

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: **LDA2B209040D010 EU2B20SP159040 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: LDA2B209040D010 EU2B20SP159040 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: 1712.8 lumens  
Efficiency: N/A  
Efficacy: 83.1 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

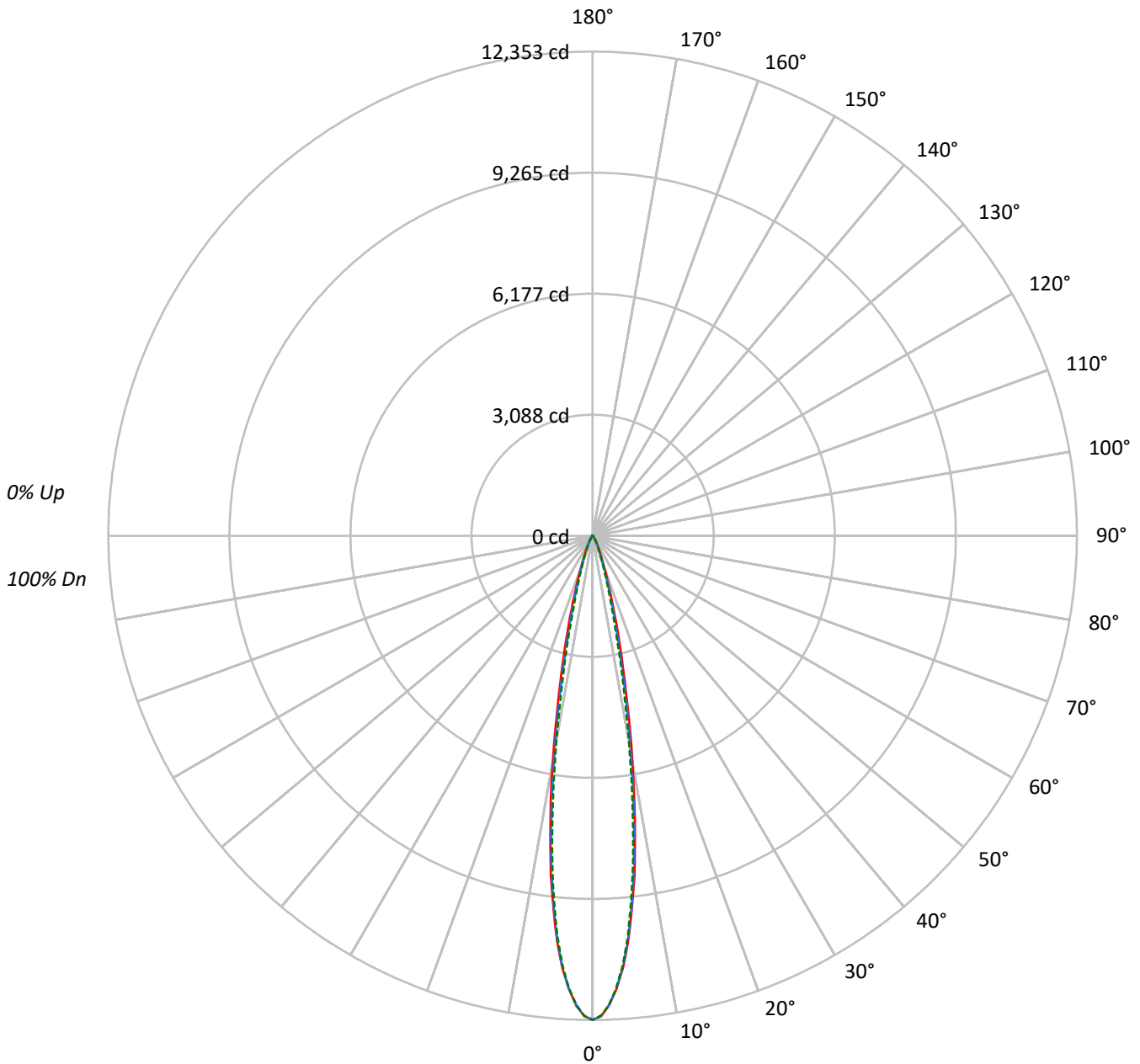
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	6094301	6094301	6094301
5°	5149076	5121590	5083803
10°	2930790	2801740	2659263
15°	1213681	1075009	947011
20°	461707	404321	370142
25°	203919	195917	174197
30°	94340	104252	83003
35°	49628	58482	46496
40°	21768	25117	14491
45°	8442	6628	9698
50°	3991	4682	6678
55°	0	3011	0
60°	0	0	1677
65°	0	0	0
70°	0	1298	0
75°	0	0	0
80°	4830	0	0
85°	49248	44153	19812



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	825.9	48.2
10°-20°	631.4	36.9
20°-30°	175.6	10.3
30°-40°	57.1	3.3
40°-50°	12.6	0.7
50°-60°	3.9	0.2
60°-70°	2.2	0.1
70°-80°	1.3	0.1
80°-90°	2.8	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°	1632.9	95.3
0°-40°	1690.0	98.7
0°-60°	1706.4	99.6
0°-90°	1712.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1712.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12353	12353	12353	12353	12353	
5°	10397	10321	10342	10264	10265	840
15°	2376	2294	2105	1943	1854	694
25°	375	379	360	339	320	188
35°	82	89	97	74	77	54
45°	12	17	10	10	14	12
55°	0	5	4	2	0	3
65°	0	4	0	0	0	3
75°	0	0	0	2	0	1
85°	9	4	8	4	4	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12352.6	12352.6	12352.6	12352.6	12352.6
1°	12258.0	12212.1	12256.3	12230.3	12245.0
2°	11991.8	11934.6	11980.5	11944.1	11974.5
3°	11577.3	11533.0	11573.8	11527.8	11552.1
4°	11057.8	10993.6	11034.4	10972.8	10987.6
5°	10397.0	10320.7	10341.5	10264.3	10265.2
6°	9564.5	9511.6	9523.7	9403.2	9394.5
7°	8750.2	8625.3	8612.3	8474.4	8447.5
8°	7761.5	7647.9	7610.6	7448.5	7391.2
9°	6813.7	6672.3	6596.0	6407.8	6341.0
10°	5850.2	5707.1	5592.6	5380.2	5308.2
11°	4958.7	4829.5	4687.3	4460.1	4389.8
12°	4131.4	4029.9	3873.8	3654.4	3580.7
13°	3455.8	3338.8	3171.4	2967.6	2904.3
14°	2870.5	2744.7	2577.4	2403.0	2279.9
15°	2376.2	2293.8	2104.7	1942.6	1854.1
16°	1941.7	1871.4	1708.4	1567.9	1505.5
17°	1592.2	1535.8	1397.1	1286.9	1234.9
18°	1313.8	1243.6	1134.3	1062.3	1021.6
19°	1065.8	1011.2	931.4	875.9	835.1
20°	879.4	834.3	770.1	720.7	705.0
22.5°	568.0	560.2	518.6	491.7	478.7
25°	374.6	379.0	359.9	339.1	320.0
26°	320.0	322.6	305.3	293.1	268.8
27°	274.0	274.9	274.9	252.4	228.9
28°	223.7	233.3	224.6	214.2	191.7
29°	191.7	203.8	199.5	189.1	167.4
30°	165.6	174.3	183.0	166.5	145.7
32.5°	116.2	124.0	133.6	124.9	107.5
35°	82.4	89.3	97.1	73.7	77.2
37.5°	56.4	68.5	65.9	59.8	51.2
40°	33.8	35.6	39.0	41.6	22.5
42.5°	24.3	28.6	26.0	29.5	10.4
45°	12.1	17.3	9.5	9.5	13.9
47.5°	8.7	14.7	5.2	5.2	1.7
50°	5.2	11.3	6.1	2.6	8.7
52.5°	8.7	10.4	6.9	7.8	1.7
55°	0.0	5.2	3.5	1.7	0.0
57.5°	3.5	6.1	3.5	1.7	3.5
60°	0.0	0.0	0.0	0.9	1.7
62.5°	0.0	1.7	0.0	2.6	3.5
65°	0.0	3.5	0.0	0.0	0.0
67.5°	5.2	6.1	3.5	6.9	10.4



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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	8.7	2.6	2.6	3.5
80°	1.7	0.0	0.0	0.9	0.0
82.5°	0.0	6.9	0.9	3.5	5.2
85°	8.7	4.3	7.8	4.3	3.5
87.5°	0.0	0.9	1.7	0.9	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	0.9	0.9	0.0
72.5°	1.7	0.0	0.0	0.0	0.0



(END OF REPORT)