

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: P973434

Luminaire Tested: FLR2-14-20-L940-CP080

Issue Date: 3/13/2025

**Test Information**

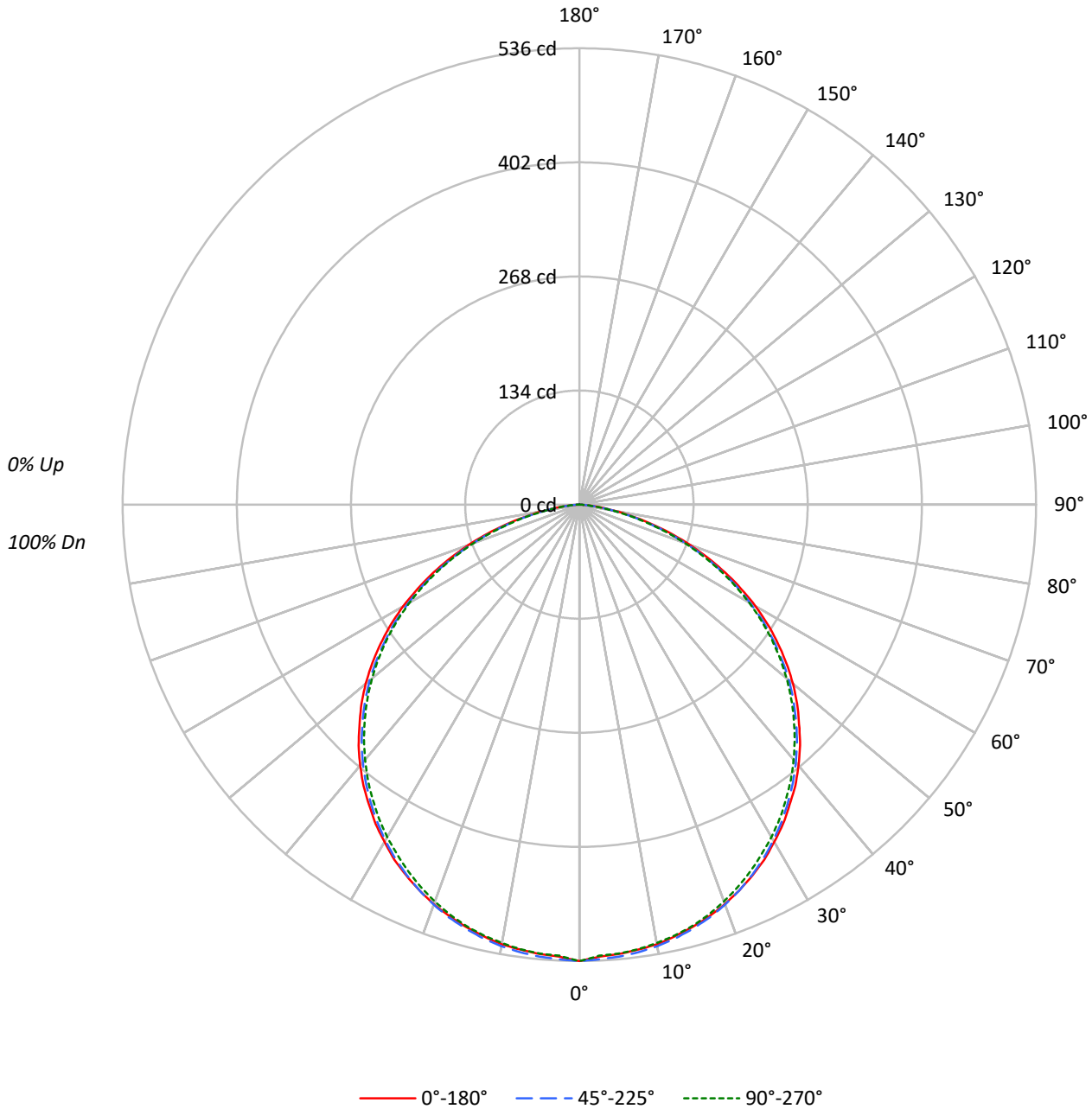
Test Method: LM-79-2019  
Report Number: P973434  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-14-20-L940-CP080  
Description: 1\*4 FLR-2.0 2000 LUMEN at 4000 CCT & 90 CRI with Clear Polycarbonate (0.080" thickness)  
  
Light Source:  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1500.6 lumens  
Efficiency: N/A  
Efficacy: 91.5 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°	1443	1443	1443
5°	1431	1440	1430
10°	1433	1439	1429
15°	1431	1436	1427
20°	1430	1432	1420
25°	1427	1425	1411
30°	1421	1415	1401
35°	1414	1403	1389
40°	1405	1388	1374
45°	1388	1369	1355
50°	1370	1345	1330
55°	1336	1305	1292
60°	1284	1248	1237
65°	1202	1167	1154
70°	1084	1041	1032
75°	909	863	854
80°	660	615	598
85°	349	309	281

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1388 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.8	3.4
10°-20°	145.8	9.7
20°-30°	221.6	14.8
30°-40°	268.0	17.9
40°-50°	278.5	18.6
50°-60°	249.4	16.6
60°-70°	181.9	12.1
70°-80°	89.6	6.0
80°-90°	15.0	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°	418.2	27.9
0°-40°	686.2	45.7
0°-60°	1214.2	80.9
0°-90°	1500.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1500.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	536	536	536	536	536	
5°	530	536	533	538	529	50
15°	514	518	516	520	512	145
25°	481	483	480	482	475	222
35°	430	431	427	429	423	269
45°	365	364	360	360	356	282
55°	285	282	278	277	275	254
65°	189	187	183	182	181	187
75°	87	86	83	82	82	93
85°	11	11	10	9	9	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	536.1	536.1	536.1	536.1	536.1
2.5°	531.5	537.5	534.6	539.9	530.4
5°	529.9	535.7	533.0	538.1	529.3
7.5°	527.3	533.3	530.4	535.3	526.8
10°	524.4	529.7	526.6	531.5	522.8
12.5°	519.3	524.6	521.7	526.2	518.2
15°	513.5	518.2	515.5	519.9	512.4
17.5°	506.9	511.3	508.4	512.4	504.9
20°	499.5	503.1	500.0	503.3	496.0
22.5°	490.4	493.8	490.4	492.7	486.2
25°	480.7	483.1	479.8	482.0	475.3
27.5°	470.2	471.6	468.2	470.0	463.1
30°	457.4	458.9	455.4	457.6	450.9
32.5°	444.9	445.8	441.8	443.6	437.6
35°	430.3	431.2	427.0	428.7	422.7
37.5°	416.3	416.1	411.7	412.8	407.7
40°	400.1	399.9	395.2	396.1	391.2
42.5°	383.5	382.6	378.1	378.6	374.1
45°	364.8	364.4	359.7	360.4	356.0
47.5°	346.9	345.5	340.9	341.1	337.3
50°	327.3	325.3	321.3	320.9	317.6
52.5°	306.5	304.2	299.8	299.4	296.9
55°	284.7	282.3	278.1	277.4	275.4
57.5°	262.3	259.2	255.9	254.5	253.0
60°	238.6	235.7	231.9	230.6	229.9
62.5°	213.9	211.0	208.2	206.8	205.9
65°	188.8	186.6	183.3	182.0	181.3
67.5°	163.3	161.3	158.2	156.7	156.5
70°	137.8	135.8	132.3	131.4	131.2
72.5°	112.3	110.5	107.2	106.3	106.3
75°	87.4	85.9	83.0	82.1	82.1
77.5°	63.9	62.6	60.4	59.3	59.3
80°	42.6	41.7	39.7	38.8	38.6
82.5°	24.6	24.2	22.4	21.5	22.0
85°	11.3	10.9	10.0	8.9	9.1
87.5°	2.9	2.7	2.0	1.6	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)