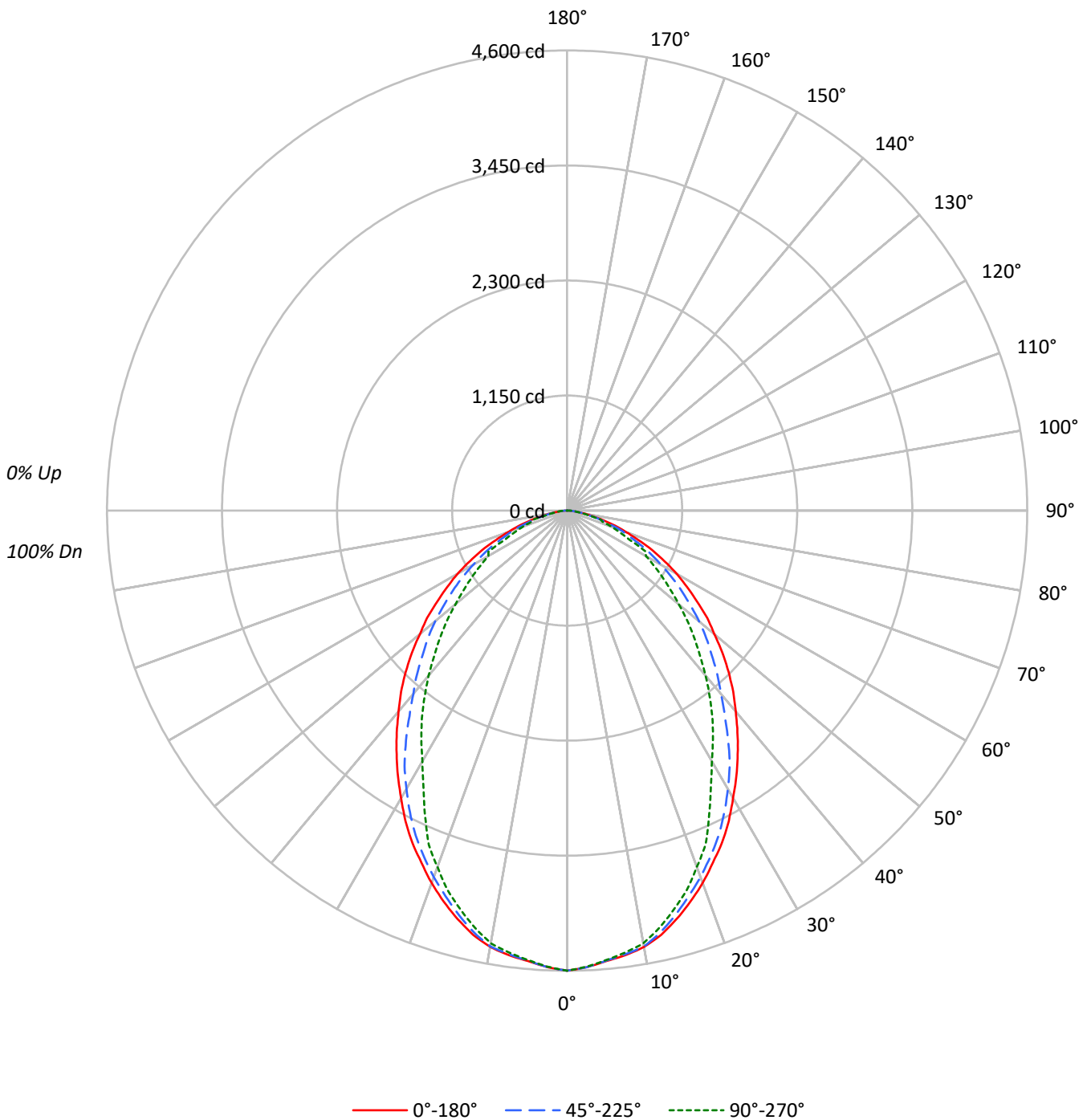
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6189	6189	6189
5°	6105	6098	6091
10°	6052	6045	6001
15°	5889	5830	5748
20°	5672	5581	5429
25°	5439	5321	4989
30°	5155	4990	4494
35°	4883	4612	4158
40°	4605	4203	3783
45°	4341	3886	3420
50°	4018	3606	3050
55°	3717	3268	2732
60°	3406	2919	2447
65°	2996	2557	2167
70°	2469	2238	1841
75°	1963	1714	1797
80°	1319	1236	1154
85°	821	985	1149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4341 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.2	4.7
10°-20°	1175.1	13.0
20°-30°	1626.8	18.0
30°-40°	1734.7	19.2
40°-50°	1582.5	17.5
50°-60°	1239.8	13.7
60°-70°	808.0	8.9
70°-80°	358.0	4.0
80°-90°	76.8	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°	3230.1	35.8
0°-40°	4964.8	55.0
0°-60°	7787.1	86.2
0°-90°	9030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9030.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4600	4600	4600	4600	4600	
5°	4520	4515	4515	4509	4509	429
15°	4228	4228	4185	4142	4126	1188
25°	3664	3643	3584	3456	3361	1682
35°	2973	2951	2808	2595	2531	1858
45°	2281	2233	2042	1872	1797	1757
55°	1585	1537	1393	1228	1165	1421
65°	941	888	803	819	681	928
75°	378	351	330	314	346	405
85°	53	58	64	69	74	74
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4599.8	4599.8	4599.8	4599.8	4599.8
2.5°	4567.9	4567.9	4567.9	4562.5	4562.5
5°	4520.0	4514.7	4514.7	4509.4	4509.4
7.5°	4482.8	4477.5	4472.1	4466.8	4456.2
10°	4429.6	4429.6	4424.3	4397.7	4392.4
12.5°	4344.5	4339.2	4317.9	4280.7	4270.1
15°	4227.5	4227.5	4185.0	4142.4	4126.5
17.5°	4099.9	4094.6	4041.4	3998.9	3977.6
20°	3961.6	3951.0	3897.8	3828.7	3791.5
22.5°	3807.4	3807.4	3743.6	3653.2	3616.0
25°	3663.9	3642.6	3584.1	3456.5	3360.8
27.5°	3499.0	3467.1	3403.3	3222.5	3110.8
30°	3318.2	3302.3	3211.9	2977.9	2892.8
32.5°	3148.0	3121.5	3025.7	2781.1	2712.0
35°	2972.6	2951.3	2807.7	2595.0	2531.2
37.5°	2797.1	2770.5	2589.7	2419.5	2339.8
40°	2621.6	2589.7	2392.9	2238.7	2153.6
42.5°	2456.8	2414.2	2222.8	2057.9	1962.2
45°	2281.3	2233.4	2042.0	1871.8	1797.4
47.5°	2105.8	2063.2	1887.8	1712.3	1627.2
50°	1919.7	1882.4	1722.9	1547.4	1457.0
52.5°	1765.5	1707.0	1552.8	1377.3	1302.8
55°	1584.7	1536.8	1393.2	1228.4	1164.6
57.5°	1419.8	1372.0	1239.0	1084.8	1031.6
60°	1265.6	1196.5	1084.8	951.9	909.3
62.5°	1095.4	1042.3	946.5	834.9	888.0
65°	941.2	888.0	803.0	818.9	680.7
67.5°	771.1	744.5	670.0	595.6	574.3
70°	627.5	595.6	569.0	489.2	468.0
72.5°	499.9	468.0	430.7	388.2	372.2
75°	377.6	351.0	329.7	313.7	345.6
77.5°	260.6	249.9	234.0	218.0	212.7
80°	170.2	164.8	159.5	154.2	148.9
82.5°	101.0	101.0	101.0	101.0	101.0
85°	53.2	58.5	63.8	69.1	74.4
87.5°	31.9	31.9	37.2	42.5	47.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)