

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: P208759

Luminaire Tested: **LDSQA6A15840D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208759
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: LDSQA6A15840D010TE 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: 1743.9 lumens
Efficiency: N/A
Efficacy: 80.0 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

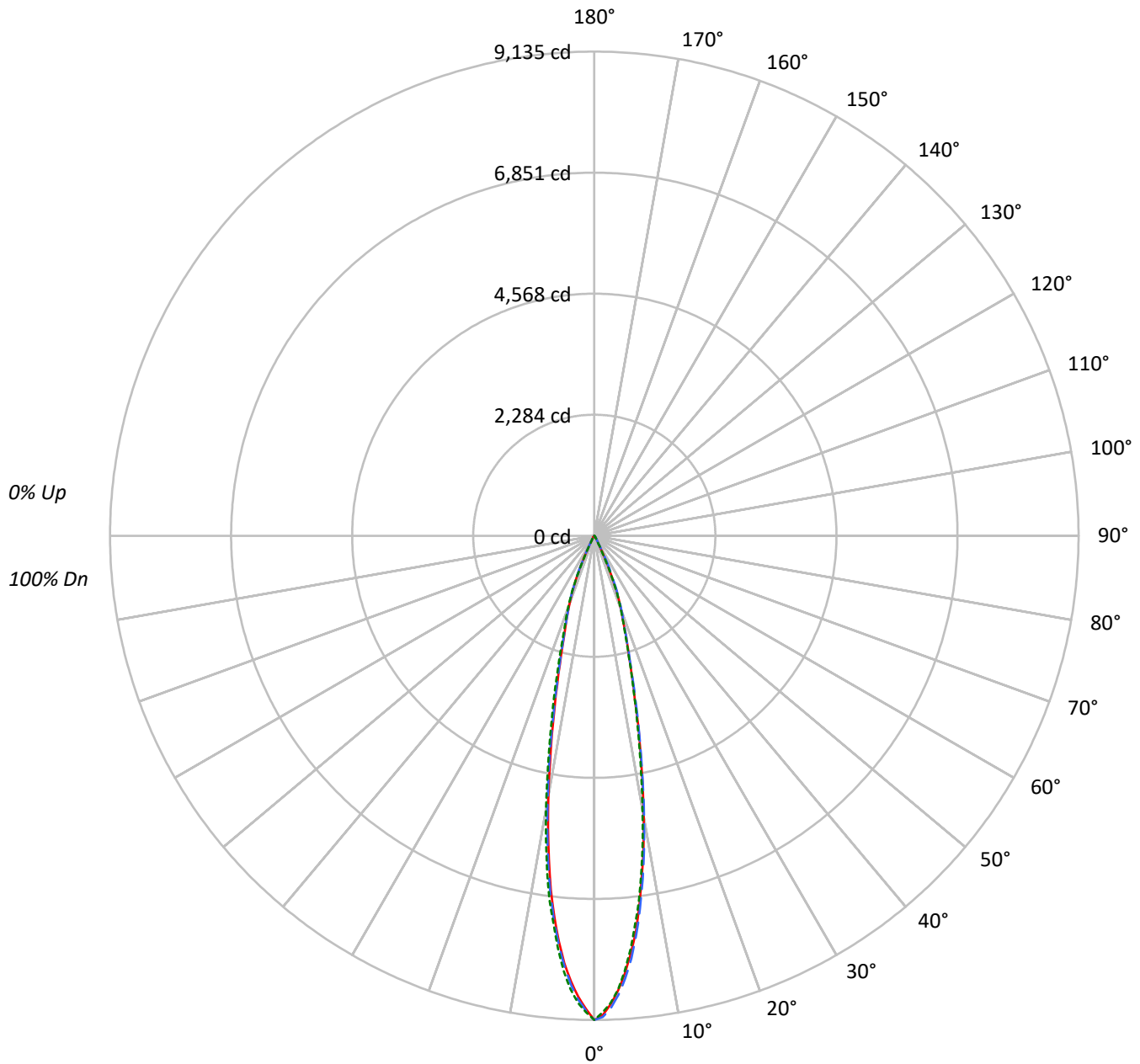
Input Watts (W): 21.79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	393309	393309	393309
5°	341806	338310	332203
10°	234819	229110	217629
15°	122286	121203	111632
20°	67995	66543	62951
25°	22494	20841	24447
30°	4982	4609	4117
35°	1866	1829	1635
40°	736	697	663
45°	225	225	225
50°	40	40	80
55°	45	0	45
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°	667.2	38.3
10°-20°	773.3	44.3
20°-30°	268.7	15.4
30°-40°	28.6	1.6
40°-50°	5.5	0.3
50°-60°	0.5	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°	1709.3	98.0
0°-40°	1737.9	99.7
0°-60°	1743.9	100.0
0°-90°	1743.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1743.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9135	9135	9135	9135	9135	
5°	7908	8004	7828	7731	7686	672
15°	2743	2803	2719	2561	2504	789
25°	474	615	439	538	515	256
35°	36	50	35	45	31	27
45°	4	10	4	9	4	4
55°	1	1	0	1	1	0
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°	9134.9	9134.9	9134.9	9134.9	9134.9	9134.9	9134.9	9134.9	9134.9
1°	9050.9	9049.6	9082.0	9090.7	8992.4	9126.8	8966.9	9130.5	8933.3
2°	8847.4	8858.6	8914.0	8906.5	8820.6	8938.9	8750.9	8879.7	8702.4
3°	8589.2	8609.1	8673.2	8668.2	8568.0	8669.4	8470.3	8585.4	8418.7
4°	8273.1	8319.7	8373.3	8387.6	8235.1	8326.6	8133.1	8240.7	8082.1
5°	7908.5	7970.1	8004.3	7985.0	7827.6	7911.6	7731.1	7884.2	7686.3
6°	7496.5	7544.4	7570.0	7535.7	7361.5	7456.7	7288.1	7418.1	7224.6
7°	7006.2	7060.4	7080.9	7047.3	6926.6	6965.2	6796.5	6905.4	6724.4
8°	6461.8	6543.3	6546.4	6515.9	6390.8	6348.5	6252.1	6331.7	6160.0
9°	5927.3	5988.3	5987.0	5964.6	5826.5	5764.9	5670.9	5727.6	5575.1
10°	5371.0	5425.8	5407.1	5386.6	5240.4	5171.9	5081.7	5111.6	4977.8
11°	4781.8	4851.5	4821.6	4801.7	4656.1	4588.9	4498.7	4506.8	4389.2
12°	4186.3	4285.2	4249.8	4236.7	4102.3	4037.0	3955.5	3946.8	3835.4
13°	3686.7	3747.6	3712.8	3706.0	3587.7	3531.1	3399.8	3434.7	3333.2
14°	3153.4	3259.8	3228.7	3225.6	3128.5	3075.6	2954.3	2981.7	2893.3
15°	2743.4	2828.0	2803.1	2801.9	2719.1	2668.7	2561.1	2583.5	2504.4
16°	2370.0	2449.7	2431.6	2434.8	2361.3	2317.2	2223.8	2242.5	2179.0
17°	2110.0	2138.6	2121.8	2121.8	2060.8	2033.4	1953.2	1971.2	1921.4
18°	1851.1	1861.7	1872.3	1874.1	1820.6	1802.0	1734.8	1750.9	1709.9
19°	1638.9	1664.4	1670.7	1671.9	1624.6	1614.0	1556.2	1568.6	1535.0
20°	1484.0	1498.9	1500.8	1497.7	1452.3	1443.6	1391.9	1403.1	1373.9
21°	1304.8	1330.9	1325.3	1320.4	1273.1	1266.2	1222.7	1224.5	1195.9
22°	1105.1	1151.7	1145.5	1136.8	1072.7	1063.4	1052.2	1047.8	1020.4
23°	860.5	969.4	963.8	951.4	858.0	886.0	879.2	871.1	845.6
24°	660.2	788.4	785.2	766.0	642.1	711.8	704.4	697.5	677.6
25°	473.5	614.8	615.4	585.5	438.7	563.7	537.6	532.6	514.6
26°	338.5	457.3	460.4	417.5	269.4	406.9	388.3	381.4	367.1
27°	206.0	318.6	324.8	273.8	168.0	273.2	261.3	253.9	212.8
28°	141.9	207.8	215.3	169.2	131.3	182.3	168.0	159.3	123.8
29°	121.3	135.6	141.2	119.5	110.8	121.3	114.5	110.8	100.2
30°	100.2	103.3	105.8	98.9	92.7	95.8	92.7	89.6	82.8
32.5°	63.5	69.1	70.9	66.0	60.4	62.2	62.2	57.9	52.3
35°	35.5	44.2	49.8	43.6	34.8	41.7	44.8	38.6	31.1
37.5°	21.8	27.4	34.8	27.4	21.2	26.8	32.4	24.3	19.9
40°	13.1	16.8	24.9	16.8	12.4	16.2	22.4	14.9	11.8
42.5°	7.5	10.0	16.2	10.0	6.8	9.3	14.9	8.7	6.8
45°	3.7	5.6	10.0	5.6	3.7	5.6	9.3	5.0	3.7
47.5°	1.9	3.1	5.6	3.1	1.9	3.1	5.0	3.1	1.9
50°	0.6	1.2	3.1	1.2	0.6	1.2	3.1	1.2	1.2
52.5°	0.6	0.6	1.9	0.6	0.6	0.6	1.2	0.6	0.6
55°	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6
57.5°	0.6	0.0	0.6	0.0	0.0	0.0	0.6	0.6	0.6
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	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)