

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: P562627

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562627
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9156.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

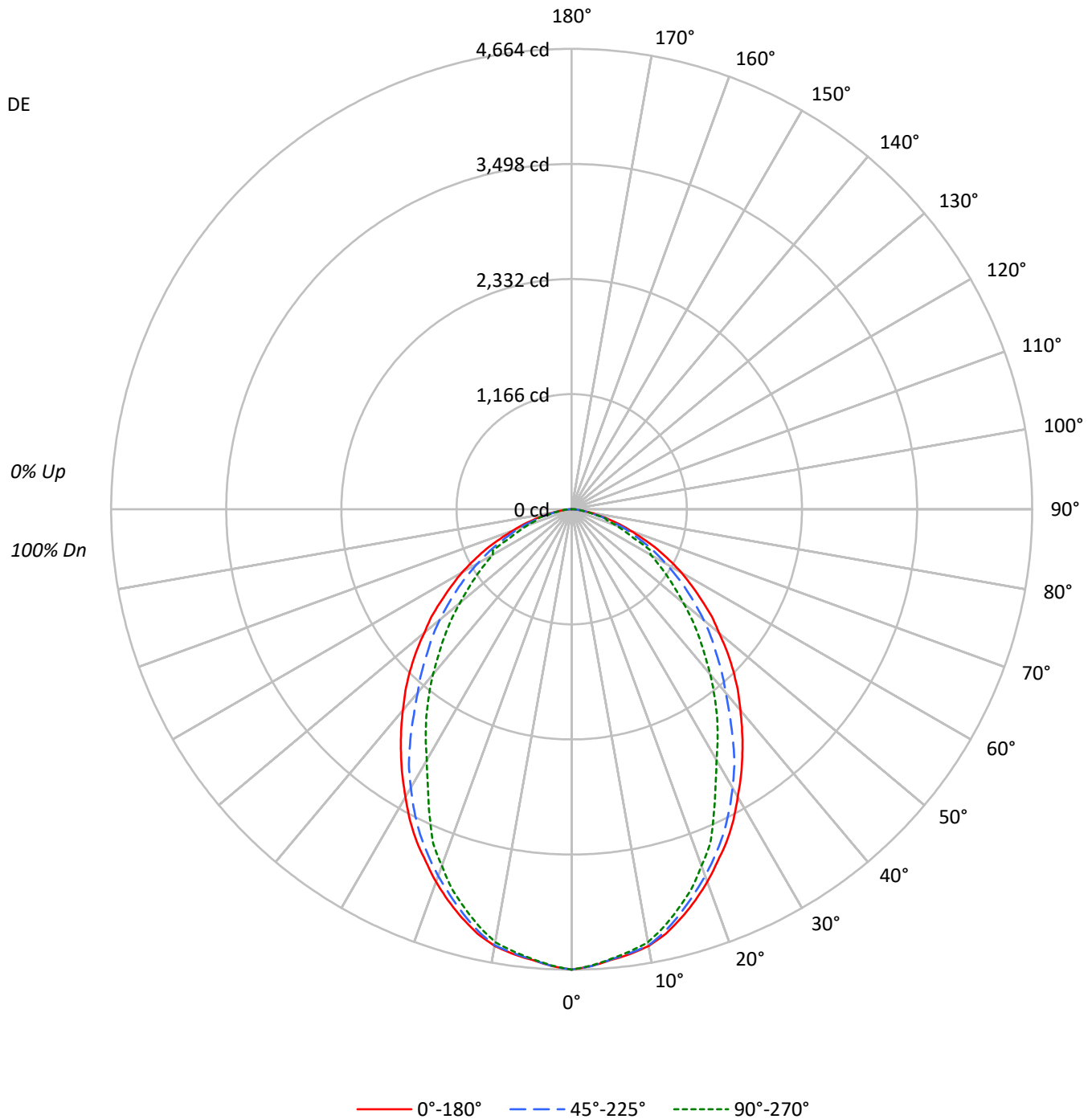
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6275	6275	6275
5°	6190	6183	6175
10°	6136	6129	6085
15°	5971	5911	5828
20°	5752	5659	5505
25°	5515	5395	5059
30°	5227	5060	4557
35°	4951	4676	4216
40°	4669	4262	3835
45°	4401	3940	3468
50°	4074	3657	3093
55°	3769	3314	2770
60°	3453	2960	2481
65°	3039	2592	2197
70°	2503	2269	1867
75°	1990	1738	1822
80°	1337	1254	1170
85°	832	999	1166

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4401 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	434.1	4.7
10°-20°	1191.5	13.0
20°-30°	1649.5	18.0
30°-40°	1758.9	19.2
40°-50°	1604.6	17.5
50°-60°	1257.1	13.7
60°-70°	819.3	8.9
70°-80°	363.0	4.0
80°-90°	77.9	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°	3275.2	35.8
0°-40°	5034.1	55.0
0°-60°	7895.8	86.2
0°-90°	9156.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9156.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4664	4664	4664	4664	4664	
5°	4583	4578	4578	4572	4572	435
15°	4286	4286	4243	4200	4184	1205
25°	3715	3693	3634	3505	3408	1706
35°	3014	2992	2847	2631	2566	1884
45°	2313	2265	2070	1898	1822	1782
55°	1607	1558	1413	1246	1181	1441
65°	954	900	814	830	690	941
75°	383	356	334	318	350	410
85°	54	59	65	70	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4663.9	4663.9	4663.9	4663.9	4663.9
2.5°	4631.6	4631.6	4631.6	4626.2	4626.2
5°	4583.1	4577.7	4577.7	4572.3	4572.3
7.5°	4545.3	4539.9	4534.5	4529.1	4518.4
10°	4491.4	4491.4	4486.0	4459.1	4453.7
12.5°	4405.1	4399.7	4378.2	4340.4	4329.6
15°	4286.5	4286.5	4243.4	4200.2	4184.1
17.5°	4157.1	4151.7	4097.8	4054.7	4033.1
20°	4016.9	4006.1	3952.2	3882.1	3844.4
22.5°	3860.6	3860.6	3795.9	3704.2	3666.5
25°	3715.0	3693.4	3634.1	3504.7	3407.6
27.5°	3547.8	3515.5	3450.8	3267.5	3154.2
30°	3364.5	3348.3	3256.7	3019.4	2933.2
32.5°	3192.0	3165.0	3068.0	2819.9	2749.8
35°	3014.0	2992.5	2846.9	2631.2	2566.5
37.5°	2836.1	2809.2	2625.8	2453.3	2372.4
40°	2658.2	2625.8	2426.3	2270.0	2183.7
42.5°	2491.0	2447.9	2253.8	2086.6	1989.6
45°	2313.1	2264.6	2070.5	1897.9	1822.4
47.5°	2135.2	2092.0	1914.1	1736.2	1649.9
50°	1946.5	1908.7	1747.0	1569.0	1477.4
52.5°	1790.1	1730.8	1574.4	1396.5	1321.0
55°	1606.8	1558.2	1412.7	1245.5	1180.8
57.5°	1439.6	1391.1	1256.3	1099.9	1046.0
60°	1283.3	1213.2	1099.9	965.1	922.0
62.5°	1110.7	1056.8	959.7	846.5	900.4
65°	954.4	900.4	814.2	830.3	690.2
67.5°	781.8	754.9	679.4	603.9	582.3
70°	636.2	603.9	576.9	496.0	474.5
72.5°	506.8	474.5	436.7	393.6	377.4
75°	382.8	355.9	334.3	318.1	350.5
77.5°	264.2	253.4	237.2	221.1	215.7
80°	172.5	167.1	161.8	156.4	151.0
82.5°	102.4	102.4	102.4	102.4	102.4
85°	53.9	59.3	64.7	70.1	75.5
87.5°	32.4	32.4	37.7	43.1	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)