

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: P1212734

Luminaire Tested: **LDA4A10950D010TE LAR25NF 4LAL1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1212734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A10950D010TE LAR25NF 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 25° Narrow Flood
Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

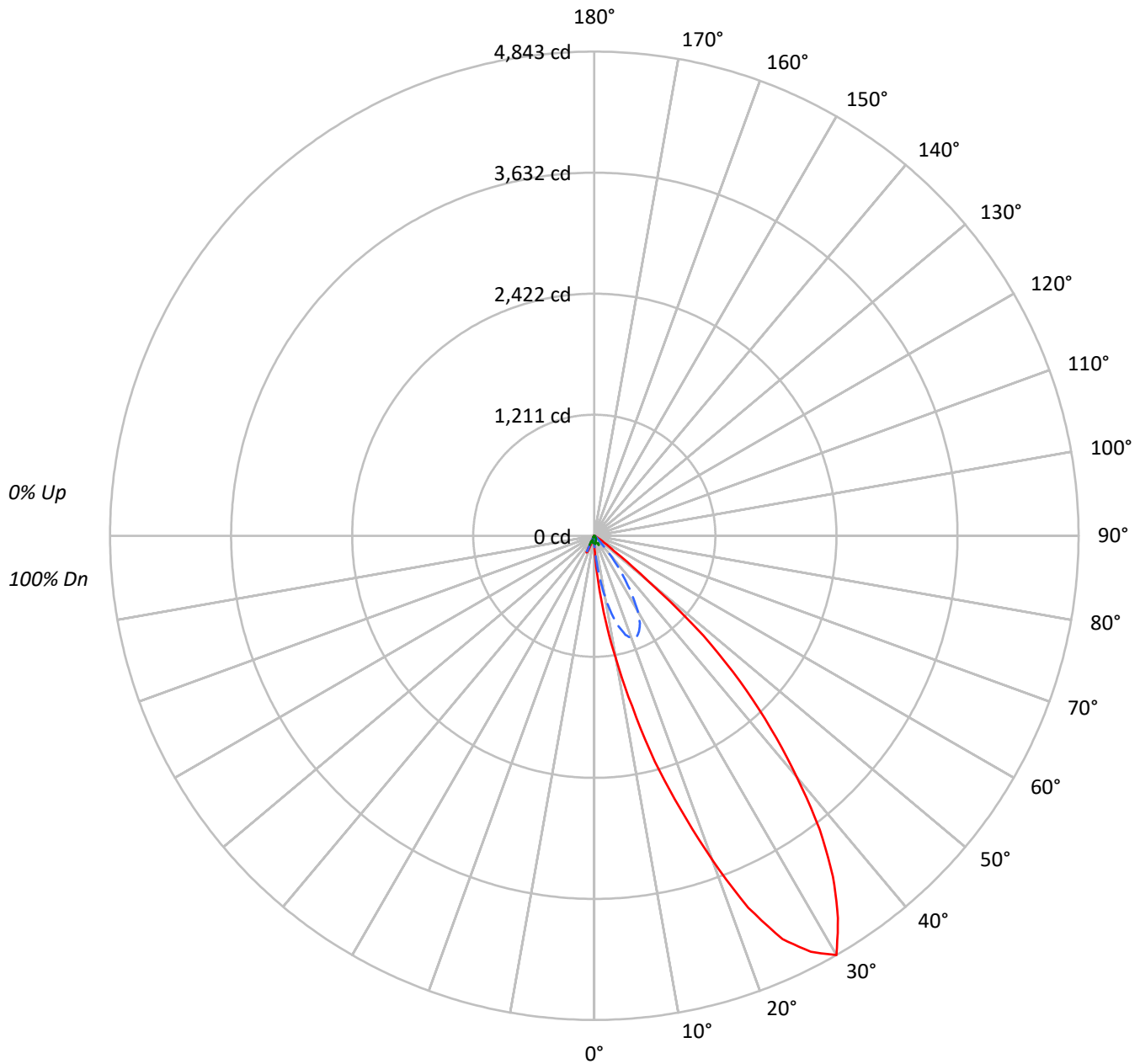
Lumens per Lamp: N/A
Luminaire Lumens: 1260.7 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 12.4
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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CATALOG NUMBER: LDA4A10950D010TE LAR25NF 4LAL1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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		
1	112	109	106	104	110	107	104	102	103	101	99	99	98	96	96	94	93	91		
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	83		
3	99	91	85	81	97	90	84	80	87	82	79	84	81	77	82	79	76	74		
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67		
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60		
6	80	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54		
7	75	64	57	52	74	63	56	51	62	56	51	61	55	51	59	54	51	49		
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44		
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42	40		
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11570	11570	11570
5°	59506	10760	5027
10°	156824	8980	2618
15°	298478	7036	2030
20°	453352	5828	5408
25°	605781	13895	25028
30°	689775	5241	5056
35°	626507	2966	2289
40°	507443	1320	918
45°	359096	785	244
50°	131024	480	0
55°	27268	409	0
60°	6562	469	0
65°	2072	555	0
70°	685	685	0
75°	286	905	0
80°	0	1350	0
85°	0	2689	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.3	1.7
10°-20°	158.6	12.6
20°-30°	402.1	31.9
30°-40°	430.4	34.1
40°-50°	220.0	17.4
50°-60°	23.0	1.8
60°-70°	2.7	0.2
70°-80°	1.5	0.1
80°-90°	1.3	0.1
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°	581.9	46.2
0°-40°	1012.3	80.3
0°-60°	1255.3	99.6
0°-90°	1260.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1260.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	94	94	94	94	94	
5°	481	261	87	50	41	70
15°	2337	940	55	20	16	691
25°	4451	1058	102	171	184	2022
35°	4161	536	20	15	15	2554
45°	2059	72	4	2	1	1536
55°	127	11	2	1	0	172
65°	7	2	2	1	0	9
75°	1	1	2	2	0	1
85°	0	1	2	2	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8
2.5°	189.6	191.5	177.5	182.0	185.0	178.9	177.5	177.5	184.5	180.6	187.1
5°	480.6	478.6	454.5	461.6	466.5	454.5	460.3	451.5	462.2	455.2	462.2
7.5°	839.3	861.5	831.2	838.1	842.5	829.9	833.1	820.4	832.4	824.2	829.9
10°	1252.1	1274.9	1239.4	1245.1	1248.3	1236.2	1236.9	1220.4	1231.2	1222.3	1226.2
12.5°	1745.3	1754.2	1737.1	1741.6	1743.5	1727.5	1697.7	1700.9	1711.7	1696.6	1700.4
15°	2337.4	2331.2	2310.8	2325.3	2310.8	2303.3	2258.3	2255.7	2262.1	2244.9	2217.7
17.5°	2859.3	2907.4	2884.6	2892.9	2875.1	2875.1	2817.4	2807.8	2808.5	2763.0	2757.8
20°	3453.8	3515.4	3459.6	3462.1	3438.7	3438.1	3367.6	3348.1	3339.9	3287.8	3273.2
22.5°	4027.1	4044.9	4044.1	4033.3	3978.2	4009.8	3921.7	3890.7	3865.4	3806.4	3777.3
25°	4451.1	4506.9	4468.9	4441.7	4393.5	4433.4	4334.5	4293.8	4255.9	4206.5	4168.4
27.5°	4690.7	4742.8	4734.0	4693.4	4643.9	4682.6	4574.2	4521.6	4467.6	4431.5	4383.9
30°	4843.0	4922.2	4896.2	4808.1	4735.8	4748.5	4626.8	4556.4	4496.9	4459.5	4399.2
32.5°	4534.2	4616.0	4608.3	4544.4	4506.9	4538.0	4432.2	4362.4	4305.4	4275.6	4208.3
35°	4160.7	4256.5	4235.6	4182.4	4155.0	4191.2	4087.9	4029.6	3971.9	3945.9	3872.3
37.5°	3703.8	3793.7	3772.7	3722.2	3695.5	3722.2	3623.2	3569.3	3514.8	3487.5	3437.5
40°	3151.5	3230.8	3208.5	3161.7	3139.4	3158.5	3072.9	3026.0	2979.6	2959.4	2892.9
42.5°	2612.1	2675.4	2655.1	2614.6	2597.5	2610.1	2539.7	2497.9	2457.3	2440.3	2400.8
45°	2058.6	2121.3	2101.6	2066.8	2050.9	2058.0	1999.0	1961.4	1926.6	1910.8	1875.2
47.5°	1477.2	1547.5	1523.4	1493.6	1477.2	1474.0	1422.1	1388.4	1391.6	1337.6	1304.7
50°	682.8	742.4	718.2	702.5	686.6	677.8	659.3	621.3	632.0	583.2	564.2
52.5°	247.8	262.4	256.8	251.7	246.7	244.7	238.3	228.9	230.2	218.1	212.4
55°	126.8	133.7	131.8	128.8	128.8	126.8	123.6	119.9	117.2	115.3	113.6
57.5°	58.2	62.1	60.8	59.6	59.6	58.2	57.1	55.1	56.5	53.2	52.6
60°	26.6	28.5	28.0	27.2	27.2	27.2	26.6	26.0	26.0	25.3	24.8
62.5°	12.7	13.9	13.4	13.4	13.4	13.4	12.7	12.7	12.7	12.7	12.1
65°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	6.3	7.1	6.3	6.3
67.5°	3.8	3.8	3.8	3.8	3.2	3.8	3.8	3.2	3.2	3.2	3.2
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
75°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
77.5°	0.0	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.6	0.0	0.6	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):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8
2.5°	172.4	176.8	181.4	180.0	173.7	173.2	170.5	171.8	133.7	108.4	90.6
5°	437.4	443.1	448.8	445.6	429.8	426.0	413.3	410.8	261.2	128.1	86.9
7.5°	799.4	802.7	807.0	803.3	779.9	769.0	742.4	716.4	439.4	154.8	80.5
10°	1191.8	1190.6	1192.5	1187.5	1158.4	1137.3	1096.2	1077.8	622.6	177.5	71.7
12.5°	1649.6	1644.4	1616.7	1629.9	1588.7	1546.3	1478.5	1421.4	795.6	190.2	63.4
15°	2184.0	2168.8	2158.7	2143.5	2092.8	2024.3	1921.0	1857.5	939.6	188.9	55.1
17.5°	2715.3	2690.6	2646.2	2651.9	2592.9	2497.1	2360.9	2252.5	1039.1	173.2	48.9
20°	3218.1	3181.3	3125.5	3121.1	3050.1	2923.9	2752.0	2617.8	1093.7	147.1	44.4
22.5°	3702.4	3645.4	3570.6	3547.1	3455.9	3277.0	3052.6	2889.0	1098.7	122.9	53.2
25°	4084.1	4012.5	3929.4	3888.8	3788.0	3559.7	3280.3	3079.2	1058.2	121.8	102.1
27.5°	4297.1	4216.0	4133.0	4077.7	3975.7	3717.0	3400.6	3168.7	988.3	130.6	96.9
30°	4308.6	4217.2	4131.0	4061.3	3959.8	3683.5	3347.3	3105.9	862.9	82.4	36.8
32.5°	4119.0	4021.4	3935.2	3856.4	3756.3	3478.0	3148.3	2917.5	701.8	57.7	26.0
35°	3787.5	3686.6	3604.1	3521.2	3427.2	3165.6	2863.1	2648.0	536.3	45.7	19.7
37.5°	3336.0	3242.8	3169.9	3113.4	3011.9	2803.4	2527.0	2299.4	379.1	32.3	12.1
40°	2830.8	2752.0	2692.5	2643.7	2549.9	2364.8	2085.7	1893.6	230.2	22.8	8.2
42.5°	2322.3	2248.7	2196.1	2149.9	2062.9	1899.4	1669.9	1477.2	110.3	15.9	5.7
45°	1806.3	1740.2	1695.9	1654.0	1576.1	1415.0	1233.0	1093.7	71.7	11.4	4.5
47.5°	1233.6	1199.5	1126.5	1081.0	1001.1	878.0	707.5	554.1	47.5	8.2	3.2
50°	512.9	495.1	447.0	416.0	370.2	307.4	223.2	187.1	29.1	5.7	2.5
52.5°	199.1	194.6	182.5	175.7	164.2	147.7	122.9	109.7	17.8	4.5	2.5
55°	107.1	105.9	99.5	95.8	89.4	81.2	66.7	58.2	11.4	3.2	1.9
57.5°	49.4	48.9	45.7	45.7	41.2	38.1	31.6	28.5	7.1	2.5	1.9
60°	23.4	23.4	22.3	22.3	20.3	19.0	15.9	14.6	4.5	1.9	1.9
62.5°	11.4	11.4	11.4	11.4	10.7	10.2	8.8	8.2	3.2	1.9	1.9
65°	6.3	6.3	6.3	6.3	5.7	5.7	5.0	4.5	2.5	1.9	1.9
67.5°	3.2	3.2	3.2	3.2	3.2	3.2	2.5	2.5	1.9	1.9	1.9
70°	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.9	1.9
72.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
75°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
80°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
82.5°	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
85°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.4	1.9	1.9
87.5°	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.4	1.9	1.9
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):

	112.5°	135°	157.5°	180°
0°	93.8	93.8	93.8	93.8
2.5°	78.0	67.8	62.8	61.5
5°	64.0	50.0	43.1	40.6
7.5°	51.9	36.2	30.5	28.0
10°	41.2	28.5	22.8	20.9
12.5°	34.2	22.8	18.4	17.1
15°	29.1	19.7	16.4	15.9
17.5°	26.6	20.9	19.7	20.3
20°	32.3	34.2	40.0	41.2
22.5°	68.5	118.6	161.1	170.5
25°	142.7	171.2	177.5	183.9
27.5°	79.2	61.5	60.3	62.8
30°	32.3	33.0	34.2	35.5
32.5°	24.1	24.1	23.4	24.1
35°	16.4	15.2	14.6	15.2
37.5°	10.2	9.6	8.8	8.8
40°	7.1	6.3	5.7	5.7
42.5°	5.0	3.8	3.2	3.2
45°	3.8	2.5	1.9	1.4
47.5°	3.2	1.9	0.6	0.6
50°	2.5	1.4	0.6	0.0
52.5°	1.9	1.4	0.6	0.0
55°	1.9	1.4	0.0	0.0
57.5°	1.9	1.4	0.0	0.0
60°	1.9	1.4	0.6	0.0
62.5°	1.9	1.4	0.6	0.6
65°	1.9	1.4	0.6	0.0
67.5°	1.9	1.4	0.6	0.0
70°	1.9	1.4	0.6	0.0
72.5°	2.5	1.4	0.6	0.0
75°	2.5	1.9	0.6	0.0
77.5°	2.5	1.9	0.6	0.0
80°	2.5	1.9	0.6	0.0
82.5°	2.5	1.9	0.6	0.0
85°	2.5	1.9	0.6	0.0
87.5°	2.5	1.9	0.6	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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Scaled Data Report



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Cooper Lighting Solutions Photometric Lab

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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)