

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: IRiS

Report Number: P1346004

Luminaire Tested: P3A13R409050DE010 E3CA451MB

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346004
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R409050DE010 E3CA451MB
Description: 3in Adjustable LED luminaire with, R40 optic, 5000K CCT AND, 90CRI , E3CA451MB TRIM
Light Source: -
Ballast/Driver: -

Summary

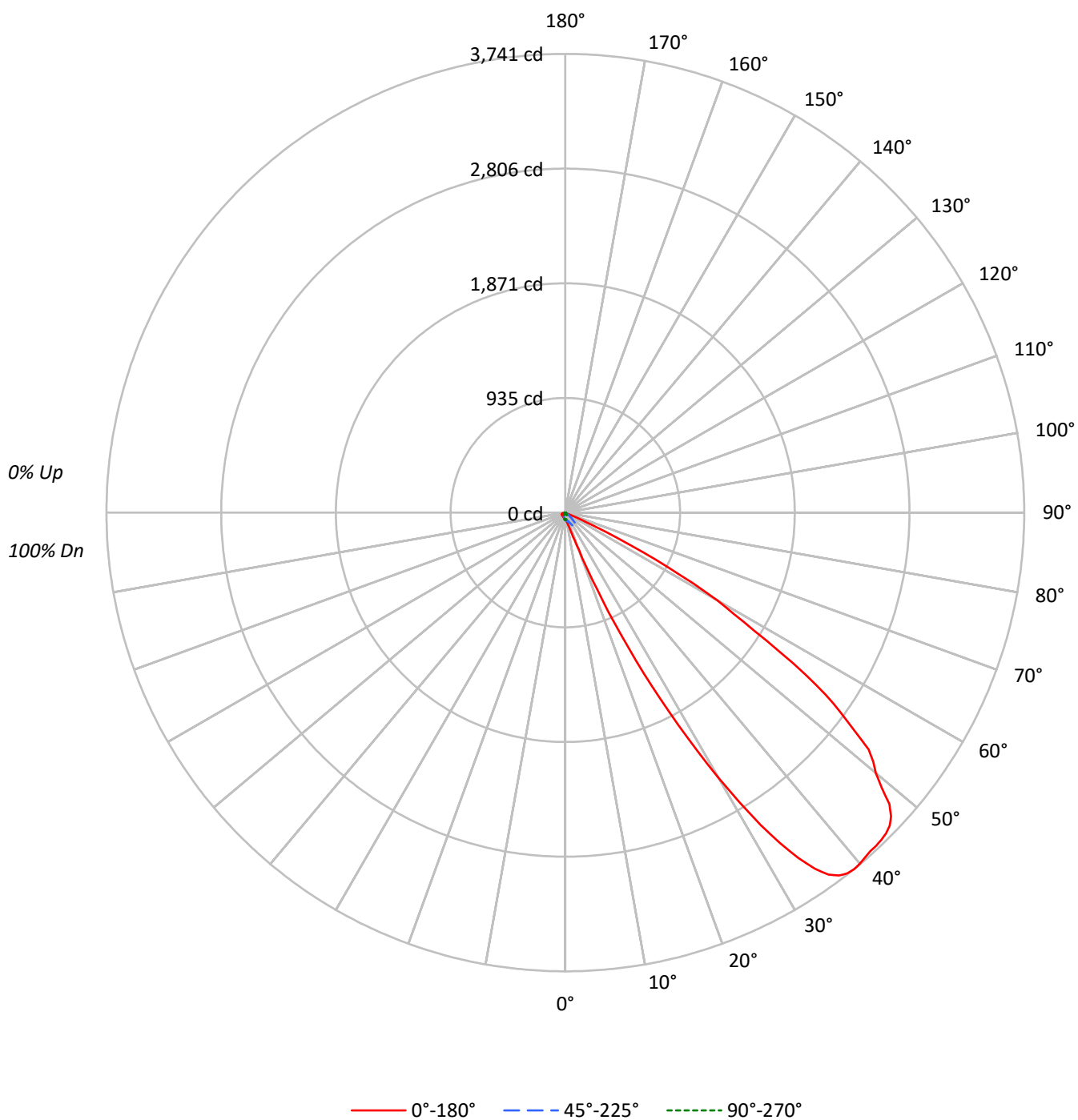
Lumens per Lamp: N/A
Luminaire Lumens: 1156.0 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

Luminous Intensity Polar Plot



TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13047	13047	13047	13047	13047
5°	14484	14022	12855	11688	11446
10°	17501	14896	11823	10643	10398
15°	28672	16141	10125	9398	9648
20°	75817	19065	8424	8424	9171
25°	292299	23638	6678	7694	9001
30°	630629	31448	5368	7520	8862
35°	949183	37236	4551	7388	9102
40°	1069404	37384	3950	7586	9733
45°	1146662	28964	3628	7908	10544
50°	1127059	18115	3275	8324	11599
55°	991544	8946	3250	9328	12998
60°	627625	1842	3728	10262	14429
65°	128367	571	3840	11000	15981
70°	2693	705	4103	12246	18401
75°	2711	1779	4490	13471	20673
80°	2652	1389	5304	14775	24119
85°	2768	2768	10567	16102	26669

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 1167399 cd/sqm

TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.6	0.5
10°-20°	18.3	1.6
20°-30°	89.8	7.8
30°-40°	292.0	25.3
40°-50°	402.6	34.8
50°-60°	280.4	24.3
60°-70°	53.2	4.6
70°-80°	9.6	0.8
80°-90°	4.5	0.4
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°	113.7	9.8
0°-40°	405.7	35.1
0°-60°	1088.8	94.2
0°-90°	1156.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1156.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	60	60	60	60	60	
5°	66	64	58	53	52	7
15°	126	71	45	41	42	46
25°	1208	98	28	32	37	622
35°	3546	139	17	28	34	2143
45°	3698	93	12	26	34	2812
55°	2594	23	8	24	34	2217
65°	247	1	7	21	31	437
75°	3	2	5	16	24	3
85°	1	1	4	6	11	1
90°	0	0	0	0	0	

TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5
2.5°	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	60.5	59.5
5°	65.8	65.8	65.8	65.8	64.8	64.8	64.8	63.7	63.7	61.6	58.4
7.5°	70.1	70.1	70.1	70.1	69.0	67.9	66.9	66.9	65.8	60.5	56.3
10°	78.6	78.6	77.5	76.4	75.4	73.3	72.2	70.1	66.9	59.5	53.1
12.5°	95.5	93.4	92.4	90.2	87.1	82.8	78.6	75.4	67.9	57.3	49.9
15°	126.3	124.2	120.0	113.6	107.2	98.7	91.3	83.9	71.1	54.1	44.6
17.5°	180.5	174.1	167.7	157.1	141.2	126.3	110.4	96.6	75.4	51.0	40.3
20°	324.9	320.6	282.4	252.7	204.9	170.9	139.1	115.7	81.7	47.8	36.1
22.5°	669.9	625.3	562.7	460.7	358.8	264.3	192.2	145.4	88.1	43.5	31.8
25°	1208.1	1138.1	1003.2	806.8	595.6	421.5	278.1	190.0	97.7	39.3	27.6
27.5°	1829.2	1758.1	1548.9	1278.2	933.2	635.9	397.0	251.6	110.4	35.0	24.4
30°	2490.6	2430.1	2164.7	1789.9	1315.4	890.7	531.9	314.2	124.2	30.8	21.2
31°	2757.0	2679.5	2392.9	1993.7	1494.8	995.8	586.0	340.8	129.5	29.7	20.2
32°	3002.3	2914.2	2616.9	2189.1	1640.2	1109.4	645.5	364.1	133.8	27.6	19.1
33°	3213.5	3110.6	2823.9	2373.8	1800.5	1215.6	707.0	386.4	136.9	25.5	18.0
34°	3393.0	3303.8	2995.9	2559.6	1942.8	1317.5	767.6	408.7	139.1	24.4	17.0
35°	3545.8	3465.1	3160.5	2700.8	2081.8	1416.2	822.8	430.0	139.1	22.3	17.0
36°	3648.8	3578.7	3302.7	2845.2	2198.6	1500.1	869.5	449.1	139.1	20.2	15.9
37°	3705.1	3637.1	3396.1	2964.1	2313.3	1582.9	911.9	463.9	138.0	19.1	14.9
38°	3733.7	3674.3	3465.1	3060.7	2392.9	1642.3	949.1	475.6	136.9	17.0	14.9
39°	3741.2	3691.3	3508.7	3130.7	2470.4	1701.8	975.6	482.0	133.8	15.9	13.8
40°	3735.9	3692.3	3532.0	3193.4	2529.9	1748.5	994.7	484.1	130.6	13.8	13.8
41°	3725.2	3691.3	3549.0	3236.9	2577.6	1778.2	1002.2	479.9	126.3	11.7	12.7
42°	3715.7	3678.5	3556.4	3266.6	2610.5	1793.1	1001.1	471.4	120.0	10.6	12.7
43°	3715.7	3673.2	3557.5	3285.7	2626.5	1794.1	988.4	455.4	111.5	9.6	11.7
44°	3709.3	3670.0	3562.8	3298.5	2630.7	1784.6	968.2	438.5	101.9	8.5	11.7
45°	3697.6	3656.2	3561.8	3299.5	2623.3	1761.2	935.3	416.2	93.4	6.4	11.7
46°	3675.3	3638.2	3552.2	3292.1	2601.0	1727.3	896.0	393.9	83.9	5.3	10.6
47°	3630.8	3602.1	3526.7	3266.6	2567.0	1677.4	849.3	368.4	76.4	4.2	10.6
48°	3554.3	3534.2	3483.2	3210.4	2502.3	1615.8	799.4	340.8	69.0	4.2	10.6
49°	3414.2	3398.3	3368.5	3120.1	2419.4	1540.4	745.3	310.0	61.6	3.2	10.6
50°	3303.8	3286.8	3226.3	2968.3	2300.5	1444.9	685.8	279.2	53.1	2.1	9.6
51°	3230.5	3202.9	3107.4	2792.1	2127.5	1317.5	621.1	248.4	44.6	2.1	9.6
52°	3138.2	3096.8	2977.9	2633.9	1969.3	1190.1	551.0	217.6	39.3	2.1	9.6
53°	2944.9	2930.1	2812.2	2464.0	1811.1	1068.0	478.8	192.2	34.0	2.1	9.6
54°	2776.2	2753.9	2593.6	2228.4	1639.1	932.1	404.5	169.9	28.7	2.1	9.6
55°	2593.6	2550.0	2407.8	2029.8	1437.4	806.8	333.4	146.5	23.4	2.1	8.5
56°	2363.2	2325.0	2172.1	1817.5	1251.7	679.4	279.2	120.0	18.0	2.1	8.5
57°	2082.9	2047.9	1930.0	1556.3	1058.4	555.2	227.2	96.6	13.8	2.1	8.5
58°	1812.2	1772.9	1638.1	1305.8	854.6	440.6	190.0	78.6	10.6	2.1	8.5
59°	1604.1	1551.0	1376.9	1096.7	668.8	334.4	150.8	62.6	7.4	2.1	8.5
60°	1431.1	1387.5	1207.1	913.0	524.4	246.3	111.5	47.8	4.2	2.1	8.5
62.5°	829.1	817.5	655.0	470.3	247.4	114.7	55.2	22.3	2.1	3.2	8.5
65°	247.4	215.5	167.7	99.8	63.7	38.2	20.2	7.4	1.1	3.2	7.4



TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	7.4	7.4	7.4	7.4	7.4	7.4	4.2	2.1	1.1	3.2	7.4
70°	4.2	3.2	3.2	3.2	3.2	2.1	2.1	1.1	1.1	3.2	6.4
72.5°	3.2	3.2	3.2	3.2	2.1	2.1	2.1	1.1	2.1	3.2	5.3
75°	3.2	2.1	2.1	2.1	2.1	1.1	1.1	1.1	2.1	3.2	5.3
77.5°	2.1	2.1	2.1	2.1	1.1	1.1	1.1	1.1	2.1	3.2	5.3
80°	2.1	2.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.2	4.2
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.2	4.2
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.2	4.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	59.5	59.5	59.5	59.5
2.5°	57.3	56.3	55.2	55.2
5°	55.2	53.1	53.1	52.0
7.5°	52.0	49.9	49.9	49.9
10°	48.8	47.8	47.8	46.7
12.5°	44.6	44.6	44.6	44.6
15°	41.4	41.4	42.5	42.5
17.5°	37.2	38.2	40.3	41.4
20°	34.0	36.1	38.2	39.3
22.5°	31.8	34.0	37.2	38.2
25°	28.7	31.8	36.1	37.2
27.5°	26.5	30.8	34.0	36.1
30°	24.4	29.7	32.9	35.0
31°	24.4	28.7	32.9	35.0
32°	23.4	27.6	32.9	34.0
33°	23.4	27.6	32.9	34.0
34°	22.3	27.6	31.8	34.0
35°	22.3	27.6	31.8	34.0
36°	21.2	26.5	31.8	34.0
37°	21.2	26.5	31.8	34.0
38°	20.2	26.5	31.8	34.0
39°	20.2	26.5	31.8	34.0
40°	20.2	26.5	31.8	34.0
41°	19.1	26.5	31.8	34.0
42°	19.1	26.5	31.8	34.0
43°	19.1	25.5	31.8	34.0
44°	19.1	25.5	31.8	34.0
45°	18.0	25.5	31.8	34.0
46°	18.0	25.5	31.8	34.0
47°	18.0	25.5	31.8	34.0
48°	18.0	25.5	31.8	34.0
49°	18.0	25.5	31.8	34.0
50°	17.0	24.4	31.8	34.0
51°	17.0	24.4	31.8	34.0
52°	17.0	24.4	31.8	34.0
53°	17.0	24.4	31.8	34.0
54°	15.9	24.4	31.8	34.0
55°	15.9	24.4	31.8	34.0
56°	15.9	24.4	31.8	32.9
57°	15.9	24.4	30.8	32.9
58°	15.9	23.4	30.8	32.9
59°	15.9	23.4	30.8	32.9
60°	15.9	23.4	30.8	32.9
62.5°	14.9	23.4	29.7	31.8
65°	13.8	21.2	29.7	30.8



TEST NUMBER: P1346004

CATALOG NUMBER: P3A13R409050DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	13.8	20.2	27.6	29.7
70°	12.7	19.1	26.5	28.7
72.5°	10.6	18.0	24.4	26.5
75°	9.6	15.9	22.3	24.4
77.5°	8.5	13.8	20.2	21.2
80°	7.4	11.7	17.0	19.1
82.5°	5.3	8.5	13.8	14.9
85°	4.2	6.4	9.6	10.6
87.5°	3.2	3.2	5.3	5.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)