

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: P209204

Luminaire Tested: **LDSQ4B10D010 EU4B10208035 4LBCSSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35089)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ4B10D010 EU4B10208035 4LBCSSQ1MMS
Description: PORTFOLIO LD4 SERIES 4" RECESSED FIXTURE WITH A SQUARE SHALLOW CAST METALLIC SILVER TRIM
MEDIUM DISTRIBUTION WITH MATTE METALLIC SILVER TRIM
WATTAGE D010TR-10.05 W DE010-10.58 W D5LT-10.2 W DMX-10.6 W DL2-11.8 W DL3-11.1 W DLE-11.39 W
Light Source: HIGH LUMEN LED 3500 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1079.5 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

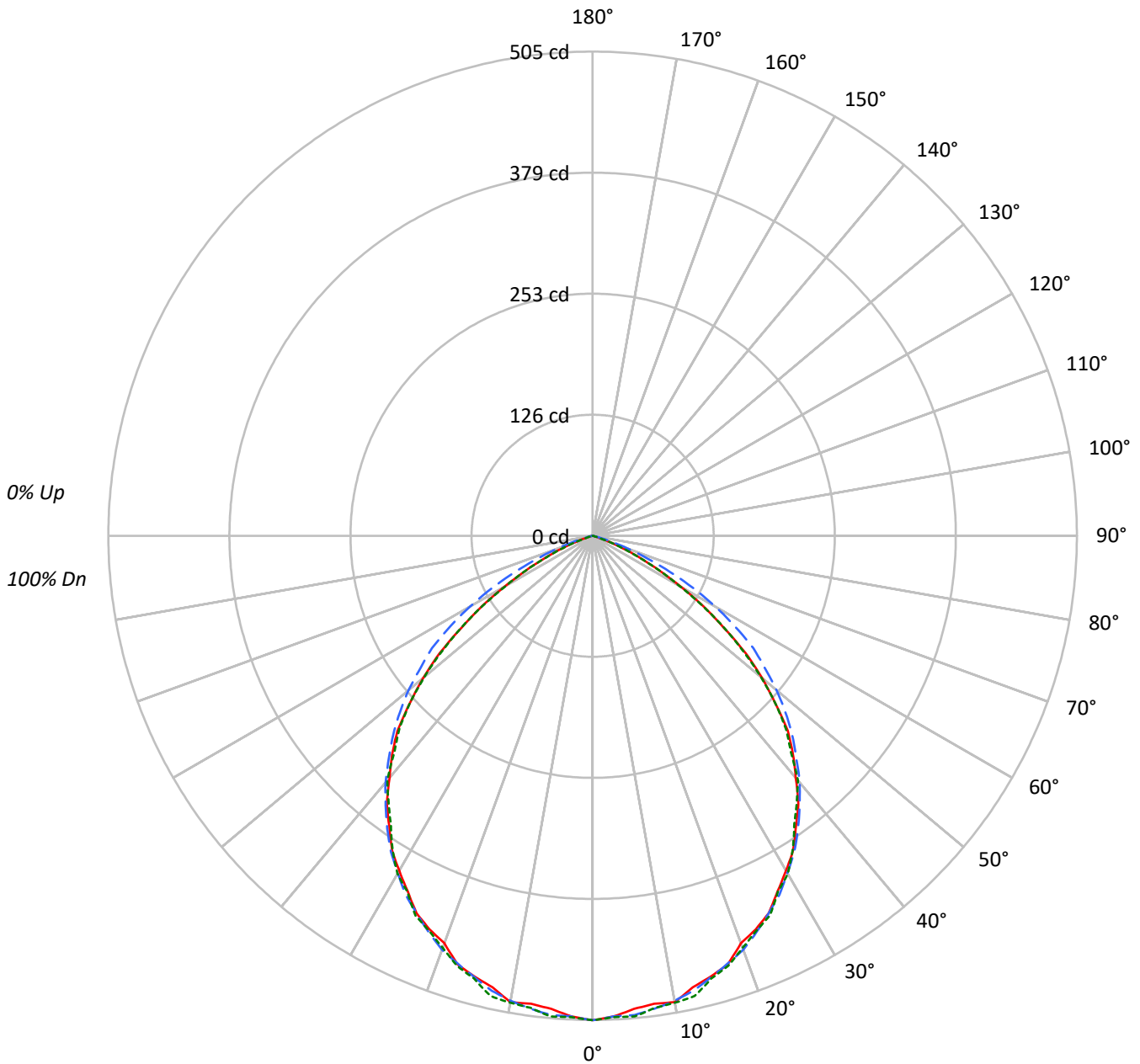
Input Watts (W): 10.05
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89																			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	4.4
10°-20°	135.0	12.5
20°-30°	200.3	18.6
30°-40°	232.1	21.5
40°-50°	222.5	20.6
50°-60°	163.6	15.2
60°-70°	70.7	6.5
70°-80°	7.6	0.7
80°-90°	0.1	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°	383.0	35.5
0°-40°	615.0	57.0
0°-60°	1001.1	92.7
0°-90°	1079.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1079.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	505	505	505	505	505	
5°	495	500	502	502	503	47
15°	476	479	477	477	478	134
25°	434	434	434	435	437	199
35°	370	372	373	372	367	231
45°	288	289	294	290	285	219
55°	166	184	205	183	167	150
65°	55	68	89	68	53	56
75°	1	2	8	1	1	4
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3
2.5°	501.8	507.5	508.2	504.6	503.2	501.0	506.1	502.5	503.9	502.5	501.8
5°	495.3	501.8	502.5	502.5	501.0	500.3	502.5	501.8	501.0	499.6	501.8
7.5°	492.4	496.0	499.6	495.3	497.4	496.7	501.8	499.6	498.9	498.9	497.4
10°	493.9	493.1	496.0	491.7	493.1	491.7	496.0	496.0	494.6	493.1	492.4
12.5°	482.4	488.1	488.1	487.4	486.0	483.8	488.1	491.0	486.7	486.7	486.0
15°	475.9	477.4	478.1	478.1	477.4	478.8	480.9	478.1	478.8	475.2	476.6
17.5°	468.7	465.9	468.0	466.6	467.3	468.7	471.6	471.6	467.3	466.6	468.0
20°	452.2	460.8	461.6	457.3	458.0	458.0	463.0	458.7	461.6	458.0	459.4
22.5°	444.3	450.1	450.8	445.0	448.6	444.3	449.4	442.9	450.1	445.0	447.2
25°	434.3	433.6	435.7	432.8	433.6	433.6	437.2	434.3	436.4	433.6	434.3
27.5°	417.8	423.5	422.8	419.9	421.4	420.6	427.8	419.9	424.2	420.6	422.1
30°	403.4	408.4	407.0	404.1	404.1	402.0	409.9	407.7	407.0	407.0	406.3
32.5°	389.1	389.8	388.3	389.1	389.8	386.9	393.4	390.5	389.8	390.5	391.2
35°	369.7	369.7	371.1	369.0	371.8	371.8	377.6	374.0	373.3	371.1	373.3
37.5°	352.4	350.3	351.0	351.0	352.4	353.9	356.8	355.3	355.3	353.2	354.6
40°	329.5	328.0	330.2	330.2	332.4	332.4	335.2	333.8	335.9	335.9	335.9
42.5°	309.4	309.4	307.9	310.1	310.8	310.1	315.1	314.4	315.1	313.7	314.4
45°	287.8	287.8	286.4	285.7	289.3	288.6	294.3	292.2	295.0	293.6	294.3
47.5°	258.4	262.0	259.9	262.0	266.3	267.0	270.6	269.2	272.1	269.9	272.8
50°	230.4	230.4	232.6	235.4	239.8	240.5	244.8	247.6	249.1	249.8	250.5
52.5°	201.0	200.3	202.4	206.0	209.6	212.5	216.8	221.1	224.0	228.3	226.1
55°	166.5	168.0	170.1	174.4	180.2	183.8	187.4	193.1	198.1	200.3	204.6
57.5°	137.1	135.7	137.1	142.8	149.3	152.2	157.2	162.9	170.1	174.4	175.9
60°	106.2	107.0	108.4	113.4	118.4	122.7	124.9	134.2	140.7	145.0	147.9
62.5°	78.2	79.7	81.1	85.4	90.4	94.0	97.6	105.5	111.3	115.6	118.4
65°	54.6	55.3	57.4	59.6	64.6	68.2	71.1	77.5	83.3	86.9	89.0
67.5°	33.7	34.5	35.9	38.8	42.4	45.2	48.1	52.4	57.4	61.0	61.7
70°	17.2	17.9	18.7	20.8	23.7	25.1	27.3	30.9	34.5	37.3	38.8
72.5°	5.7	5.7	6.5	7.9	9.3	10.8	11.5	15.1	17.9	19.4	20.1
75°	1.4	1.4	1.4	1.4	1.4	2.2	2.2	4.3	5.7	7.2	7.9
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.0	0.0	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	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3
2.5°	505.3	503.9	503.2	503.9	503.9	503.2	505.3	508.2	511.8	502.5
5°	504.6	503.2	504.6	500.3	502.5	501.0	503.9	503.2	506.1	503.2
7.5°	502.5	499.6	500.3	498.2	501.0	497.4	499.6	503.9	501.0	496.7
10°	495.3	493.9	498.9	491.7	490.3	493.1	498.9	494.6	493.1	494.6
12.5°	488.1	488.1	490.3	484.5	485.2	486.7	489.6	486.7	488.1	491.7
15°	480.2	478.8	482.4	478.1	477.4	475.9	478.8	478.8	480.2	478.1
17.5°	470.9	468.7	468.7	467.3	466.6	470.2	471.6	472.3	473.0	470.2
20°	459.4	458.7	460.8	458.7	459.4	460.1	460.1	458.7	465.1	457.3
22.5°	447.2	449.4	446.5	445.0	446.5	447.9	447.9	448.6	447.2	445.8
25°	435.0	436.4	437.2	432.8	435.0	432.8	437.9	438.6	435.7	437.2
27.5°	424.2	422.1	421.4	418.5	419.9	419.2	419.9	419.9	424.2	418.5
30°	407.7	405.6	406.3	404.1	404.9	404.1	404.9	404.9	407.7	407.0
32.5°	391.9	389.8	390.5	388.3	388.3	389.1	387.6	387.6	389.8	388.3
35°	376.9	371.8	372.5	371.8	372.5	369.7	369.7	369.0	370.4	366.8
37.5°	355.3	353.2	352.4	351.7	352.4	351.0	352.4	350.3	352.4	349.6
40°	335.9	334.5	335.2	330.9	330.9	331.6	330.2	329.5	330.2	333.1
42.5°	316.6	313.7	312.3	310.8	311.5	309.4	308.7	307.2	308.7	305.8
45°	293.6	293.6	292.9	289.3	290.0	290.0	287.1	284.3	285.0	285.0
47.5°	272.8	271.3	270.6	267.0	266.3	265.6	262.7	260.6	260.6	258.4
50°	249.8	248.4	246.2	242.6	241.2	236.9	234.7	231.9	229.0	229.0
52.5°	228.3	223.2	220.4	214.6	212.5	210.3	204.6	202.4	200.3	198.1
55°	202.4	198.1	192.4	185.9	183.0	179.5	173.7	169.4	166.5	167.3
57.5°	177.3	170.1	164.4	155.8	152.2	150.0	144.3	138.5	135.7	135.7
60°	146.4	140.7	133.5	125.6	122.7	119.2	112.0	108.4	106.2	104.1
62.5°	117.0	112.7	106.2	96.2	94.0	90.4	85.4	81.1	79.0	79.0
65°	87.6	83.3	77.5	70.3	67.5	64.6	60.3	56.0	53.8	53.1
67.5°	61.7	56.7	51.7	45.9	43.8	42.4	38.0	35.2	33.7	33.0
70°	37.3	34.5	30.9	26.6	24.4	23.0	20.1	17.9	17.2	16.5
72.5°	19.4	17.2	14.4	11.5	10.0	8.6	7.2	5.7	5.0	5.0
75°	7.2	5.7	3.6	2.2	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.0	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	0.0
87.5°	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



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









(END OF REPORT)