

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: P973733

Luminaire Tested: FLR2-22-20HE-L830-CP187

Issue Date: 3/13/2025

**Test Information**

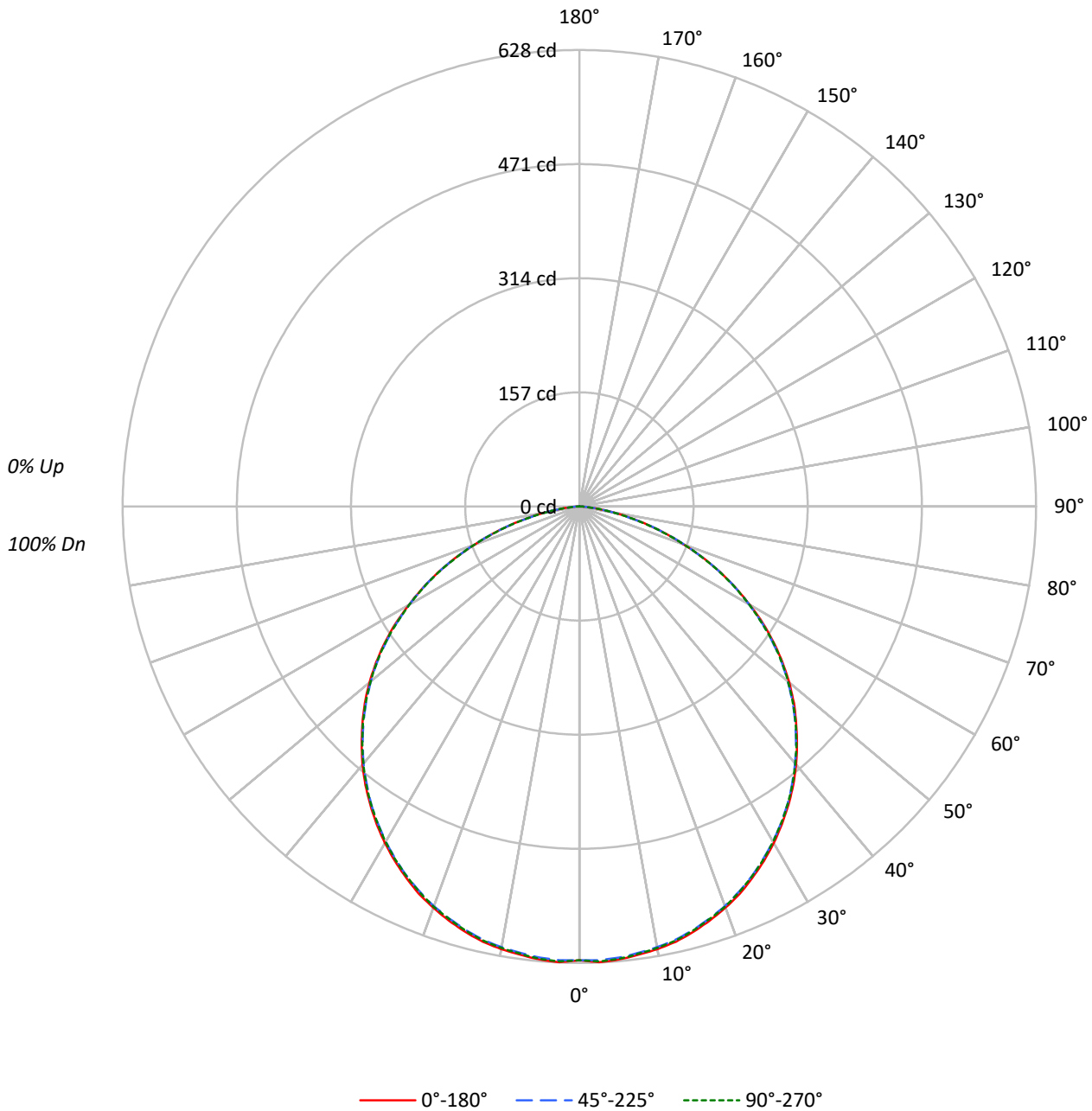
Test Method: LM-79-2019  
Report Number: P973733  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-22-20HE-L830-CP187  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1745.5 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' 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										
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	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						100														
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85						85														
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71						71														
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60						60														
4	83	71	63	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51						51														
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44						44														
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39						39														
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34						34														
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30						30														
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27						27														
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25						25														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1680	1680	1680
5°	1690	1683	1688
10°	1690	1682	1685
15°	1688	1681	1683
20°	1682	1676	1678
25°	1673	1667	1668
30°	1661	1654	1656
35°	1646	1640	1641
40°	1629	1621	1623
45°	1605	1598	1601
50°	1577	1566	1569
55°	1532	1519	1525
60°	1456	1450	1450
65°	1360	1358	1352
70°	1205	1210	1207
75°	1014	1006	998
80°	728	717	711
85°	380	380	371

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1605 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.1	3.4
10°-20°	170.0	9.7
20°-30°	258.3	14.8
30°-40°	312.2	17.9
40°-50°	324.0	18.6
50°-60°	289.7	16.6
60°-70°	210.6	12.1
70°-80°	103.6	5.9
80°-90°	18.0	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°	487.4	27.9
0°-40°	799.6	45.8
0°-60°	1413.3	81.0
0°-90°	1745.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1745.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	626	618	623	621	625	59
15°	606	599	603	602	604	171
25°	564	558	561	560	562	260
35°	501	498	499	500	500	314
45°	422	420	420	421	421	325
55°	326	325	324	325	325	291
65°	214	214	213	213	212	211
75°	98	98	97	97	96	104
85°	12	13	12	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	624.2	624.2	624.2	624.2	624.2
2.5°	627.6	620.3	624.9	622.2	626.5
5°	625.7	618.4	623.0	620.7	624.9
7.5°	622.2	614.9	619.5	617.2	620.7
10°	618.4	610.7	615.7	613.4	616.8
12.5°	613.4	606.0	610.7	608.7	611.8
15°	606.0	599.1	603.3	601.8	604.1
17.5°	597.2	590.2	594.5	593.3	595.2
20°	587.5	581.0	585.2	584.1	586.0
22.5°	576.7	569.8	573.7	572.9	574.4
25°	563.6	557.5	561.3	560.2	561.7
27.5°	549.8	544.0	547.1	547.1	547.8
30°	534.7	529.3	532.4	532.4	532.8
32.5°	518.5	514.3	516.2	516.6	516.6
35°	501.2	497.7	499.3	499.6	499.6
37.5°	483.1	479.6	480.7	481.5	481.5
40°	463.8	460.7	461.5	462.2	461.9
42.5°	443.0	440.7	441.0	441.8	441.8
45°	421.8	419.8	419.8	420.6	420.6
47.5°	400.2	398.2	397.5	398.2	398.2
50°	376.7	374.7	374.0	374.7	374.7
52.5°	352.0	350.1	350.1	350.1	350.4
55°	326.5	324.6	323.8	324.6	325.0
57.5°	299.6	298.8	297.6	298.0	296.9
60°	270.6	270.6	269.5	270.3	269.5
62.5°	242.5	243.3	242.1	242.1	241.3
65°	213.6	214.4	213.2	213.2	212.4
67.5°	183.9	185.1	183.5	183.5	182.7
70°	153.1	155.4	153.8	154.2	153.4
72.5°	125.3	126.5	124.9	124.9	124.1
75°	97.5	98.3	96.8	97.2	96.0
77.5°	70.2	71.3	69.8	70.2	69.8
80°	47.0	47.4	46.3	46.6	45.9
82.5°	27.4	27.8	27.4	27.0	26.6
85°	12.3	12.7	12.3	12.3	12.0
87.5°	3.1	3.1	3.1	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)