

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: P281778

Luminaire Tested: **LDA2B209035D010 EU2B20SP159035 2LBAPINSQ1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P281778  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-5)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B209035D010 EU2B20SP159035 2LBAPINSQ1MMS  
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ PinHole, MMS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1677.1 lumens  
Efficiency: N/A  
Efficacy: 81.4 lumens/watt  
Spacing Criteria (0/90/45): 0.33 / 0.31 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

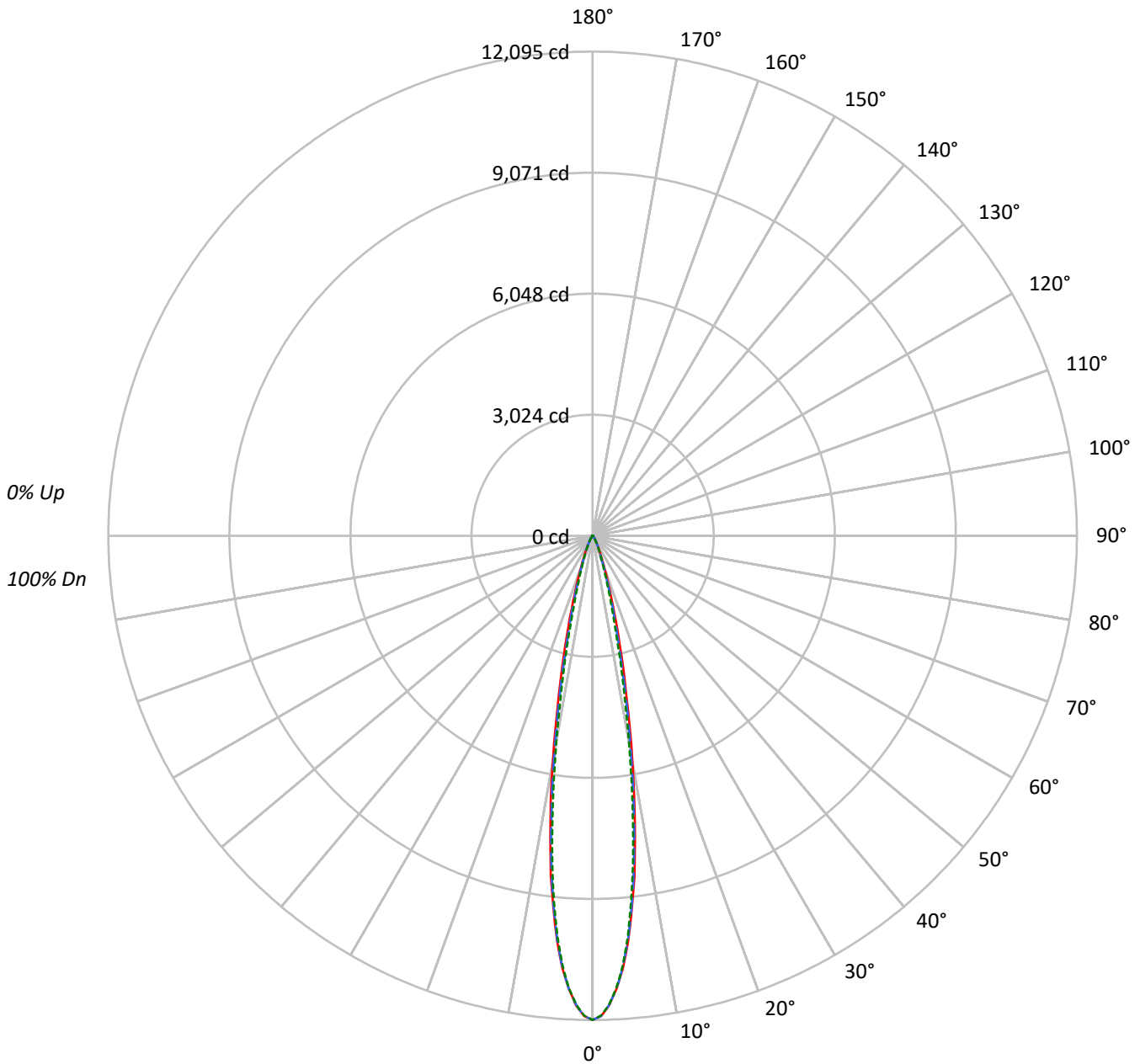
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97	97	97	97		
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	95	95	95	95	95	95	95		
3	109	104	101	98	107	103	100	98	101	98	96	98	96	95	96	95	93	92	92	92	92	92	92	92		
4	106	101	97	95	104	100	97	94	98	95	93	96	94	92	94	93	91	90	90	90	90	90	90	90		
5	103	98	94	91	102	97	93	91	95	92	90	94	91	89	93	90	89	88	88	88	88	88	88	88		
6	101	95	91	89	99	94	91	88	93	90	88	92	89	87	91	88	87	86	86	86	86	86	86	86		
7	98	92	89	86	97	92	88	86	91	88	85	90	87	85	89	87	85	84	84	84	84	84	84	84		
8	96	90	86	84	95	90	86	84	89	86	83	88	85	83	87	85	83	82	82	82	82	82	82	82		
9	94	88	84	82	93	88	84	82	87	84	82	86	83	81	86	83	81	80	80	80	80	80	80	80		
10	92	86	83	80	91	86	82	80	85	82	80	85	82	80	84	81	80	79	79	79	79	79	79	79		

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

	0°	45°	90°
0°	5967408	5967408	5967408
5°	5041905	5014964	4977969
10°	2869772	2743427	2603906
15°	1188399	1052637	927295
20°	452046	395921	362477
25°	199673	191834	170549
30°	92403	102088	81294
35°	48604	57277	45533
40°	21318	24602	14233
45°	8303	6489	9489
50°	3914	4528	6524
55°	0	2925	0
60°	0	0	1677
65°	0	0	0
70°	0	1154	0
75°	0	0	0
80°	4830	0	0
85°	48116	43021	19246



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	808.7	48.2
10°-20°	618.3	36.9
20°-30°	171.9	10.3
30°-40°	55.9	3.3
40°-50°	12.3	0.7
50°-60°	3.8	0.2
60°-70°	2.2	0.1
70°-80°	1.3	0.1
80°-90°	2.7	0.2
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°	1598.9	95.3
0°-40°	1654.8	98.7
0°-60°	1670.9	99.6
0°-90°	1677.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1677.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12095	12095	12095	12095	12095	
5°	10181	10106	10126	10051	10052	823
15°	2327	2246	2061	1902	1816	679
25°	367	371	352	332	313	184
35°	81	88	95	72	76	53
45°	12	17	9	9	14	12
55°	0	5	3	2	0	3
65°	0	3	0	0	0	3
75°	0	0	0	2	0	1
85°	8	4	8	4	3	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12095.4	12095.4	12095.4	12095.4	12095.4
1°	12002.9	11957.8	12001.2	11975.7	11990.1
2°	11742.2	11686.1	11731.1	11695.5	11725.2
3°	11336.3	11293.0	11332.9	11287.9	11311.6
4°	10827.6	10764.8	10804.7	10744.4	10758.8
5°	10180.6	10105.8	10126.2	10050.6	10051.5
6°	9365.4	9313.6	9325.5	9207.4	9198.9
7°	8568.0	8445.7	8433.0	8298.0	8271.6
8°	7600.0	7488.7	7452.2	7293.4	7237.4
9°	6671.8	6533.4	6458.7	6274.4	6209.0
10°	5728.4	5588.3	5476.2	5268.2	5197.7
11°	4855.5	4729.0	4589.7	4367.2	4298.4
12°	4045.4	3946.0	3793.2	3578.4	3506.2
13°	3383.9	3269.3	3105.4	2905.8	2843.8
14°	2810.7	2687.6	2523.7	2353.0	2232.4
15°	2326.7	2246.0	2060.9	1902.1	1815.5
16°	1901.3	1832.5	1672.8	1535.3	1474.1
17°	1559.1	1503.9	1368.0	1260.2	1209.2
18°	1286.5	1217.7	1110.7	1040.2	1000.3
19°	1043.6	990.1	912.0	857.6	817.7
20°	861.0	816.9	754.1	705.7	690.4
22.5°	556.2	548.6	507.8	481.5	468.7
25°	366.8	371.1	352.4	332.0	313.3
26°	313.3	315.9	298.9	287.0	263.2
27°	268.3	269.2	269.2	247.1	224.2
28°	219.1	228.4	219.9	209.7	187.7
29°	187.7	199.6	195.3	185.1	163.9
30°	162.2	170.7	179.2	163.0	142.7
32.5°	113.8	121.4	130.8	122.3	105.3
35°	80.7	87.5	95.1	72.2	75.6
37.5°	55.2	67.1	64.5	58.6	50.1
40°	33.1	34.8	38.2	40.8	22.1
42.5°	23.8	28.0	25.5	28.9	10.2
45°	11.9	17.0	9.3	9.3	13.6
47.5°	8.5	14.4	5.1	5.1	1.7
50°	5.1	11.0	5.9	2.5	8.5
52.5°	8.5	10.2	6.8	7.6	1.7
55°	0.0	5.1	3.4	1.7	0.0
57.5°	3.4	5.9	3.4	1.7	3.4
60°	0.0	0.0	0.0	0.8	1.7
62.5°	0.0	1.7	0.0	2.5	3.4
65°	0.0	3.4	0.0	0.0	0.0
67.5°	5.1	5.9	3.4	6.8	10.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	0.0	0.0	0.0	1.7	0.0
77.5°	0.0	8.5	2.5	2.5	3.4
80°	1.7	0.0	0.0	0.8	0.0
82.5°	0.0	6.8	0.8	3.4	5.1
85°	8.5	4.2	7.6	4.2	3.4
87.5°	0.0	0.8	1.7	0.8	0.0
90°	0.0	0.0	0.0	0.0	0.0



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







70°	0.0	0.0	0.8	0.8	0.0
72.5°	1.7	0.0	0.0	0.0	0.0



(END OF REPORT)