

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: P973224

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

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973224
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-L940-CP080
Description: 1*4 FLR-2.0 2000 Lumen High Efficacy at 4000CCT & 90 CRI with Clear Polycarbonate (0.080" thickness)

Light Source:
Ballast/Driver: -

Summary

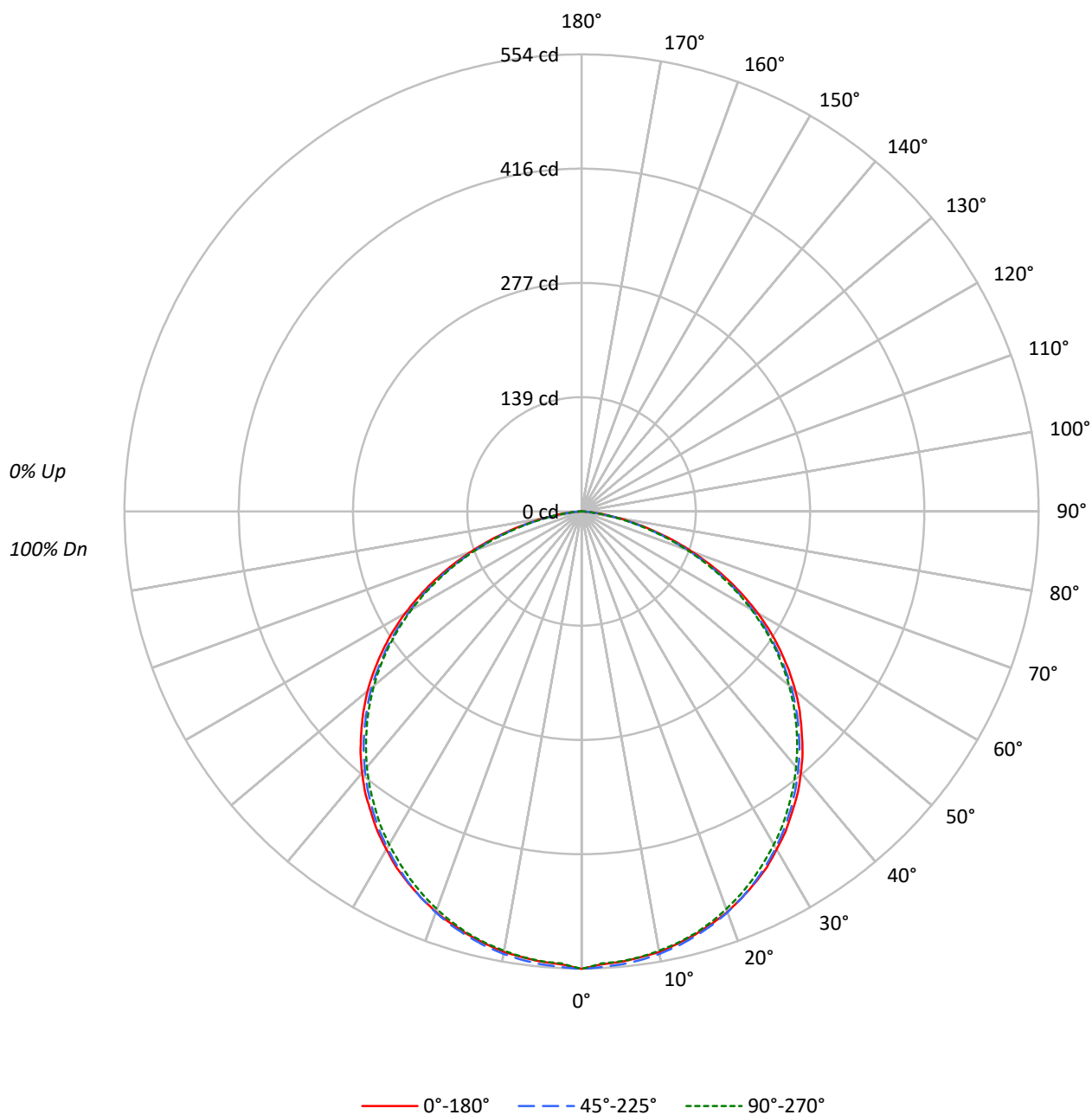
Lumens per Lamp: N/A
Luminaire Lumens: 1551.9 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.25 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	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°	1492	1492	1492
5°	1480	1489	1478
10°	1482	1488	1477
15°	1480	1485	1476
20°	1479	1481	1469
25°	1476	1473	1460
30°	1470	1463	1449
35°	1462	1451	1436
40°	1454	1436	1421
45°	1436	1416	1401
50°	1417	1391	1375
55°	1381	1349	1336
60°	1328	1291	1280
65°	1244	1207	1194
70°	1121	1076	1067
75°	940	892	883
80°	683	637	618
85°	361	318	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1436 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.5	3.4
10°-20°	150.8	9.7
20°-30°	229.1	14.8
30°-40°	277.2	17.9
40°-50°	288.1	18.6
50°-60°	257.9	16.6
60°-70°	188.1	12.1
70°-80°	92.6	6.0
80°-90°	15.5	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°	432.5	27.9
0°-40°	709.7	45.7
0°-60°	1255.6	80.9
0°-90°	1551.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1551.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	548	554	551	556	547	52
15°	531	536	533	538	530	150
25°	497	500	496	498	492	229
35°	445	446	442	443	437	279
45°	377	377	372	373	368	291
55°	294	292	288	287	285	263
65°	195	193	190	188	188	193
75°	90	89	86	85	85	96
85°	12	11	10	9	9	17
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	554.5	554.5	554.5	554.5	554.5
2.5°	549.6	555.8	552.9	558.4	548.5
5°	548.0	554.0	551.2	556.5	547.3
7.5°	545.3	551.5	548.5	553.5	544.8
10°	542.3	547.8	544.6	549.6	540.7
12.5°	537.0	542.5	539.5	544.1	535.9
15°	531.1	535.9	533.1	537.7	529.9
17.5°	524.2	528.8	525.8	529.9	522.1
20°	516.6	520.3	517.1	520.5	512.9
22.5°	507.2	510.6	507.2	509.5	502.8
25°	497.1	499.6	496.2	498.5	491.6
27.5°	486.3	487.7	484.2	486.1	479.0
30°	473.0	474.6	470.9	473.2	466.3
32.5°	460.1	461.1	456.9	458.8	452.6
35°	445.0	445.9	441.6	443.4	437.2
37.5°	430.5	430.3	425.7	426.9	421.6
40°	413.8	413.6	408.7	409.7	404.6
42.5°	396.6	395.7	391.1	391.5	386.9
45°	377.3	376.8	372.0	372.7	368.1
47.5°	358.7	357.3	352.5	352.7	348.8
50°	338.5	336.4	332.3	331.9	328.4
52.5°	316.9	314.6	310.0	309.6	307.1
55°	294.4	291.9	287.6	286.9	284.8
57.5°	271.3	268.1	264.6	263.2	261.6
60°	246.7	243.7	239.8	238.4	237.8
62.5°	221.2	218.3	215.3	213.9	213.0
65°	195.3	193.0	189.6	188.2	187.5
67.5°	168.9	166.8	163.6	162.0	161.8
70°	142.5	140.5	136.8	135.9	135.6
72.5°	116.1	114.3	110.8	109.9	109.9
75°	90.4	88.8	85.8	84.9	84.9
77.5°	66.1	64.7	62.4	61.3	61.3
80°	44.1	43.1	41.1	40.2	39.9
82.5°	25.5	25.0	23.2	22.3	22.7
85°	11.7	11.2	10.3	9.2	9.4
87.5°	3.0	2.8	2.1	1.6	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)