

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: P1336944

Luminaire Tested: P3A05R209740DE010 E3CA451MB

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1336944
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-74)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A05R209740DE010 E3CA451MB
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 97CRI , E3CA451MB TRIM
Light Source: -
Ballast/Driver: -

Summary

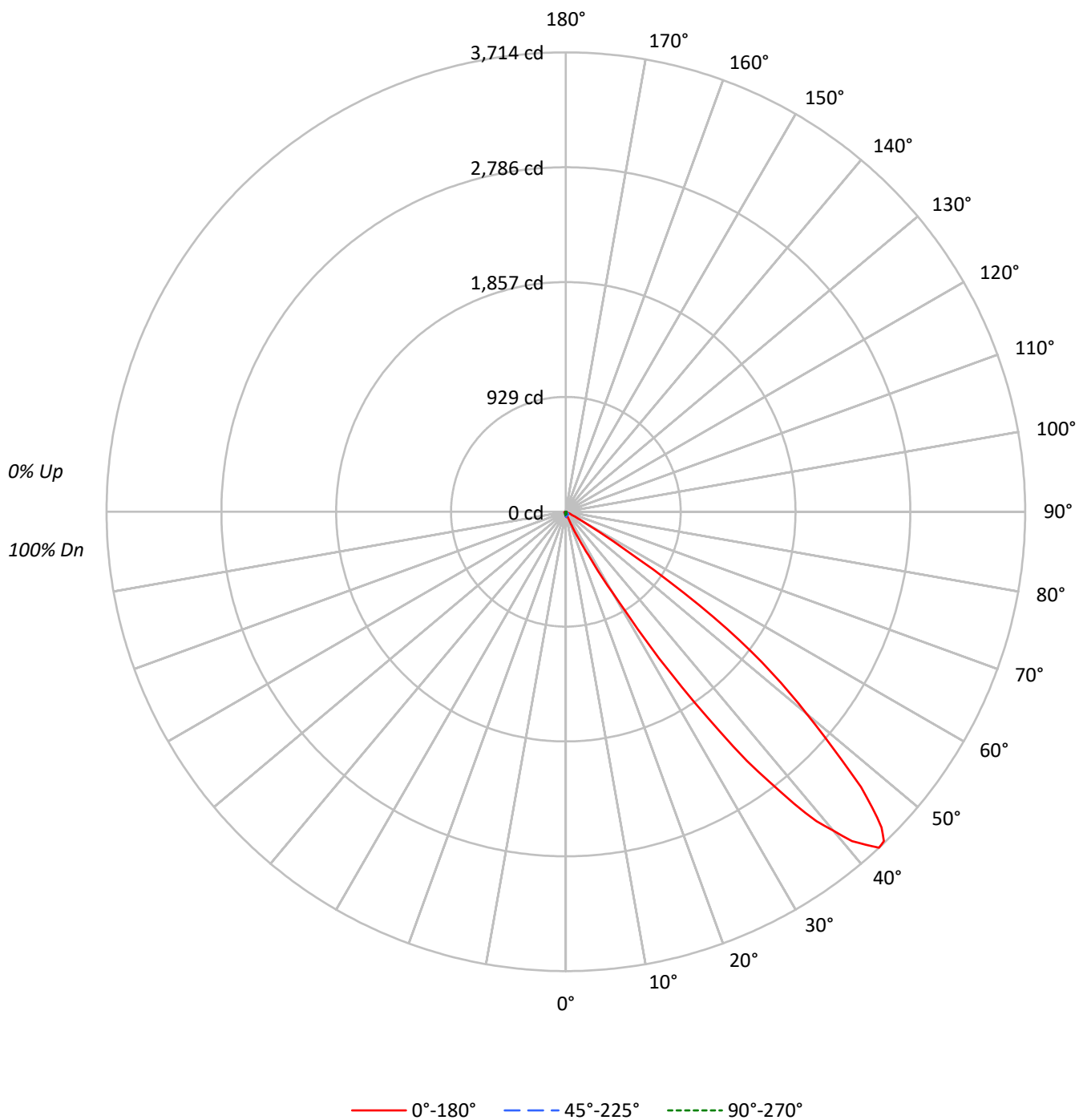
Lumens per Lamp: N/A
Luminaire Lumens: 516.0 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

Luminous Intensity Polar Plot



TEST NUMBER: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87		
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73		
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61		
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42		
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35		
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29		
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25		
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21		
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	7872	7872	7872	7872	7872
5°	9179	8541	7374	6405	6185
10°	9062	7771	5834	4965	4854
15°	7923	5948	4291	3973	4177
20°	11761	4970	3174	3384	3734
25°	50688	5154	2468	3049	3629
30°	191675	6254	2076	2937	3570
35°	581026	7522	1954	2998	3774
40°	963462	7500	1660	3206	4036
45°	1119868	5117	1489	3318	4373
50°	869293	2797	1501	3480	4947
55°	503151	1835	1491	3900	5390
60°	85081	439	1272	4035	5964
65°	6538	0	1505	4514	6797
70°	962	0	1859	5001	7758
75°	847	424	2033	5761	9065
80°	631	631	3031	6061	10355
85°	1258	1258	4780	6038	11070

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1119868 cd/sqm

TEST NUMBER: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.1	0.6
10°-20°	6.5	1.3
20°-30°	20.6	4.0
30°-40°	131.6	25.5
40°-50°	240.9	46.7
50°-60°	99.0	19.2
60°-70°	8.3	1.6
70°-80°	4.2	0.8
80°-90°	2.0	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°	30.1	5.8
0°-40°	161.7	31.3
0°-60°	501.6	97.2
0°-90°	516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	516.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	36	36	36	36	36	
5°	42	39	34	29	28	4
15°	35	26	19	18	18	11
25°	210	21	10	13	15	138
35°	2170	28	7	11	14	1374
45°	3611	16	5	11	14	2593
55°	1316	5	4	10	14	1150
65°	13	0	3	9	13	41
75°	1	0	2	7	11	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

TEST NUMBER: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9
2.5°	39.3	39.3	39.3	38.8	38.8	39.3	38.8	38.8	38.8	38.8	38.3
5°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.2	41.2	40.7	38.8
7.5°	42.7	42.7	42.7	42.7	42.2	42.2	42.2	42.2	41.7	41.2	37.8
10°	40.7	40.7	40.7	40.2	40.2	40.2	39.8	39.8	39.3	38.8	34.9
12.5°	36.9	36.9	36.9	36.9	36.4	36.4	35.9	35.9	35.4	34.9	30.5
15°	34.9	34.9	34.9	34.4	34.4	33.9	33.5	33.0	32.5	31.5	26.2
17.5°	37.8	37.8	37.3	37.3	36.4	35.4	34.9	33.5	32.5	31.0	23.3
20°	50.4	50.9	49.0	47.5	46.6	43.6	42.2	39.8	37.8	35.4	21.3
22.5°	101.8	99.9	96.5	91.2	84.9	79.5	69.8	62.1	56.7	49.5	20.9
25°	209.5	207.5	198.3	190.6	171.2	156.1	135.3	118.3	100.9	83.9	21.3
27.5°	398.1	385.0	382.6	347.2	320.0	281.3	241.0	207.1	176.0	141.6	22.8
30°	757.0	741.9	689.1	635.7	562.5	479.6	400.5	326.8	265.3	209.5	24.7
31°	960.6	975.2	913.1	805.9	697.8	591.6	483.5	389.9	310.3	241.0	25.7
32°	1262.7	1199.2	1133.7	1023.7	866.6	730.8	595.0	460.2	355.4	274.9	26.7
33°	1548.3	1511.0	1411.1	1273.9	1085.2	894.7	718.6	543.1	410.7	316.2	27.2
34°	1852.9	1811.7	1730.7	1533.8	1326.7	1077.0	842.3	638.6	476.7	356.4	27.6
35°	2170.5	2153.0	1996.9	1826.2	1571.6	1270.5	991.2	743.4	541.2	393.3	28.1
36°	2490.1	2433.8	2311.6	2062.4	1796.6	1449.4	1147.3	840.8	606.6	436.9	28.1
37°	2730.6	2718.0	2556.0	2313.1	2000.8	1640.5	1282.1	949.0	672.6	474.3	28.1
38°	2995.8	2945.9	2781.5	2534.2	2192.8	1815.5	1423.2	1043.1	735.1	508.2	27.6
39°	3219.4	3145.2	2979.3	2734.9	2360.6	1948.4	1535.3	1134.2	790.4	536.3	27.2
40°	3365.8	3314.4	3141.3	2866.4	2512.8	2074.0	1648.7	1209.4	831.6	557.7	26.2
41°	3527.3	3442.0	3270.8	2994.4	2623.4	2184.6	1720.0	1258.8	863.6	571.7	25.2
42°	3623.8	3554.0	3350.8	3080.2	2702.5	2247.6	1778.2	1296.7	883.0	579.0	23.3
43°	3714.0	3618.9	3421.1	3130.2	2754.8	2292.2	1804.9	1314.1	887.4	579.0	20.9
44°	3701.9	3611.7	3406.6	3136.9	2766.5	2305.3	1816.0	1314.6	880.6	571.7	18.4
45°	3611.2	3521.5	3336.7	3077.8	2724.8	2279.6	1793.7	1295.2	861.7	559.1	16.5
46°	3444.9	3355.6	3214.0	2978.9	2647.2	2221.4	1741.8	1253.0	830.2	538.7	14.5
47°	3264.0	3177.2	3032.2	2819.3	2514.8	2117.6	1666.7	1193.9	786.1	509.2	13.1
48°	3001.6	2947.3	2801.9	2620.0	2331.0	1955.2	1534.8	1097.4	726.9	470.9	11.2
49°	2769.9	2712.6	2585.1	2389.7	2091.5	1766.1	1377.2	980.0	649.8	428.2	9.7
50°	2548.2	2498.3	2380.5	2159.8	1875.2	1537.7	1164.3	832.1	552.8	375.3	8.2
51°	2331.5	2294.2	2173.9	1971.2	1682.2	1362.1	1008.6	692.9	456.8	311.3	7.8
52°	2113.8	2109.4	1979.0	1773.8	1494.5	1187.1	857.3	584.8	387.5	261.4	7.3
53°	1879.5	1851.4	1737.5	1553.2	1285.0	1004.8	726.9	493.2	333.6	222.6	6.3
54°	1612.8	1581.3	1459.1	1292.8	1049.8	822.9	585.8	398.6	277.9	188.1	5.8
55°	1316.1	1262.2	1173.5	1002.8	820.0	628.0	452.4	315.7	222.1	156.6	4.8
56°	998.4	944.6	894.7	769.1	601.8	468.4	337.0	242.0	173.6	123.7	4.4
57°	694.4	691.5	609.5	513.0	402.5	319.1	230.8	170.7	122.7	96.0	3.4
58°	450.5	435.5	383.1	327.3	263.3	199.3	148.4	115.9	83.4	65.5	2.9
59°	315.7	285.6	257.5	218.2	165.8	125.6	95.5	74.2	57.7	45.6	1.9
60°	194.0	187.7	168.8	132.9	107.7	88.7	71.3	54.8	42.2	32.5	1.0
62.5°	55.3	56.3	50.9	45.1	38.8	33.5	30.1	25.7	21.3	17.0	0.0
65°	12.6	12.1	13.1	12.1	11.2	11.2	9.7	8.7	7.8	7.3	0.0



TEST NUMBER: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	3.9	3.9	3.4	3.4	3.4	2.9	2.9	2.4	2.4	1.9	0.0
70°	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	0.5	0.5	0.0
72.5°	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5
77.5°	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
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: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	35.9	35.9	35.9	35.9	35.9	35.9
2.5°	37.3	35.4	33.9	32.5	32.0	32.0
5°	36.4	33.5	30.5	29.1	28.1	28.1
7.5°	33.5	30.1	27.2	25.7	25.2	25.2
10°	30.1	26.2	23.3	22.3	22.3	21.8
12.5°	26.2	22.3	20.4	19.9	19.9	19.9
15°	21.8	18.9	17.5	17.5	17.9	18.4
17.5°	18.4	15.5	15.0	16.0	17.0	17.0
20°	15.5	13.6	13.6	14.5	15.5	16.0
22.5°	13.1	11.6	12.1	13.6	15.0	15.5
25°	11.6	10.2	11.2	12.6	14.1	15.0
27.5°	9.7	9.2	10.2	12.1	14.1	14.5
30°	8.2	8.2	9.7	11.6	13.6	14.1
31°	7.8	7.8	9.7	11.6	13.6	14.1
32°	7.3	7.8	9.2	11.6	13.6	14.1
33°	6.8	7.3	9.2	11.2	13.6	14.1
34°	6.3	7.3	9.2	11.2	13.6	14.1
35°	5.8	7.3	9.2	11.2	13.6	14.1
36°	5.3	6.8	8.7	11.2	13.6	14.1
37°	4.8	6.8	8.7	11.2	13.6	14.1
38°	4.4	6.3	8.7	11.2	13.6	14.1
39°	4.4	6.3	8.2	11.2	13.1	14.1
40°	3.9	5.8	8.2	11.2	13.1	14.1
41°	3.4	5.8	8.2	10.7	13.1	14.1
42°	2.9	5.3	7.8	10.7	13.1	14.1
43°	2.4	5.3	7.8	10.7	13.1	14.1
44°	2.4	4.8	7.8	10.7	13.1	14.1
45°	1.9	4.8	7.8	10.7	13.1	14.1
46°	1.5	4.8	7.8	10.7	13.1	14.1
47°	1.5	4.4	7.3	10.7	13.1	14.1
48°	1.0	4.4	7.3	10.7	13.1	14.1
49°	1.0	4.4	7.3	10.7	13.1	14.5
50°	1.0	4.4	7.3	10.2	13.1	14.5
51°	0.5	4.4	7.3	10.2	13.1	14.5
52°	0.5	4.4	6.8	10.2	13.6	14.5
53°	0.5	3.9	6.8	10.2	13.6	14.5
54°	0.5	3.9	6.8	10.2	13.6	14.1
55°	0.5	3.9	6.8	10.2	13.1	14.1
56°	0.5	3.4	6.8	10.2	13.1	14.1
57°	0.5	3.4	6.3	9.7	13.1	13.6
58°	0.5	3.4	6.3	9.7	13.1	13.6
59°	0.5	3.4	6.3	9.7	12.6	13.6
60°	1.0	2.9	5.8	9.2	12.6	13.6
62.5°	1.0	2.9	5.8	9.2	12.1	13.1
65°	1.0	2.9	5.3	8.7	12.1	13.1



TEST NUMBER: P1336944

CATALOG NUMBER: P3A05R209740DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.0	2.4	4.8	8.2	11.6	12.6
70°	1.0	2.9	4.8	7.8	11.2	12.1
72.5°	1.5	2.4	4.4	7.3	10.7	11.6
75°	1.5	2.4	4.4	6.8	10.2	10.7
77.5°	1.9	2.4	3.9	5.8	9.2	9.7
80°	1.9	2.4	3.4	4.8	7.8	8.2
82.5°	1.9	2.4	2.4	3.9	5.8	6.3
85°	1.5	1.9	1.9	2.4	3.9	4.4
87.5°	1.5	1.9	1.5	1.0	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)