

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P282598

Luminaire Tested: **LDA2B209027D010 EU2B20SP159027 2LBALPINSQ1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P282598  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B209027D010 EU2B20SP159027 2LBALPINSQ1MMS  
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Pinhole w-lens, MMS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1548.4 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

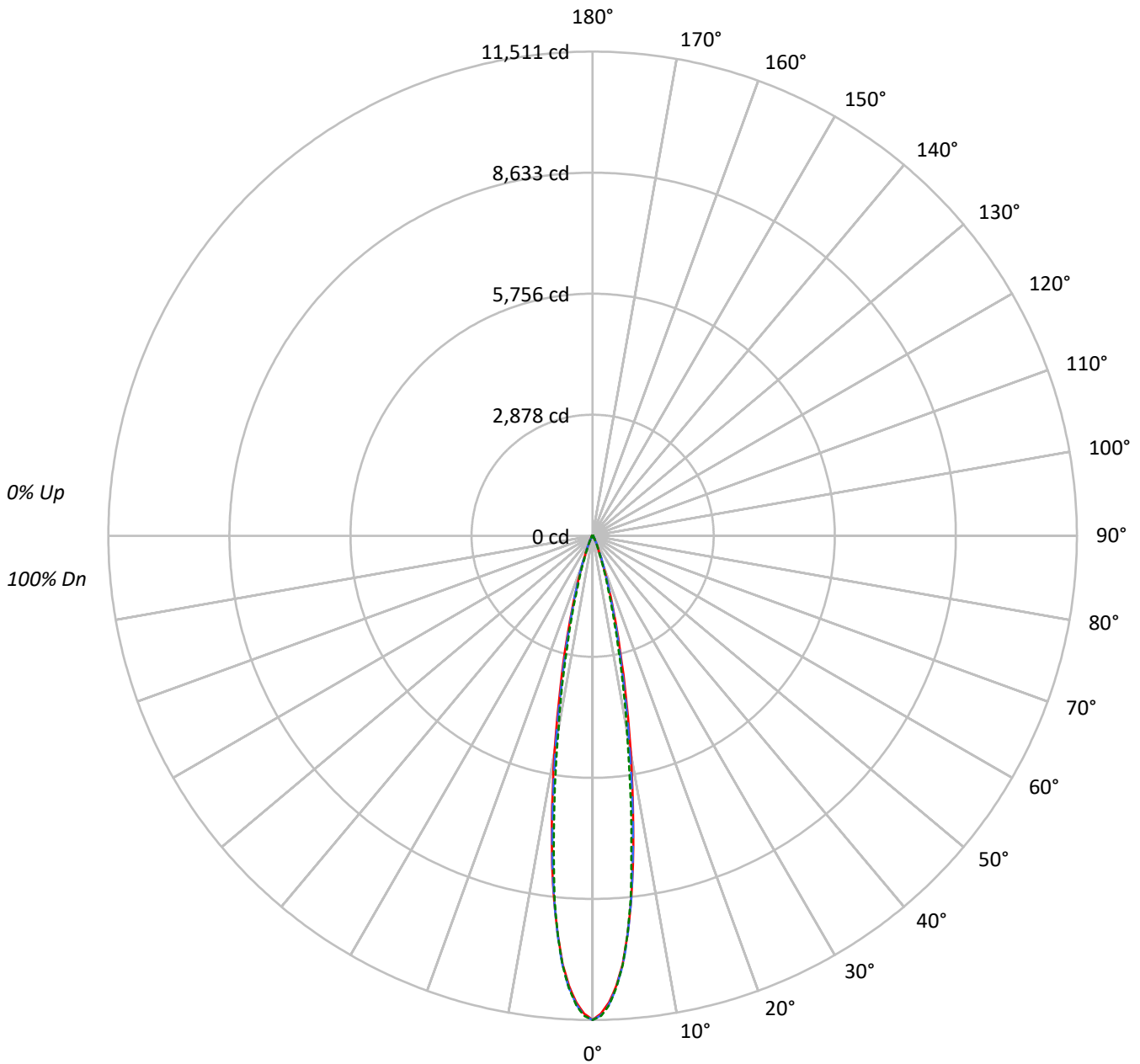
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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					10					0					
RW	70	50	30	10	70	50	30	10	50	30	10	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													
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	96	98	98	95	94	94	92	91	96	96	96		
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	98	96	95	94	94	96	96	93	92	91	90	89	94	94	94		
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	96	94	92	91	91	94	94	91	90	89	88	87	92	92	92		
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	92	89	88	87	87	92	92	89	88	87	86	85	90	90	90		
5	102	97	93	90	101	96	93	90	95	91	89	93	90	88	92	89	88	87	87	92	92	89	88	87	86	85	90	90	90		
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85	85	92	92	89	88	87	86	85	90	90	90		
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83	83	92	92	89	88	87	86	85	90	90	90		
8	96	90	86	83	95	89	86	83	88	85	83	87	85	82	87	84	82	81	81	92	92	89	88	87	86	85	90	90	90		
9	94	88	84	81	93	87	84	81	86	83	81	86	83	81	85	82	81	80	80	92	92	89	88	87	86	85	90	90	90		
10	92	86	82	80	91	85	82	80	85	82	79	84	81	79	84	81	79	78	78	92	92	89	88	87	86	85	90	90	90		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5679038	5679038	5679038
5°	4711328	4726631	4708703
10°	2607563	2513380	2341346
15°	1055548	1009579	896394
20°	353657	374973	303569
25°	134567	135057	127817
30°	60330	59361	57310
35°	29271	26079	20719
40°	19321	24473	17067
45°	4954	8024	7396
50°	1382	1996	2686
55°	12128	10666	16687
60°	17465	13913	22695
65°	8288	21597	20663
70°	7645	6347	7645
75°	3431	8387	23637
80°	40060	55118	50288
85°	0	24907	30002



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	753.9	48.7
10°-20°	571.1	36.9
20°-30°	129.8	8.4
30°-40°	38.4	2.5
40°-50°	12.8	0.8
50°-60°	11.3	0.7
60°-70°	13.5	0.9
70°-80°	8.7	0.6
80°-90°	9.0	0.6
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°	1454.8	94.0
0°-40°	1493.2	96.4
0°-60°	1517.2	98.0
0°-90°	1548.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1548.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11511	11511	11511	11511	11511	
5°	9513	9588	9544	9420	9508	763
15°	2067	2095	1977	1791	1755	601
25°	247	266	248	245	235	129
35°	49	54	43	50	34	38
45°	7	20	12	20	11	11
55°	14	20	12	18	19	6
65°	7	15	18	18	18	7
75°	2	6	4	8	12	4
85°	0	0	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11510.9	11510.9	11510.9	11510.9	11510.9
1°	11362.6	11408.5	11404.0	11385.5	11418.2
2°	11101.2	11156.9	11151.6	11111.0	11169.2
3°	10718.1	10767.5	10759.6	10701.3	10764.9
4°	10206.1	10262.6	10240.5	10153.1	10234.3
5°	9513.1	9588.1	9544.0	9419.5	9507.8
6°	8745.0	8808.6	8738.9	8573.8	8660.3
7°	7885.2	7924.9	7833.1	7621.2	7563.0
8°	6946.8	6998.9	6870.9	6623.7	6560.1
9°	6049.8	6067.5	5912.1	5649.1	5568.7
10°	5205.0	5191.8	5017.0	4750.4	4673.6
11°	4404.3	4386.6	4202.1	3955.8	3980.6
12°	3676.0	3710.4	3495.9	3272.5	3277.0
13°	3077.4	3081.0	2896.5	2683.7	2671.4
14°	2519.5	2552.2	2394.2	2203.5	2168.2
15°	2066.6	2094.9	1976.6	1791.2	1755.0
16°	1654.4	1689.7	1604.9	1437.2	1389.5
17°	1332.1	1377.2	1321.6	1181.2	1126.5
18°	1065.5	1100.0	1086.7	942.0	896.9
19°	841.3	889.0	892.5	771.6	717.7
20°	673.6	716.8	714.2	620.6	578.2
22.5°	386.7	409.6	410.5	366.4	341.6
25°	247.2	265.7	248.1	245.4	234.8
26°	214.5	229.5	210.1	210.1	200.4
27°	173.9	187.2	168.6	176.6	163.3
28°	146.5	160.7	144.8	143.0	141.2
29°	121.8	135.1	114.8	123.6	118.3
30°	105.9	115.6	104.2	117.4	100.6
32.5°	82.1	90.0	69.7	88.3	66.2
35°	48.6	53.9	43.3	50.3	34.4
37.5°	50.3	52.1	46.8	52.1	48.6
40°	30.0	30.9	38.0	38.0	26.5
42.5°	28.2	27.4	16.8	26.5	21.2
45°	7.1	20.3	11.5	20.3	10.6
47.5°	5.3	7.1	7.1	14.1	14.1
50°	1.8	7.1	2.6	5.3	3.5
52.5°	0.0	16.8	3.5	12.4	10.6
55°	14.1	20.3	12.4	18.5	19.4
57.5°	1.8	14.1	7.1	15.0	10.6
60°	17.7	23.8	14.1	25.6	23.0
62.5°	1.8	15.9	18.5	14.1	12.4
65°	7.1	15.0	18.5	17.7	17.7
67.5°	8.8	15.0	11.5	11.5	15.9



TEST NUMBER: P282598

CATALOG NUMBER: LDA2B209027D010 EU2B20SP159027 2LBALPINSQ1MMS

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	1.8	6.2	4.4	7.9	12.4
77.5°	1.8	7.1	6.2	14.1	10.6
80°	14.1	15.9	19.4	25.6	17.7
82.5°	12.4	12.4	19.4	14.1	10.6
85°	0.0	0.0	4.4	4.4	5.3
87.5°	0.0	3.5	8.8	7.1	12.4
90°	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







70°	5.3	1.8	4.4	4.4	5.3
72.5°	1.8	7.9	7.1	4.4	8.8



(END OF REPORT)