

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: P208767

Luminaire Tested: **LDSQA6A20840D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208767
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: LDSQA6A20840D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2112.8 lumens
Efficiency: N/A
Efficacy: 73.3 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

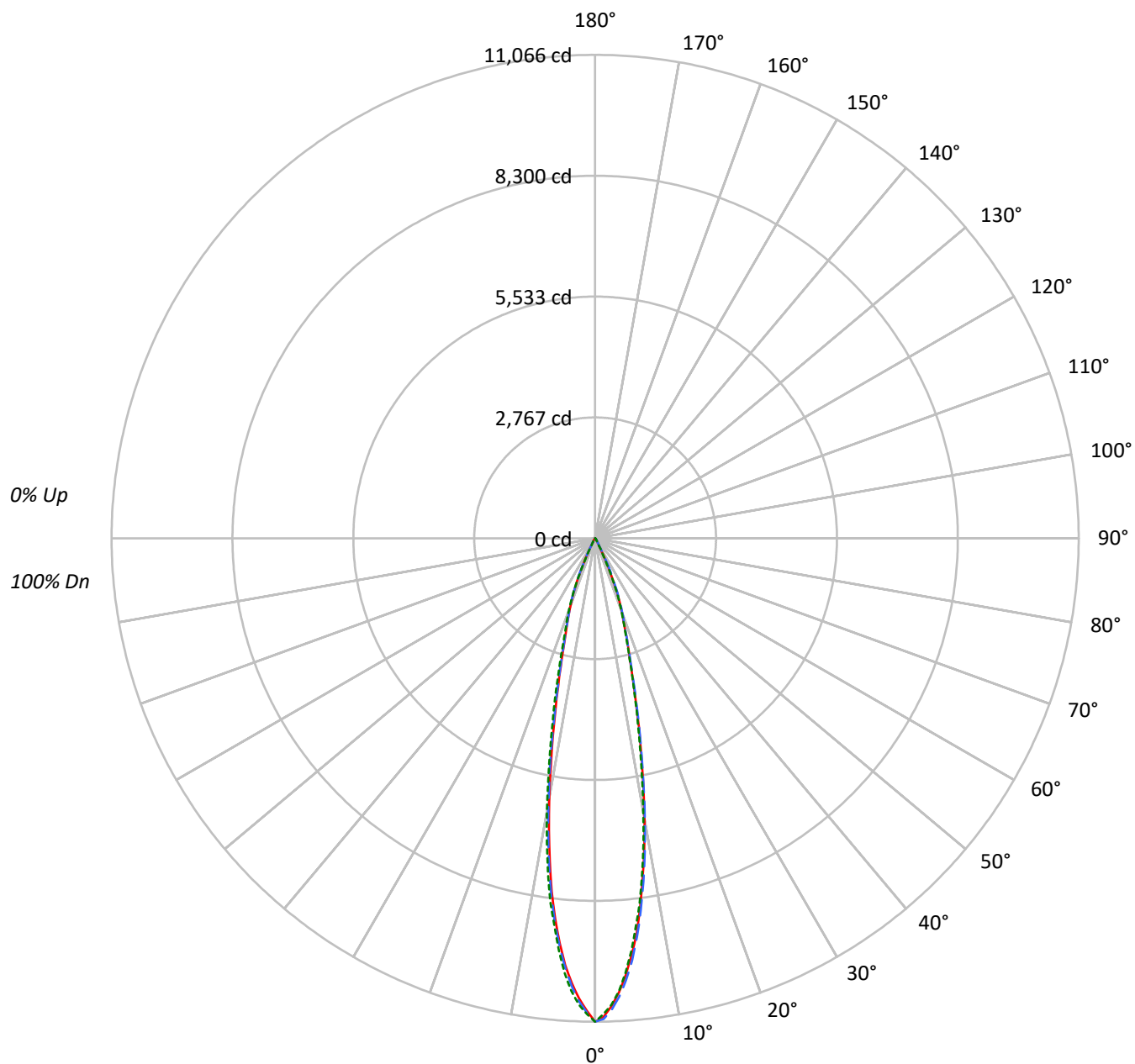
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	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
1	115	113	111	110	113	111	109	108		107	106	105		103	102	102		100	99	99
2	112	108	105	103	110	107	104	102		103	101	100		101	99	97		98	97	95
3	108	104	100	98	107	103	99	97		100	98	95		98	96	94		96	94	93
4	105	100	96	93	104	99	96	93		97	94	92		95	93	91		94	92	90
5	102	97	93	90	101	96	92	89		94	91	89		93	90	88		91	89	87
6	99	94	90	87	98	93	89	86		92	88	86		90	88	85		89	87	85
7	97	91	87	84	96	90	86	84		89	86	83		88	85	83		87	85	83
8	94	88	84	82	93	88	84	81		87	83	81		86	83	81		85	82	80
9	92	86	82	79	91	85	82	79		85	81	79		84	81	79		83	80	78
10	90	84	80	77	89	83	80	77		83	79	77		82	79	77		81	79	77

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	476475	476475	476475
5°	414083	409848	402453
10°	284476	277556	263648
15°	148143	146833	135239
20°	82373	80614	76261
25°	27250	25245	29616
30°	6036	5583	4987
35°	2260	2218	1982
40°	888	849	804
45°	274	274	274
50°	54	54	100
55°	60	0	60
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°	808.3	38.3
10°-20°	936.9	44.3
20°-30°	325.6	15.4
30°-40°	34.7	1.6
40°-50°	6.7	0.3
50°-60°	0.7	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°	2070.7	98.0
0°-40°	2105.4	99.7
0°-60°	2112.8	100.0
0°-90°	2112.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2112.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	11066	11066	11066	11066	11066	
5°	9581	9697	9483	9366	9312	814
15°	3324	3396	3294	3103	3034	956
25°	574	746	531	651	623	311
35°	43	60	42	54	38	32
45°	4	12	4	11	4	5
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	11066.5	11066.5	11066.5	11066.5	11066.5	11066.5	11066.5	11066.5	11066.5
1°	10964.8	10963.3	11002.5	11013.0	10893.9	11056.7	10863.0	11061.3	10822.3
2°	10718.3	10731.9	10798.9	10789.9	10685.9	10829.1	10601.4	10757.5	10542.7
3°	10405.5	10429.6	10507.2	10501.2	10379.8	10502.7	10261.5	10400.9	10198.9
4°	10022.5	10079.1	10143.9	10161.2	9976.5	10087.4	9852.9	9983.3	9791.1
5°	9580.8	9655.4	9696.9	9673.5	9482.8	9584.6	9366.0	9551.4	9311.7
6°	9081.8	9139.8	9170.7	9129.3	8918.2	9033.5	8829.3	8986.8	8752.4
7°	8487.8	8553.4	8578.2	8537.5	8391.3	8438.0	8233.8	8365.7	8146.3
8°	7828.2	7927.0	7930.7	7893.8	7742.3	7691.0	7574.2	7670.7	7462.6
9°	7180.7	7254.6	7253.1	7225.9	7058.6	6984.0	6870.1	6938.7	6754.1
10°	6506.8	6573.1	6550.5	6525.6	6348.5	6265.6	6156.3	6192.5	6030.4
11°	5793.0	5877.4	5841.2	5817.1	5640.7	5559.3	5450.0	5459.8	5317.3
12°	5071.6	5191.4	5148.5	5132.6	4969.8	4890.7	4791.9	4781.4	4646.4
13°	4466.3	4540.1	4497.9	4489.6	4346.4	4277.8	4118.8	4161.0	4038.1
14°	3820.3	3949.2	3911.5	3907.7	3790.1	3726.0	3579.0	3612.2	3505.2
15°	3323.5	3426.0	3395.9	3394.4	3294.1	3233.0	3102.6	3129.8	3034.0
16°	2871.2	2967.7	2945.9	2949.6	2860.7	2807.2	2694.1	2716.7	2639.8
17°	2556.1	2590.8	2570.5	2570.5	2496.6	2463.4	2366.2	2388.0	2327.7
18°	2242.6	2255.4	2268.2	2270.4	2205.6	2183.0	2101.6	2121.2	2071.4
19°	1985.5	2016.4	2024.0	2025.5	1968.2	1955.4	1885.3	1900.3	1859.6
20°	1797.8	1815.9	1818.2	1814.4	1759.4	1748.8	1686.3	1699.8	1664.4
21°	1580.7	1612.4	1605.6	1599.6	1542.3	1534.0	1481.2	1483.5	1448.8
22°	1338.7	1395.3	1387.7	1377.2	1299.6	1288.2	1274.7	1269.4	1236.2
23°	1042.5	1174.4	1167.6	1152.6	1039.5	1073.4	1065.1	1055.3	1024.4
24°	799.8	955.1	951.3	927.9	777.9	862.3	853.3	845.0	820.9
25°	573.6	744.8	745.5	709.3	531.4	682.9	651.3	645.3	623.4
26°	410.1	554.0	557.8	505.8	326.4	493.0	470.4	462.1	444.7
27°	249.5	385.9	393.5	331.7	203.5	330.9	316.6	307.6	257.8
28°	171.9	251.8	260.8	205.0	159.1	220.9	203.5	193.0	150.0
29°	147.0	164.3	171.1	144.7	134.2	147.0	138.7	134.2	121.4
30°	121.4	125.1	128.1	119.9	112.3	116.1	112.3	108.5	100.3
32.5°	76.9	83.7	85.9	79.9	73.1	75.4	75.4	70.1	63.3
35°	43.0	53.5	60.3	52.8	42.2	50.5	54.3	46.7	37.7
37.5°	26.4	33.2	42.2	33.2	25.6	32.4	39.2	29.4	24.1
40°	15.8	20.4	30.2	20.4	15.1	19.6	27.1	18.1	14.3
42.5°	9.0	12.1	19.6	12.1	8.3	11.3	18.1	10.6	8.3
45°	4.5	6.8	12.1	6.8	4.5	6.8	11.3	6.0	4.5
47.5°	2.3	3.8	6.8	3.8	2.3	3.8	6.0	3.8	2.3
50°	0.8	1.5	3.8	1.5	0.8	1.5	3.8	1.5	1.5
52.5°	0.8	0.8	2.3	0.8	0.8	0.8	1.5	0.8	0.8
55°	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8
57.5°	0.8	0.0	0.8	0.0	0.0	0.0	0.8	0.8	0.8
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	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)