

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: P973413

Luminaire Tested: FLR2-14-20-L840-CP080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973413
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR2-14-20-L840-CP080
Description: 1*4 FLR-2.0 2000 LUMEN at 4000 CCT & 80CRI with Clear Polycarbonate (0.080" thickness)

Light Source:
Ballast/Driver: -

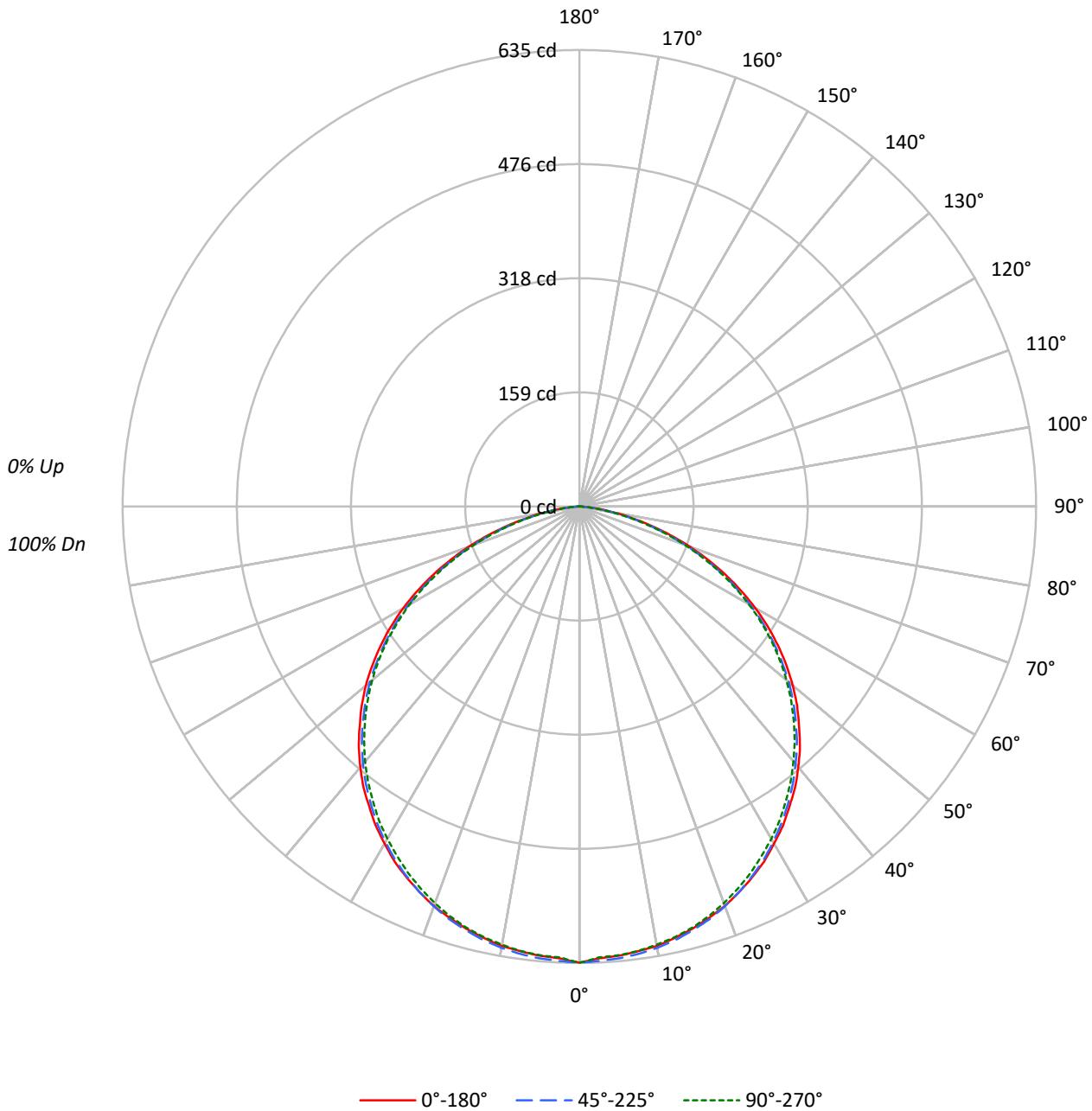
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1776.6 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.25 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 16.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor:
Total Harmonic Distortion (THDi):
Frequency (hertz): 60
Stabilization Time: HR
Operation Time: HR
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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	32	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1708	1708	1708
5°	1695	1705	1693
10°	1696	1704	1691
15°	1694	1700	1690
20°	1694	1695	1682
25°	1690	1686	1671
30°	1683	1675	1659
35°	1673	1661	1644
40°	1664	1644	1627
45°	1644	1621	1604
50°	1622	1593	1574
55°	1582	1544	1529
60°	1520	1478	1465
65°	1424	1382	1366
70°	1284	1232	1222
75°	1076	1022	1011
80°	781	728	708
85°	414	364	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	3.4
10°-20°	172.7	9.7
20°-30°	262.3	14.8
30°-40°	317.3	17.9
40°-50°	329.8	18.6
50°-60°	295.3	16.6
60°-70°	215.4	12.1
70°-80°	106.0	6.0
80°-90°	17.7	1.0
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°	495.1	27.9
0°-40°	812.4	45.7
0°-60°	1437.4	80.9
0°-90°	1776.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1776.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	635	635	635	635	635	
5°	627	634	631	637	627	60
15°	608	614	610	616	607	172
25°	569	572	568	571	563	262
35°	509	510	506	508	500	319
45°	432	431	426	427	421	333
55°	337	334	329	328	326	301
65°	224	221	217	215	215	221
75°	104	102	98	97	97	110
85°	13	13	12	10	11	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.7	634.7	634.7	634.7	634.7
2.5°	629.2	636.3	632.9	639.2	627.9
5°	627.4	634.2	631.1	637.1	626.6
7.5°	624.2	631.3	627.9	633.7	623.7
10°	620.8	627.1	623.5	629.2	619.0
12.5°	614.8	621.1	617.7	622.9	613.5
15°	608.0	613.5	610.3	615.6	606.6
17.5°	600.1	605.3	601.9	606.6	597.7
20°	591.4	595.6	591.9	595.9	587.2
22.5°	580.6	584.6	580.6	583.3	575.6
25°	569.1	572.0	568.0	570.6	562.8
27.5°	556.7	558.3	554.4	556.5	548.3
30°	541.5	543.3	539.1	541.7	533.9
32.5°	526.8	527.8	523.1	525.2	518.1
35°	509.4	510.5	505.5	507.6	500.5
37.5°	492.9	492.6	487.4	488.7	482.6
40°	473.7	473.4	467.9	469.0	463.2
42.5°	454.0	452.9	447.7	448.2	443.0
45°	431.9	431.4	425.9	426.7	421.4
47.5°	410.6	409.1	403.5	403.8	399.3
50°	387.5	385.2	380.4	379.9	376.0
52.5°	362.8	360.2	354.9	354.4	351.5
55°	337.1	334.2	329.2	328.4	326.0
57.5°	310.5	306.9	302.9	301.3	299.5
60°	282.4	279.0	274.6	273.0	272.2
62.5°	253.3	249.9	246.4	244.9	243.8
65°	223.6	221.0	217.0	215.4	214.6
67.5°	193.4	191.0	187.3	185.5	185.2
70°	163.2	160.8	156.6	155.5	155.3
72.5°	132.9	130.8	126.9	125.8	125.8
75°	103.5	101.7	98.3	97.2	97.2
77.5°	75.7	74.1	71.5	70.1	70.1
80°	50.4	49.4	47.0	46.0	45.7
82.5°	29.2	28.6	26.5	25.5	26.0
85°	13.4	12.9	11.8	10.5	10.8
87.5°	3.4	3.2	2.4	1.8	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)