

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: P136721

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10830 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136721
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23378)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6A10D010TE ESQ6A10830 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1225.0 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 0.92 / 0.93 / 0.95
Luminous Opening: Rectangular (W 0.46' x L: 0.46' x H: 0')
CIE Type: Direct

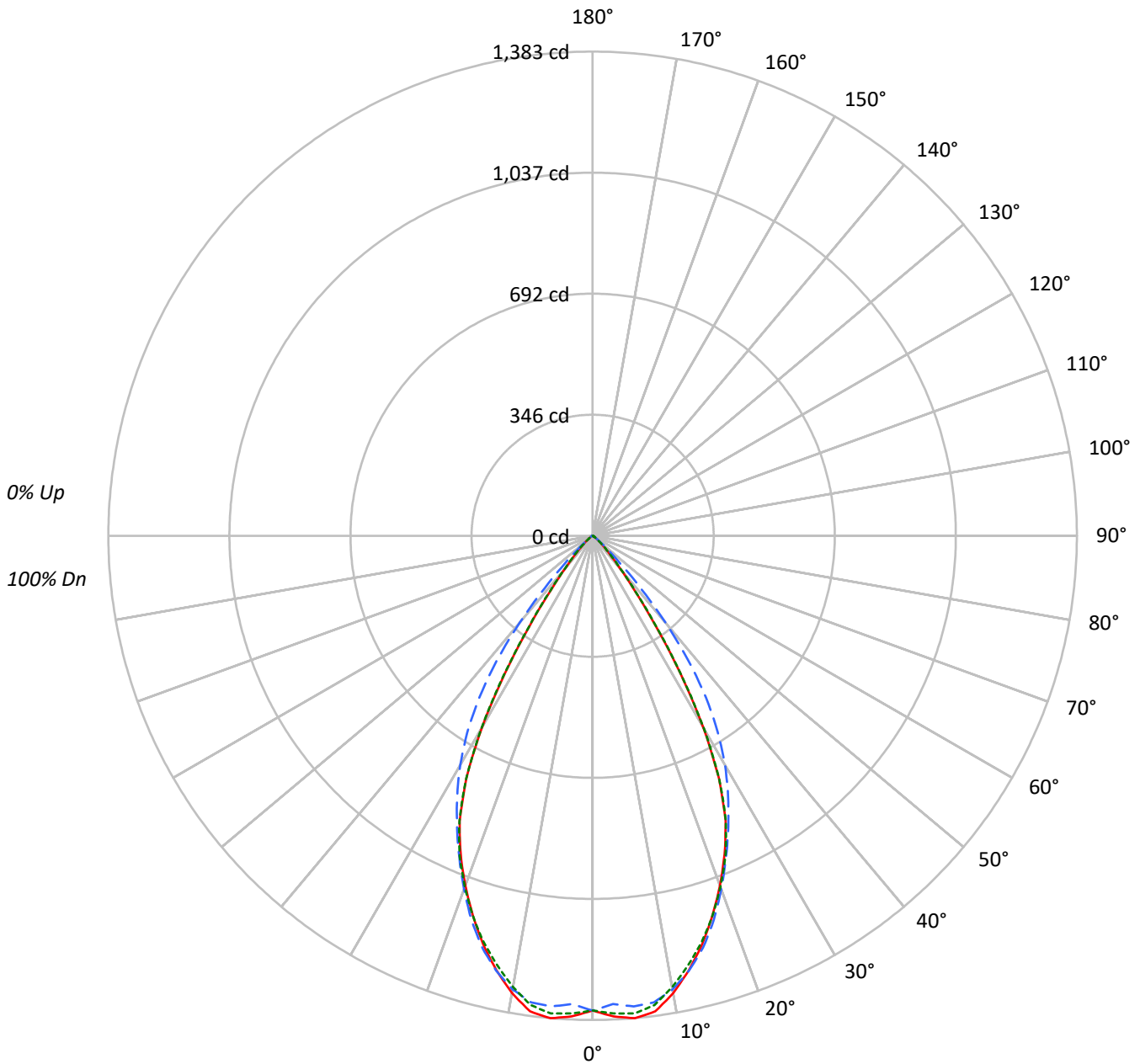
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87																			
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81																			
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75																			
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70																			
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66																			
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62																			
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58																			
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54																			
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	69481	69481	69481
5°	71151	69397	70446
10°	69013	68451	68097
15°	64087	64628	63752
20°	57969	58558	58182
25°	50776	51805	50906
30°	37387	44724	37559
35°	19429	35292	19854
40°	8181	21645	8522
45°	3754	8036	3877
50°	1722	2399	1770
55°	867	965	867
60°	523	584	523
65°	339	412	339
70°	255	255	255
75°	119	218	119
80°	177	177	177
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.3	10.5
10°-20°	337.4	27.5
20°-30°	412.5	33.7
30°-40°	265.1	21.6
40°-50°	66.1	5.4
50°-60°	11.1	0.9
60°-70°	3.4	0.3
70°-80°	1.0	0.1
80°-90°	0.2	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°	878.2	71.7
0°-40°	1143.2	93.3
0°-60°	1220.4	99.6
0°-90°	1225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1356	1356	1356	1356	1356	
5°	1383	1354	1349	1351	1370	130
15°	1208	1215	1218	1205	1202	337
25°	898	922	916	925	900	401
35°	311	410	564	417	317	205
45°	52	65	111	68	54	45
55°	10	11	11	11	10	10
65°	3	3	3	3	3	3
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10830 6LSQ1LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0
2.5°	1374.2	1340.1	1366.8	1364.5	1341.8	1346.3	1350.3	1349.7	1349.2	1338.9	1362.8
5°	1383.3	1348.6	1375.9	1372.5	1351.4	1356.0	1358.3	1359.4	1356.6	1349.2	1371.9
7.5°	1370.2	1337.8	1363.9	1360.0	1343.5	1347.5	1349.2	1352.0	1348.0	1344.0	1365.7
10°	1326.4	1299.1	1323.6	1320.7	1309.9	1314.5	1315.6	1320.1	1315.6	1315.6	1334.9
12.5°	1270.7	1249.6	1271.8	1269.5	1265.5	1270.7	1269.0	1276.9	1270.1	1272.4	1290.0
15°	1208.1	1194.4	1212.6	1212.1	1212.6	1216.6	1211.5	1217.2	1210.9	1218.3	1233.7
17.5°	1137.6	1131.3	1145.5	1146.1	1150.7	1151.8	1143.8	1151.2	1142.1	1150.7	1163.7
20°	1063.1	1064.2	1075.6	1073.9	1080.7	1077.3	1065.9	1073.3	1064.2	1073.9	1084.1
22.5°	984.6	994.2	1000.5	999.4	1008.5	1003.9	989.7	993.1	984.0	994.8	1001.1
25°	898.1	908.9	913.5	913.5	923.1	921.4	908.9	914.6	906.1	916.3	919.7
27.5°	780.4	794.0	797.4	804.3	820.8	824.2	819.1	830.4	827.0	837.8	836.7
30°	631.9	645.6	650.7	664.3	691.1	707.0	715.5	737.7	743.4	755.9	749.7
32.5°	465.8	477.2	484.6	505.1	540.3	572.8	601.8	634.8	652.4	666.0	654.7
35°	310.6	319.1	327.1	352.6	389.6	430.0	472.1	519.3	549.4	564.2	548.9
37.5°	195.1	200.8	205.9	224.7	254.2	291.8	336.7	390.8	432.3	449.9	430.6
40°	122.3	125.7	128.5	139.9	158.1	180.9	219.0	264.5	307.1	323.6	305.4
42.5°	78.5	80.2	81.9	88.2	97.8	112.1	133.1	161.5	191.1	202.5	190.5
45°	51.8	52.3	52.9	56.3	61.4	68.3	79.1	92.1	106.4	110.9	105.8
47.5°	34.1	34.1	34.7	37.0	39.8	43.8	47.8	51.2	55.7	58.0	55.2
50°	21.6	22.2	22.8	24.5	26.2	27.9	29.0	29.0	30.1	30.1	29.6
52.5°	13.1	13.1	13.7	14.2	16.5	18.2	18.2	17.1	17.1	17.1	16.5
55°	9.7	9.7	9.7	10.2	10.8	10.8	10.8	10.8	10.8	10.8	10.2
57.5°	7.4	7.4	7.4	8.0	8.0	8.0	8.0	7.4	7.4	7.4	7.4
60°	5.1	5.1	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.1
62.5°	4.0	4.0	4.0	4.6	4.6	4.6	4.6	4.6	4.6	4.0	4.0
65°	2.8	2.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
67.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.8	2.3	2.3	2.3	2.3
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
75°	0.6	0.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.0	0.0	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	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0	1356.0
2.5°	1368.5	1370.2	1345.2	1350.3	1368.5	1350.3	1350.9	1365.7
5°	1373.6	1373.0	1347.5	1353.7	1364.5	1351.4	1352.0	1369.6
7.5°	1362.2	1357.1	1331.5	1338.9	1341.8	1332.7	1332.7	1352.0
10°	1327.0	1318.4	1294.6	1301.9	1296.8	1291.1	1289.4	1308.8
12.5°	1280.9	1271.2	1250.8	1257.6	1245.1	1245.1	1240.0	1257.6
15°	1223.5	1214.9	1200.7	1208.7	1189.9	1193.9	1185.9	1201.8
17.5°	1154.6	1148.9	1141.0	1150.7	1128.5	1135.3	1124.5	1138.1
20°	1075.6	1072.7	1071.6	1081.3	1058.5	1069.9	1057.4	1067.0
22.5°	993.7	993.7	999.9	1013.0	988.0	1000.5	985.7	991.4
25°	912.9	913.5	920.9	930.0	905.5	916.3	899.8	900.4
27.5°	827.0	821.9	829.9	828.2	797.4	803.7	786.1	782.6
30°	732.6	717.2	711.6	695.6	660.9	659.8	641.6	634.8
32.5°	629.1	600.1	582.4	550.0	505.6	495.4	478.9	471.0
35°	514.2	470.4	438.5	395.9	352.1	337.3	324.2	317.4
37.5°	387.9	337.9	301.5	260.5	229.2	217.3	206.5	201.9
40°	264.5	221.8	190.5	163.2	143.9	136.5	130.3	127.4
42.5°	163.2	135.9	117.7	101.2	90.4	86.5	83.6	81.9
45°	93.3	80.8	72.8	63.7	58.6	56.3	54.6	53.5
47.5°	51.8	48.3	45.5	41.5	38.1	36.4	35.8	35.3
50°	29.0	29.6	29.6	27.3	25.6	23.9	22.8	22.2
52.5°	17.1	18.2	18.8	17.1	14.8	13.7	13.7	13.1
55°	10.8	10.8	10.8	10.8	10.2	9.7	9.7	9.7
57.5°	7.4	7.4	8.0	8.0	8.0	7.4	7.4	6.8
60°	5.7	5.7	5.7	5.7	5.7	5.7	5.1	5.1
62.5°	4.6	4.6	4.6	4.6	4.6	4.0	4.0	4.0
65°	3.4	3.4	3.4	3.4	3.4	2.8	2.8	2.8
67.5°	2.3	2.8	2.3	2.3	2.3	2.3	2.3	2.3
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
75°	1.1	1.1	1.1	1.1	1.1	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
85°	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
90°	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°









(END OF REPORT)