

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: P562636

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562636
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-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8056.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

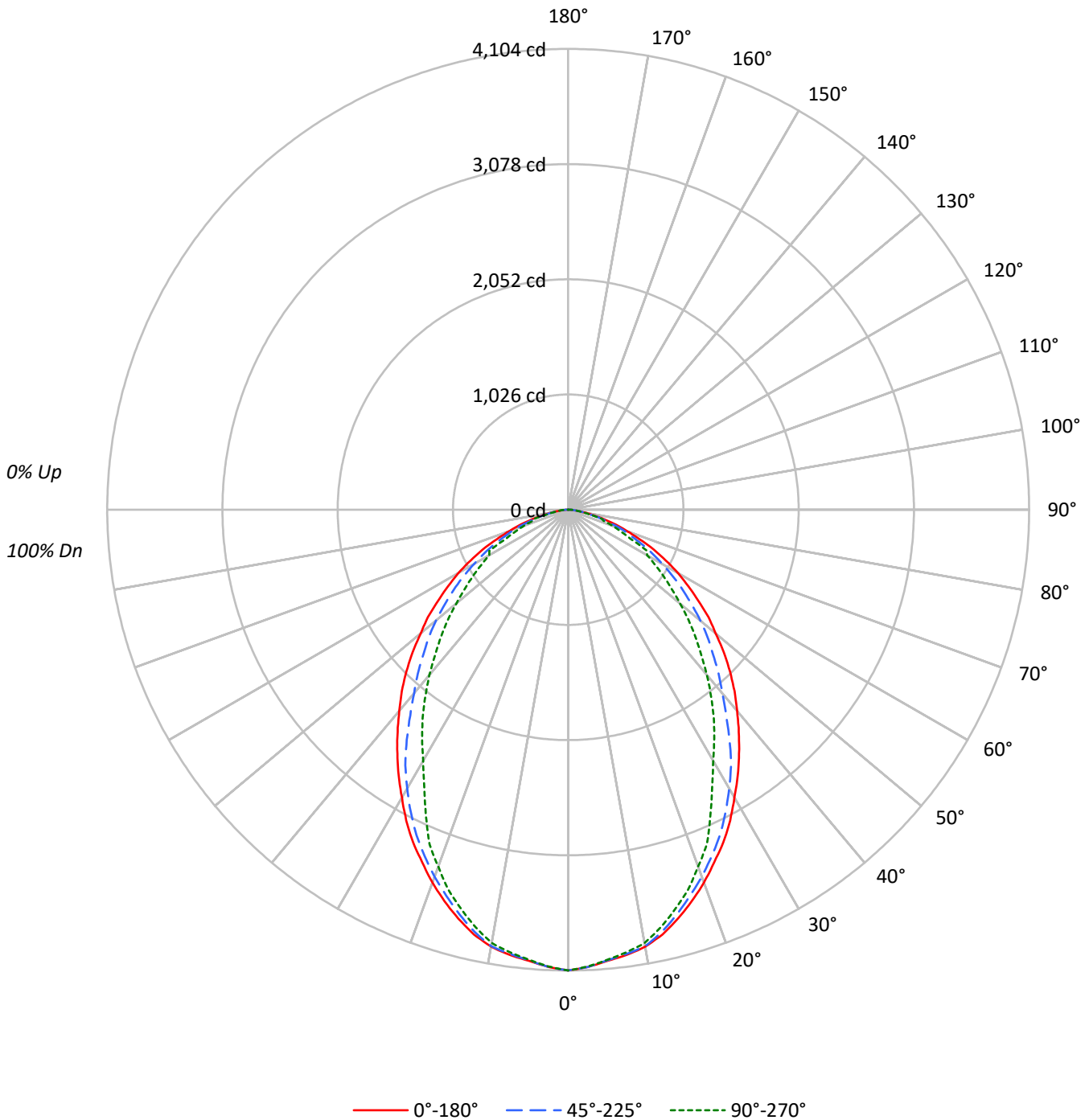
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5521	5521	5521
5°	5446	5440	5434
10°	5399	5393	5354
15°	5254	5201	5128
20°	5061	4979	4843
25°	4853	4747	4451
30°	4599	4452	4010
35°	4356	4114	3709
40°	4108	3750	3375
45°	3873	3466	3051
50°	3585	3217	2721
55°	3316	2916	2437
60°	3038	2604	2183
65°	2673	2281	1933
70°	2202	1997	1642
75°	1751	1529	1603
80°	1176	1103	1029
85°	732	878	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3873 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	382.0	4.7
10°-20°	1048.3	13.0
20°-30°	1451.4	18.0
30°-40°	1547.6	19.2
40°-50°	1411.8	17.5
50°-60°	1106.1	13.7
60°-70°	720.9	8.9
70°-80°	319.4	4.0
80°-90°	68.6	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°	2881.7	35.8
0°-40°	4429.3	55.0
0°-60°	6947.2	86.2
0°-90°	8056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4104	4104	4104	4104	4104	
5°	4032	4028	4028	4023	4023	383
15°	3772	3772	3734	3696	3681	1060
25°	3269	3250	3198	3084	2998	1501
35°	2652	2633	2505	2315	2258	1658
45°	2035	1992	1822	1670	1604	1568
55°	1414	1371	1243	1096	1039	1268
65°	840	792	716	731	607	828
75°	337	313	294	280	308	361
85°	47	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°	4103.6	4103.6	4103.6	4103.6	4103.6
2.5°	4075.2	4075.2	4075.2	4070.4	4070.4
5°	4032.5	4027.7	4027.7	4023.0	4023.0
7.5°	3999.2	3994.5	3989.8	3985.0	3975.5
10°	3951.8	3951.8	3947.1	3923.3	3918.6
12.5°	3875.9	3871.2	3852.2	3819.0	3809.5
15°	3771.5	3771.5	3733.6	3695.6	3681.4
17.5°	3657.7	3652.9	3605.5	3567.5	3548.6
20°	3534.3	3524.8	3477.4	3415.7	3382.5
22.5°	3396.8	3396.8	3339.8	3259.2	3226.0
25°	3268.7	3249.7	3197.5	3083.6	2998.3
27.5°	3121.6	3093.1	3036.2	2874.9	2775.3
30°	2960.3	2946.1	2865.4	2656.7	2580.8
32.5°	2808.5	2784.8	2699.4	2481.1	2419.5
35°	2651.9	2633.0	2504.9	2315.1	2258.2
37.5°	2495.4	2471.7	2310.4	2158.6	2087.4
40°	2338.8	2310.4	2134.8	1997.3	1921.3
42.5°	2191.8	2153.8	1983.0	1836.0	1750.6
45°	2035.2	1992.5	1821.7	1669.9	1603.5
47.5°	1878.7	1840.7	1684.1	1527.6	1451.7
50°	1712.6	1679.4	1537.1	1380.5	1299.9
52.5°	1575.0	1522.8	1385.3	1228.7	1162.3
55°	1413.7	1371.0	1242.9	1095.9	1039.0
57.5°	1266.7	1224.0	1105.4	967.8	920.3
60°	1129.1	1067.4	967.8	849.2	811.2
62.5°	977.3	929.8	844.4	744.8	792.3
65°	839.7	792.3	716.4	730.6	607.2
67.5°	687.9	664.2	597.8	531.3	512.4
70°	559.8	531.3	507.6	436.5	417.5
72.5°	445.9	417.5	384.3	346.3	332.1
75°	336.8	313.1	294.1	279.9	308.4
77.5°	232.5	223.0	208.7	194.5	189.8
80°	151.8	147.1	142.3	137.6	132.8
82.5°	90.1	90.1	90.1	90.1	90.1
85°	47.4	52.2	56.9	61.7	66.4
87.5°	28.5	28.5	33.2	38.0	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)