

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: P973419

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

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973419
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-CP187
Description: 1*4 FLR-2.0 2000 LUMEN at 4000 CCT & 80CRI with Clear Polycarbonate (0.187" thickness)

Light Source:
Ballast/Driver: -

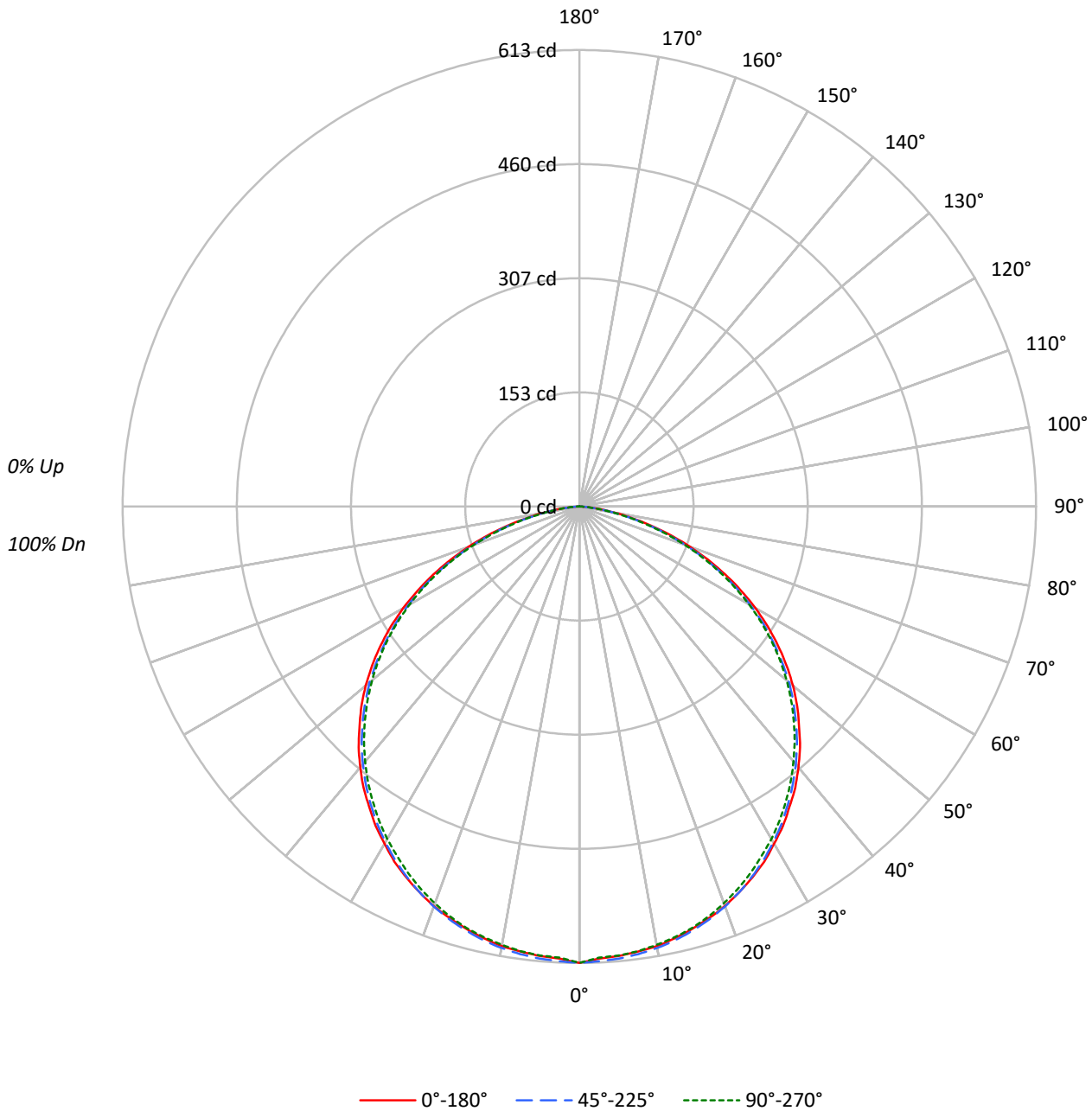
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1715.8 lumens
Efficiency: N/A
Efficacy: 104.6 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									
RC	80									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	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	62	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	70	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	49	42	37	48	41	36	47	41	36	34			34																
8	61	47	39	33	59	47	38	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	39	32	27	38	32	27	38	31	27	37	31	26	25			25																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1650	1650	1650
5°	1637	1646	1635
10°	1638	1645	1633
15°	1636	1642	1632
20°	1636	1637	1624
25°	1632	1629	1614
30°	1625	1618	1602
35°	1616	1604	1588
40°	1607	1587	1571
45°	1588	1565	1549
50°	1567	1538	1520
55°	1528	1491	1477
60°	1468	1427	1415
65°	1375	1335	1320
70°	1240	1190	1180
75°	1040	987	976
80°	755	704	685
85°	398	352	321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1588 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	3.4
10°-20°	166.8	9.7
20°-30°	253.3	14.8
30°-40°	306.5	17.9
40°-50°	318.5	18.6
50°-60°	285.2	16.6
60°-70°	208.0	12.1
70°-80°	102.4	6.0
80°-90°	17.1	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°	478.2	27.9
0°-40°	784.6	45.7
0°-60°	1388.3	80.9
0°-90°	1715.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1715.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	613	613	613	613	613	
5°	606	612	610	615	605	58
15°	587	592	589	594	586	166
25°	550	552	549	551	544	253
35°	492	493	488	490	483	308
45°	417	417	411	412	407	322
55°	326	323	318	317	315	291
65°	216	213	210	208	207	213
75°	100	98	95	94	94	107
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°	613.0	613.0	613.0	613.0	613.0
2.5°	607.7	614.6	611.3	617.4	606.4
5°	605.9	612.5	609.5	615.3	605.2
7.5°	602.9	609.7	606.4	612.0	602.4
10°	599.6	605.7	602.1	607.7	597.8
12.5°	593.8	599.8	596.5	601.6	592.5
15°	587.2	592.5	589.4	594.5	585.9
17.5°	579.5	584.6	581.3	585.9	577.3
20°	571.2	575.2	571.7	575.5	567.1
22.5°	560.8	564.6	560.8	563.3	555.9
25°	549.6	552.4	548.6	551.1	543.5
27.5°	537.7	539.2	535.4	537.4	529.6
30°	523.0	524.7	520.7	523.2	515.6
32.5°	508.8	509.8	505.2	507.2	500.4
35°	492.0	493.0	488.2	490.2	483.4
37.5°	476.0	475.8	470.7	472.0	466.1
40°	457.5	457.2	451.9	452.9	447.3
42.5°	438.5	437.5	432.4	432.9	427.8
45°	417.2	416.6	411.3	412.1	407.0
47.5°	396.6	395.1	389.7	390.0	385.7
50°	374.3	372.0	367.4	366.9	363.1
52.5°	350.4	347.9	342.8	342.3	339.5
55°	325.6	322.8	317.9	317.2	314.9
57.5°	299.9	296.4	292.6	291.0	289.3
60°	272.8	269.5	265.2	263.6	262.9
62.5°	244.6	241.3	238.0	236.5	235.5
65°	215.9	213.4	209.6	208.1	207.3
67.5°	186.8	184.5	180.9	179.1	178.9
70°	157.6	155.3	151.2	150.2	150.0
72.5°	128.4	126.4	122.6	121.5	121.5
75°	100.0	98.2	94.9	93.9	93.9
77.5°	73.1	71.6	69.0	67.7	67.7
80°	48.7	47.7	45.4	44.4	44.2
82.5°	28.2	27.7	25.6	24.6	25.1
85°	12.9	12.4	11.4	10.1	10.4
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)