

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: P208765

Luminaire Tested: **LDSQA6A20830D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208765
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29055)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA6A20830D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1979.1 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 0.37 / 0.38 / 0.39
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

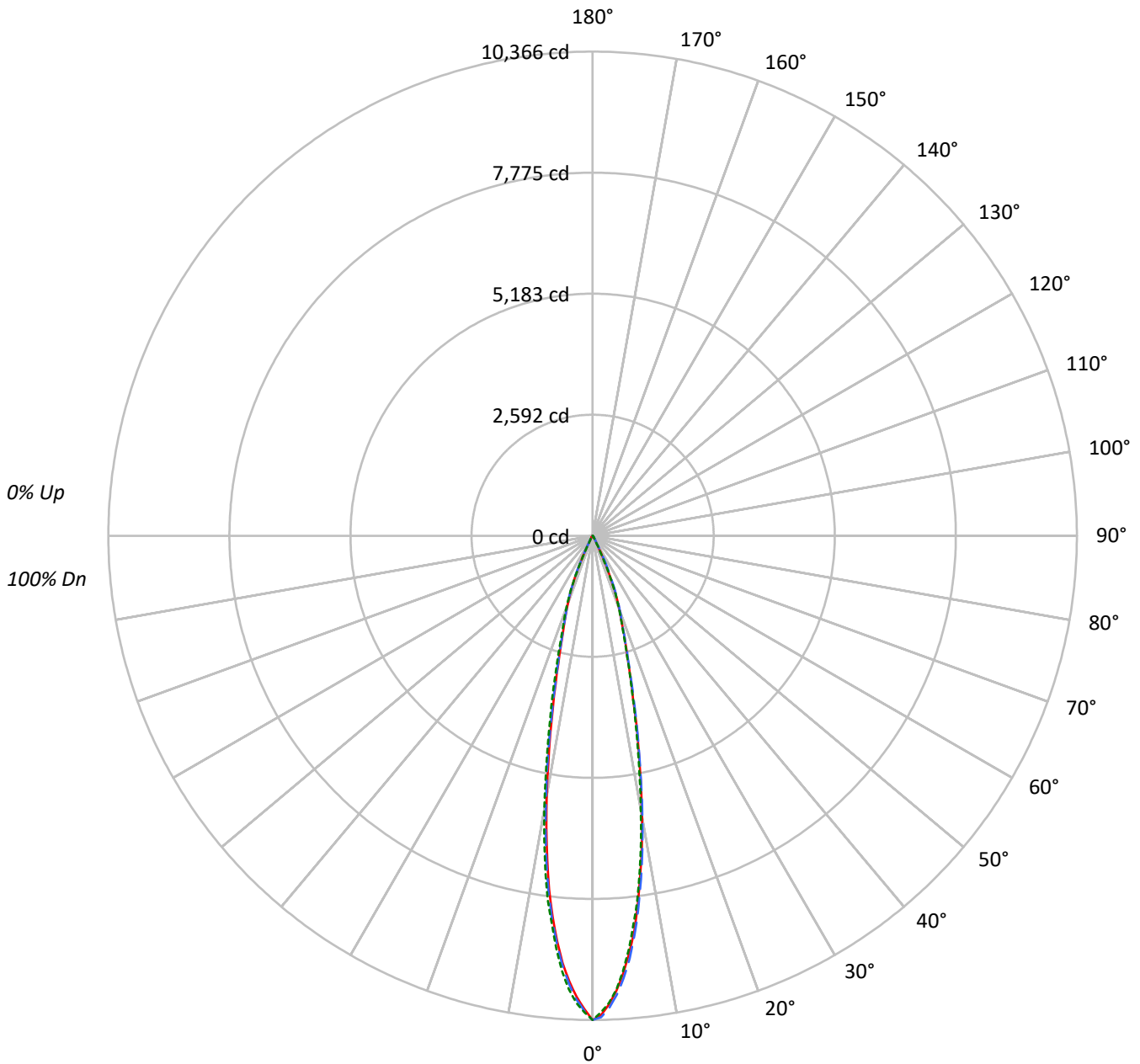
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	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	109	108	107	106	105	103	102	102	100	99	99	97				97															
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94				94															
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91				91															
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89				89															
5	102	97	93	90	101	96	92	89	94	91	89	93	90	88	91	89	87	86				86															
6	99	94	90	87	98	93	89	86	92	88	86	90	88	85	89	87	85	84				84															
7	97	91	87	84	96	90	86	84	89	86	83	88	85	83	87	85	83	82				82															
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80				80															
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78				78															
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	81	79	77	76				76															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	446332	446332	446332
5°	387883	383916	376988
10°	266477	259993	246969
15°	138769	137544	126685
20°	77164	75514	71436
25°	25525	23649	27744
30°	5653	5230	4668
35°	2113	2076	1855
40°	832	792	753
45°	256	256	256
50°	47	47	94
55°	53	0	53
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	757.2	38.3
10°-20°	877.6	44.3
20°-30°	305.0	15.4
30°-40°	32.5	1.6
40°-50°	6.2	0.3
50°-60°	0.6	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	1939.7	98.0
0°-40°	1972.2	99.7
0°-60°	1979.0	100.0
0°-90°	1979.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1979.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10366	10366	10366	10366	10366	
5°	8975	9083	8883	8773	8722	763
15°	3113	3181	3086	2906	2842	896
25°	537	698	498	610	584	291
35°	40	56	40	51	35	30
45°	4	11	4	11	4	4
55°	1	1	0	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	10366.4	10366.4	10366.4	10366.4	10366.4	10366.4	10366.4	10366.4	10366.4
1°	10271.0	10269.6	10306.3	10316.2	10204.7	10357.2	10175.7	10361.4	10137.6
2°	10040.1	10052.8	10115.7	10107.2	10009.8	10143.9	9930.7	10076.9	9875.6
3°	9747.1	9769.7	9842.4	9836.8	9723.1	9838.2	9612.2	9742.9	9553.6
4°	9388.4	9441.4	9502.1	9518.3	9345.3	9449.1	9229.5	9351.7	9171.6
5°	8974.6	9044.5	9083.4	9061.5	8882.8	8978.1	8773.4	8947.1	8722.5
6°	8507.2	8561.5	8590.5	8551.7	8354.0	8462.0	8270.6	8418.2	8198.6
7°	7950.8	8012.2	8035.5	7997.4	7860.4	7904.2	7712.8	7836.4	7630.9
8°	7332.9	7425.4	7429.0	7394.4	7252.4	7204.4	7095.0	7185.3	6990.5
9°	6726.4	6795.6	6794.2	6768.7	6612.0	6542.1	6435.5	6499.7	6326.7
10°	6095.1	6157.3	6136.1	6112.8	5946.8	5869.2	5766.8	5800.7	5648.9
11°	5426.4	5505.5	5471.6	5449.0	5283.8	5207.5	5105.2	5114.3	4980.9
12°	4750.7	4863.0	4822.7	4807.9	4655.4	4581.2	4488.7	4478.8	4352.4
13°	4183.7	4252.9	4213.3	4205.6	4071.4	4007.2	3858.2	3897.7	3782.6
14°	3578.5	3699.3	3664.0	3660.5	3550.3	3490.3	3352.6	3383.7	3283.4
15°	3113.2	3209.3	3181.0	3179.6	3085.7	3028.5	2906.3	2931.8	2842.1
16°	2689.6	2779.9	2759.5	2763.0	2679.7	2629.5	2523.6	2544.8	2472.8
17°	2394.4	2426.9	2407.8	2407.8	2338.6	2307.6	2216.5	2236.9	2180.5
18°	2100.7	2112.7	2124.7	2126.8	2066.1	2044.9	1968.6	1987.0	1940.4
19°	1859.9	1888.8	1895.9	1897.3	1843.6	1831.6	1766.0	1780.1	1742.0
20°	1684.1	1701.0	1703.1	1699.6	1648.1	1638.2	1579.6	1592.3	1559.1
21°	1480.7	1510.4	1504.0	1498.4	1444.7	1436.9	1387.5	1389.6	1357.1
22°	1254.0	1307.0	1299.9	1290.1	1217.3	1206.7	1194.0	1189.1	1158.0
23°	976.5	1100.1	1093.8	1079.6	973.7	1005.5	997.7	988.5	959.6
24°	749.2	894.6	891.1	869.2	728.7	807.8	799.3	791.5	769.0
25°	537.3	697.6	698.3	664.4	497.8	639.7	610.1	604.4	584.0
26°	384.1	519.0	522.5	473.8	305.7	461.8	440.6	432.8	416.6
27°	233.7	361.5	368.6	310.7	190.6	310.0	296.6	288.1	241.5
28°	161.0	235.8	244.3	192.1	149.0	206.9	190.6	180.8	140.5
29°	137.7	153.9	160.3	135.6	125.7	137.7	129.9	125.7	113.7
30°	113.7	117.2	120.0	112.3	105.2	108.7	105.2	101.7	93.9
32.5°	72.0	78.4	80.5	74.8	68.5	70.6	70.6	65.7	59.3
35°	40.2	50.1	56.5	49.4	39.5	47.3	50.8	43.8	35.3
37.5°	24.7	31.1	39.5	31.1	24.0	30.4	36.7	27.5	22.6
40°	14.8	19.1	28.2	19.1	14.1	18.4	25.4	16.9	13.4
42.5°	8.5	11.3	18.4	11.3	7.8	10.6	16.9	9.9	7.8
45°	4.2	6.4	11.3	6.4	4.2	6.4	10.6	5.6	4.2
47.5°	2.1	3.5	6.4	3.5	2.1	3.5	5.6	3.5	2.1
50°	0.7	1.4	3.5	1.4	0.7	1.4	3.5	1.4	1.4
52.5°	0.7	0.7	2.1	0.7	0.7	0.7	1.4	0.7	0.7
55°	0.7	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7
57.5°	0.7	0.0	0.7	0.0	0.0	0.0	0.7	0.7	0.7
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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







62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)