

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: P973199

Luminaire Tested: FLR2-14-20HE-L840-CP187

Issue Date: 3/13/2025

**Test Information**

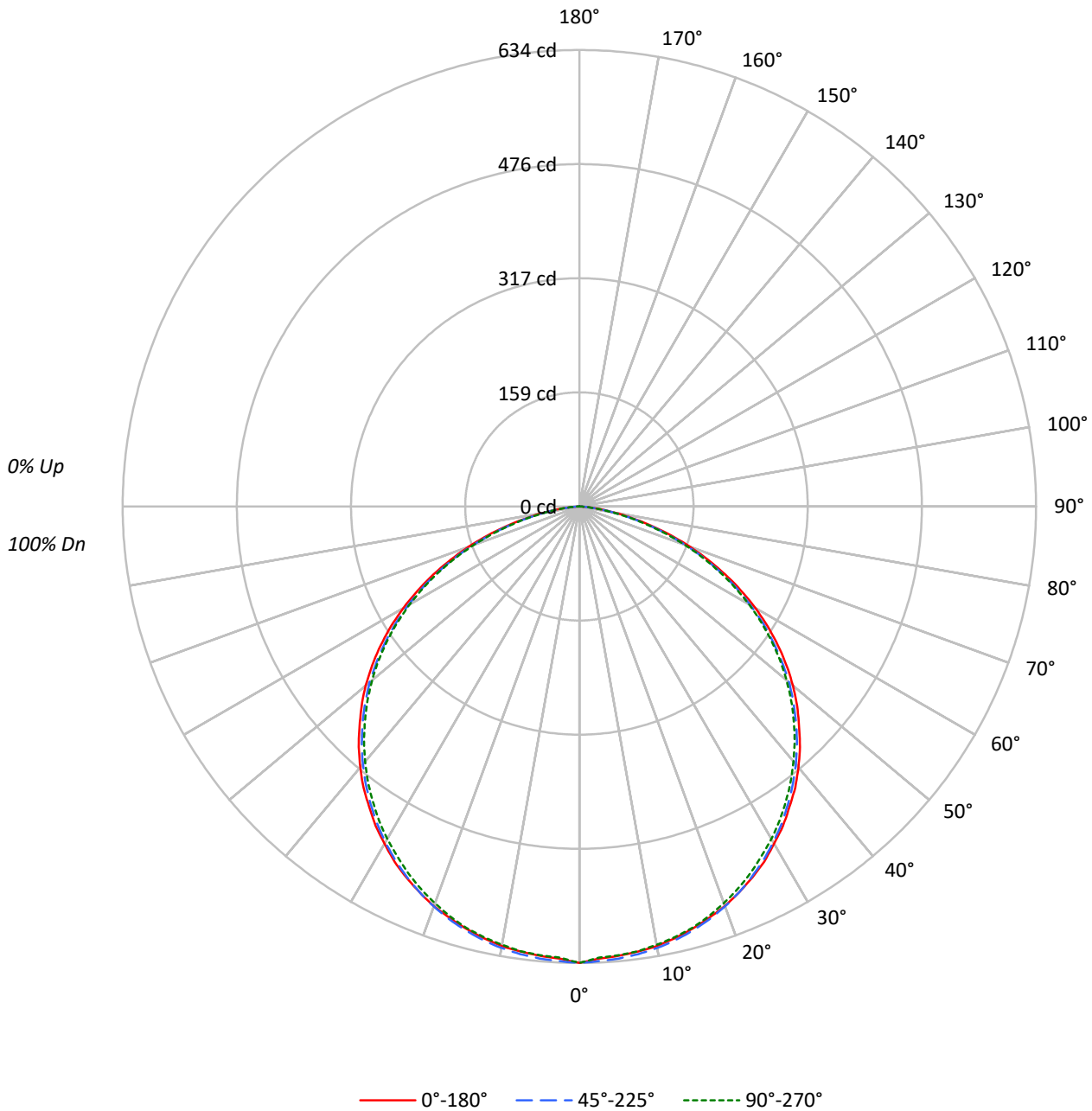
Test Method: LM-79-2019  
Report Number: P973199  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-14-20HE-L840-CP187  
Description: 1\*4 FLR-2.0 2000 Lumen High Efficacy at 4000CCT & 80CRI with Clear Polycarbonate (0.187" thickness)  
  
Light Source:  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1774.5 lumens  
Efficiency: N/A  
Efficacy: 119.9 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): 14.8  
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°	1706	1706	1706
5°	1693	1703	1690
10°	1694	1702	1689
15°	1692	1698	1688
20°	1692	1693	1680
25°	1688	1684	1669
30°	1680	1673	1657
35°	1671	1659	1642
40°	1662	1642	1625
45°	1642	1619	1602
50°	1621	1591	1572
55°	1580	1543	1528
60°	1518	1476	1463
65°	1422	1380	1365
70°	1282	1231	1220
75°	1075	1020	1010
80°	781	728	708
85°	414	364	333

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1642 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.1	3.4
10°-20°	172.5	9.7
20°-30°	262.0	14.8
30°-40°	316.9	17.9
40°-50°	329.4	18.6
50°-60°	294.9	16.6
60°-70°	215.1	12.1
70°-80°	105.9	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°	494.5	27.9
0°-40°	811.4	45.7
0°-60°	1435.7	80.9
0°-90°	1774.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1774.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	627	634	630	636	626	60
15°	607	613	610	615	606	171
25°	568	571	567	570	562	262
35°	509	510	505	507	500	319
45°	431	431	425	426	421	333
55°	337	334	329	328	326	301
65°	223	221	217	215	214	221
75°	103	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°	634.0	634.0	634.0	634.0	634.0
2.5°	628.5	635.6	632.1	638.4	627.2
5°	626.6	633.5	630.3	636.3	625.8
7.5°	623.5	630.6	627.2	632.9	623.0
10°	620.1	626.4	622.7	628.5	618.2
12.5°	614.0	620.3	616.9	622.2	612.7
15°	607.2	612.7	609.6	614.8	605.9
17.5°	599.3	604.6	601.2	605.9	597.0
20°	590.7	594.9	591.2	595.1	586.5
22.5°	579.9	583.9	579.9	582.5	574.9
25°	568.4	571.3	567.3	570.0	562.1
27.5°	556.0	557.6	553.7	555.8	547.6
30°	540.8	542.7	538.5	541.1	533.2
32.5°	526.1	527.2	522.5	524.6	517.5
35°	508.8	509.9	504.9	507.0	499.9
37.5°	492.3	492.0	486.8	488.1	482.0
40°	473.1	472.9	467.4	468.4	462.6
42.5°	453.4	452.4	447.1	447.7	442.4
45°	431.4	430.9	425.4	426.2	420.9
47.5°	410.1	408.6	403.1	403.3	398.9
50°	387.1	384.7	380.0	379.4	375.5
52.5°	362.4	359.8	354.5	354.0	351.1
55°	336.7	333.8	328.8	328.0	325.6
57.5°	310.2	306.5	302.6	301.0	299.1
60°	282.1	278.7	274.2	272.6	271.9
62.5°	253.0	249.6	246.1	244.6	243.5
65°	223.3	220.7	216.7	215.2	214.4
67.5°	193.1	190.8	187.1	185.3	185.0
70°	163.0	160.6	156.4	155.3	155.1
72.5°	132.8	130.7	126.7	125.7	125.7
75°	103.4	101.6	98.1	97.1	97.1
77.5°	75.6	74.0	71.4	70.1	70.1
80°	50.4	49.3	47.0	45.9	45.7
82.5°	29.1	28.6	26.5	25.5	26.0
85°	13.4	12.9	11.8	10.5	10.8
87.5°	3.4	3.1	2.4	1.8	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)