

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: P973059

Luminaire Tested: FLR2-14-20HE-L830-CP187

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973059
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-L830-CP187
Description: 1*4 FLR-2.0 2000 Lumen High Efficacy at 3000CCT & 80CRI with Clear Polycarbonate (0.187" thickness)

Light Source:
Ballast/Driver: -

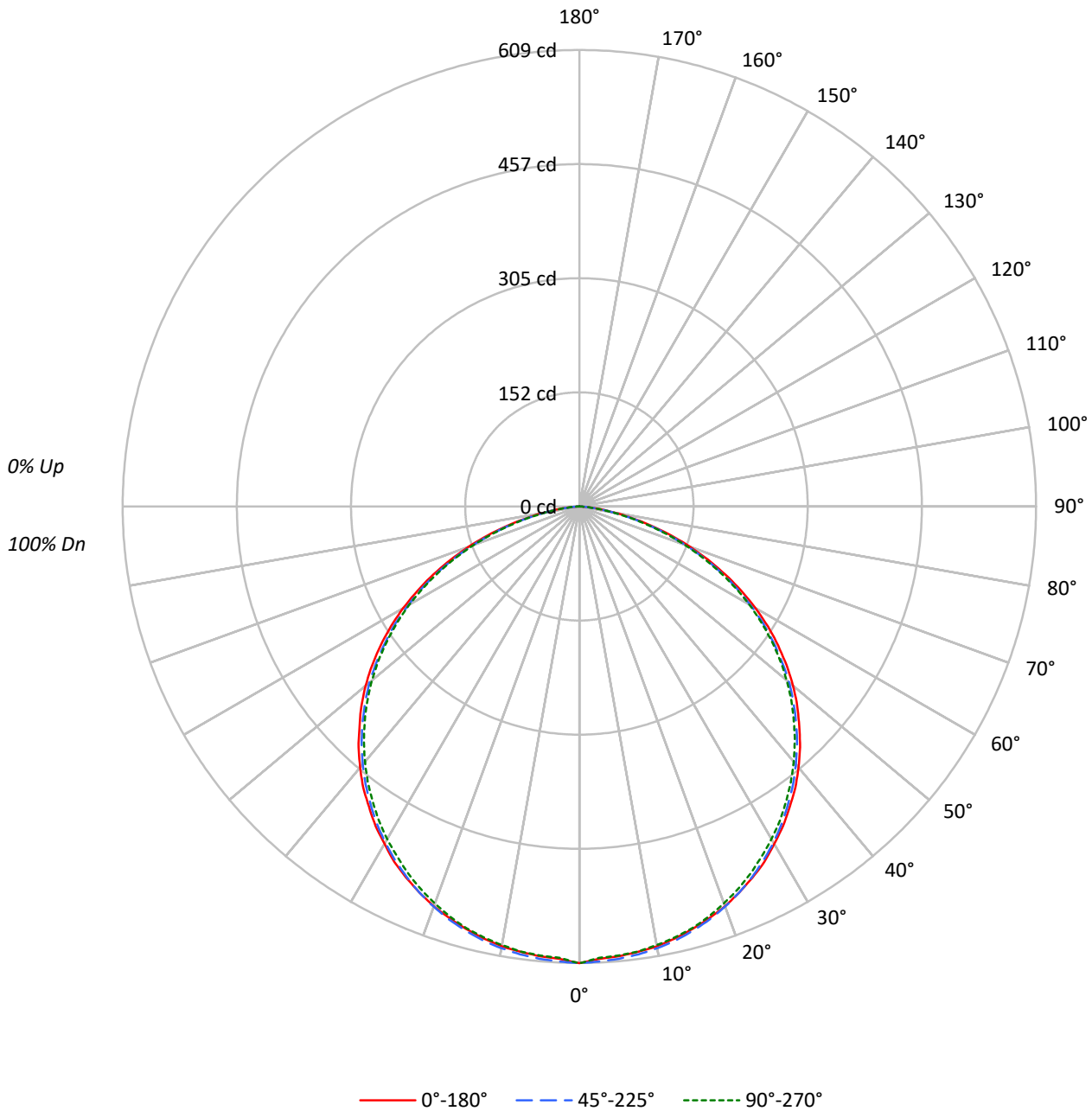
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1705.5 lumens
Efficiency: N/A
Efficacy: 115.2 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																		
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	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°	1640	1640	1640
5°	1627	1636	1625
10°	1629	1635	1624
15°	1626	1632	1623
20°	1626	1627	1614
25°	1622	1619	1604
30°	1615	1608	1592
35°	1607	1594	1578
40°	1597	1578	1562
45°	1578	1556	1540
50°	1557	1529	1511
55°	1518	1483	1468
60°	1459	1419	1406
65°	1366	1326	1312
70°	1232	1183	1173
75°	1033	980	970
80°	750	699	680
85°	398	349	318

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1578 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	3.4
10°-20°	165.8	9.7
20°-30°	251.8	14.8
30°-40°	304.6	17.9
40°-50°	316.6	18.6
50°-60°	283.4	16.6
60°-70°	206.7	12.1
70°-80°	101.8	6.0
80°-90°	17.0	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°	475.3	27.9
0°-40°	779.9	45.7
0°-60°	1379.9	80.9
0°-90°	1705.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1705.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	602	609	606	612	602	57
15°	584	589	586	591	582	165
25°	546	549	545	548	540	252
35°	489	490	485	487	480	306
45°	415	414	409	410	405	320
55°	324	321	316	315	313	289
65°	215	212	208	207	206	212
75°	99	98	94	93	93	106
85°	13	12	11	10	10	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	609.4	609.4	609.4	609.4	609.4
2.5°	604.1	610.9	607.6	613.6	602.8
5°	602.3	608.9	605.8	611.6	601.5
7.5°	599.3	606.1	602.8	608.4	598.8
10°	596.0	602.0	598.5	604.1	594.2
12.5°	590.2	596.2	593.0	598.0	588.9
15°	583.6	588.9	585.9	590.9	582.4
17.5°	576.1	581.1	577.8	582.4	573.8
20°	567.7	571.8	568.2	572.0	563.7
22.5°	557.4	561.2	557.4	559.9	552.6
25°	546.3	549.1	545.3	547.8	540.3
27.5°	534.5	536.0	532.2	534.2	526.4
30°	519.8	521.6	517.6	520.1	512.5
32.5°	505.7	506.7	502.2	504.2	497.4
35°	489.1	490.1	485.3	487.3	480.5
37.5°	473.2	472.9	467.9	469.1	463.3
40°	454.7	454.5	449.2	450.2	444.7
42.5°	435.8	434.8	429.8	430.3	425.2
45°	414.6	414.1	408.8	409.6	404.6
47.5°	394.2	392.7	387.4	387.7	383.4
50°	372.0	369.8	365.2	364.7	360.9
52.5°	348.3	345.8	340.7	340.2	337.5
55°	323.6	320.8	316.0	315.3	313.0
57.5°	298.1	294.6	290.8	289.3	287.5
60°	271.1	267.9	263.6	262.1	261.3
62.5°	243.1	239.9	236.6	235.1	234.1
65°	214.6	212.1	208.3	206.8	206.1
67.5°	185.6	183.4	179.8	178.1	177.8
70°	156.6	154.4	150.3	149.3	149.1
72.5°	127.6	125.6	121.8	120.8	120.8
75°	99.4	97.6	94.3	93.3	93.3
77.5°	72.6	71.1	68.6	67.3	67.3
80°	48.4	47.4	45.1	44.1	43.9
82.5°	28.0	27.5	25.5	24.5	25.0
85°	12.9	12.4	11.3	10.1	10.3
87.5°	3.3	3.0	2.3	1.8	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)