

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: P208752

Luminaire Tested: **LDSQA6A10927D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208752
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: LDSQA6A10927D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 863.0 lumens
Efficiency: N/A
Efficacy: 62.9 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

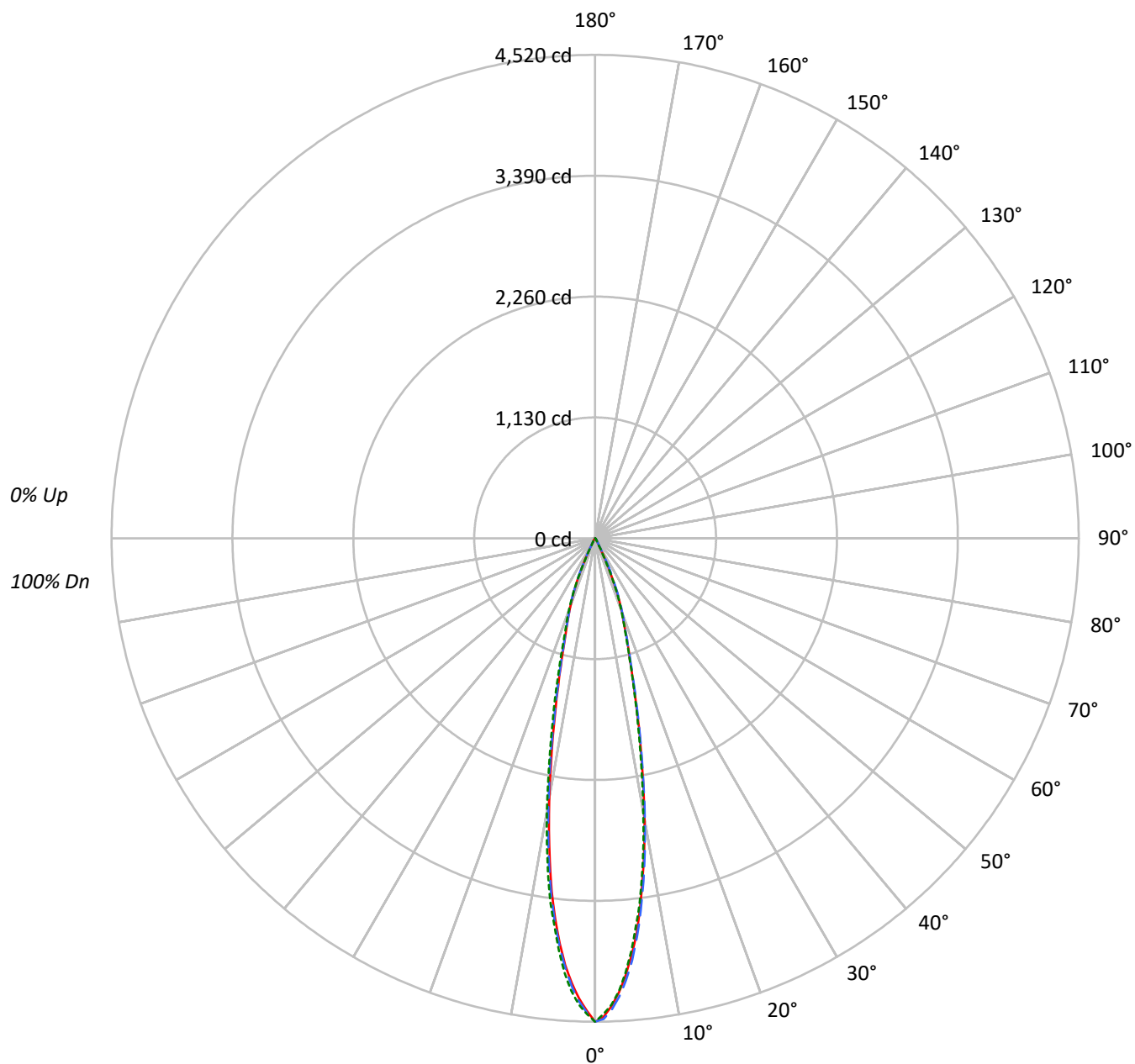
Input Watts (W): 13.73
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97	97	97
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94	94	94
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91	91	91
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89	89	89
5	102	97	93	90	101	96	92	89	94	91	89	93	90	88	91	89	87	86	86	86
6	99	94	90	87	98	93	89	86	92	88	86	90	88	85	89	87	85	84	84	84
7	97	91	87	84	96	90	86	84	89	86	83	88	85	83	87	85	83	82	82	82
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80	80	80
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78	78	78
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	81	79	77	76	76	76

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	194629	194629	194629
5°	169142	167413	164392
10°	116203	113374	107695
15°	60514	59979	55241
20°	33649	32930	31152
25°	11131	10314	12095
30°	2466	2282	2038
35°	925	904	809
40°	365	348	332
45°	110	110	110
50°	20	20	40
55°	23	0	23
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°	330.2	38.3
10°-20°	382.7	44.3
20°-30°	133.0	15.4
30°-40°	14.2	1.6
40°-50°	2.7	0.3
50°-60°	0.3	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°	845.8	98.0
0°-40°	860.0	99.7
0°-60°	863.0	100.0
0°-90°	863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	863.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4520	4520	4520	4520	4520	
5°	3914	3961	3874	3826	3804	333
15°	1358	1387	1346	1267	1239	391
25°	234	304	217	266	255	127
35°	18	25	17	22	15	13
45°	2	5	2	5	2	2
55°	0	0	0	0	0	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4520.4	4520.4	4520.4	4520.4	4520.4	4520.4	4520.4	4520.4	4520.4
1°	4478.8	4478.2	4494.2	4498.5	4449.9	4516.4	4437.3	4518.2	4420.6
2°	4378.1	4383.7	4411.1	4407.4	4364.9	4423.4	4330.4	4394.2	4306.4
3°	4250.4	4260.2	4291.9	4289.5	4239.9	4290.1	4191.5	4248.5	4166.0
4°	4093.9	4117.0	4143.5	4150.6	4075.2	4120.4	4024.7	4077.9	3999.4
5°	3913.5	3944.0	3960.9	3951.4	3873.5	3915.0	3825.8	3901.5	3803.6
6°	3709.7	3733.4	3746.0	3729.1	3642.9	3690.0	3606.5	3670.9	3575.1
7°	3467.0	3493.8	3504.0	3487.4	3427.6	3446.7	3363.3	3417.2	3327.6
8°	3197.6	3238.0	3239.5	3224.4	3162.5	3141.6	3093.9	3133.3	3048.3
9°	2933.1	2963.3	2962.7	2951.6	2883.2	2852.8	2806.3	2834.3	2758.9
10°	2657.9	2685.0	2675.7	2665.6	2593.2	2559.3	2514.7	2529.5	2463.3
11°	2366.3	2400.8	2386.0	2376.1	2304.1	2270.8	2226.2	2230.2	2172.0
12°	2071.6	2120.6	2103.0	2096.5	2030.0	1997.7	1957.4	1953.1	1897.9
13°	1824.4	1854.5	1837.3	1833.9	1775.4	1747.4	1682.4	1699.7	1649.5
14°	1560.5	1613.1	1597.7	1596.2	1548.2	1522.0	1461.9	1475.5	1431.8
15°	1357.6	1399.4	1387.1	1386.5	1345.6	1320.6	1267.3	1278.4	1239.3
16°	1172.8	1212.2	1203.3	1204.8	1168.5	1146.6	1100.5	1109.7	1078.3
17°	1044.1	1058.3	1050.0	1050.0	1019.8	1006.2	966.5	975.5	950.8
18°	916.0	921.3	926.5	927.4	900.9	891.7	858.4	866.5	846.1
19°	811.0	823.7	826.7	827.3	803.9	798.7	770.1	776.2	759.6
20°	734.4	741.7	742.7	741.1	718.7	714.3	688.8	694.3	679.9
21°	645.7	658.6	655.8	653.4	630.0	626.6	605.0	606.0	591.8
22°	546.8	569.9	566.9	562.5	530.8	526.2	520.7	518.5	505.0
23°	425.8	479.7	476.9	470.8	424.6	438.5	435.1	431.1	418.4
24°	326.7	390.1	388.6	379.0	317.8	352.2	348.6	345.2	335.3
25°	234.3	304.2	304.5	289.7	217.1	279.0	266.0	263.6	254.6
26°	167.5	226.3	227.9	206.6	133.3	201.4	192.1	188.7	181.7
27°	101.9	157.6	160.7	135.5	83.1	135.2	129.3	125.6	105.3
28°	70.2	102.8	106.5	83.8	65.0	90.2	83.1	78.8	61.3
29°	60.0	67.1	69.9	59.1	54.8	60.0	56.7	54.8	49.6
30°	49.6	51.1	52.3	49.0	45.9	47.4	45.9	44.3	41.0
32.5°	31.4	34.2	35.1	32.6	29.9	30.8	30.8	28.6	25.9
35°	17.6	21.9	24.6	21.6	17.2	20.6	22.2	19.1	15.4
37.5°	10.8	13.5	17.2	13.5	10.5	13.2	16.0	12.0	9.9
40°	6.5	8.3	12.3	8.3	6.2	8.0	11.1	7.4	5.9
42.5°	3.7	4.9	8.0	4.9	3.4	4.6	7.4	4.3	3.4
45°	1.8	2.8	4.9	2.8	1.8	2.8	4.6	2.5	1.8
47.5°	0.9	1.5	2.8	1.5	0.9	1.5	2.5	1.5	0.9
50°	0.3	0.6	1.5	0.6	0.3	0.6	1.5	0.6	0.6
52.5°	0.3	0.3	0.9	0.3	0.3	0.3	0.6	0.3	0.3
55°	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3
57.5°	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.3	0.3
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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



Report Generated By E9808895 / USPTCWHP6082093





— 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)