

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: P1191751

Luminaire Tested: **LDA4A25940D010TE LAR25NF 4LAL1 30° Tilt**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14
Report Number: P1191751
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: LDA4A25940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

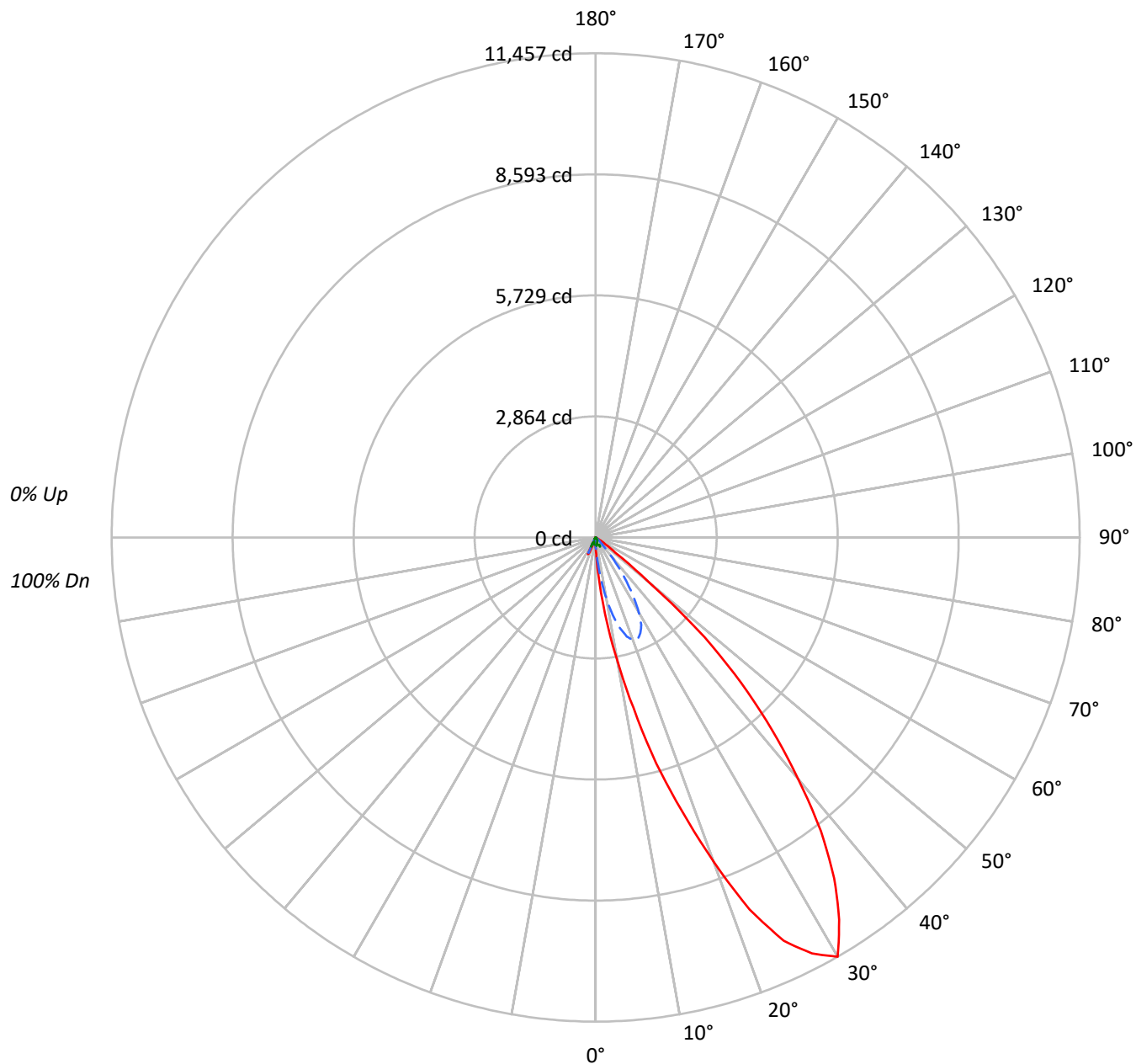
Lumens per Lamp: N/A
Luminaire Lumens: 2982.3 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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		
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°	27383	27383	27383
5°	140767	25444	11886
10°	370998	21230	6200
15°	706150	16664	4776
20°	1072539	13769	12798
25°	1433141	32854	59202
30°	1631818	12391	11964
35°	1482177	7002	5421
40°	1200473	3140	2174
45°	849491	1814	523
50°	309963	1151	0
55°	64514	968	0
60°	15542	1110	0
65°	4816	1313	0
70°	1623	1623	0
75°	715	2145	0
80°	0	3196	0
85°	0	6369	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	1.7
10°-20°	375.1	12.6
20°-30°	951.3	31.9
30°-40°	1018.1	34.1
40°-50°	520.4	17.5
50°-60°	54.3	1.8
60°-70°	6.2	0.2
70°-80°	3.4	0.1
80°-90°	3.0	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°	1376.7	46.2
0°-40°	2394.8	80.3
0°-60°	2969.6	99.6
0°-90°	2982.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2982.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	222	222	222	222	222	
5°	1137	618	206	118	96	166
15°	5530	2223	130	46	37	1634
25°	10530	2503	241	405	435	4785
35°	9843	1269	46	36	36	6043
45°	4870	170	10	6	3	3634
55°	300	27	4	3	0	407
65°	16	6	4	3	0	22
75°	2	3	4	4	0	1
85°	0	3	4	4	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°	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0
2.5°	448.5	452.9	420.0	430.4	437.9	422.9	420.0	420.0	436.4	427.5	442.5
5°	1136.9	1132.4	1075.4	1091.9	1103.9	1075.4	1088.9	1067.9	1093.3	1076.9	1093.3
7.5°	1985.7	2038.3	1966.2	1982.8	1993.2	1963.3	1970.8	1940.8	1969.3	1949.8	1963.3
10°	2962.1	3016.1	2932.2	2945.7	2953.2	2924.7	2926.2	2887.1	2912.6	2891.7	2900.6
12.5°	4129.0	4150.1	4109.6	4120.0	4124.5	4087.0	4016.5	4024.0	4049.5	4013.6	4022.5
15°	5529.9	5514.9	5466.9	5501.4	5466.9	5448.9	5342.3	5336.3	5351.4	5310.9	5246.4
17.5°	6764.2	6878.2	6824.2	6843.7	6801.7	6801.7	6665.2	6642.7	6644.2	6536.2	6524.3
20°	8171.0	8316.6	8184.5	8190.5	8135.1	8133.6	7967.0	7920.5	7901.1	7778.1	7743.5
22.5°	9526.9	9568.9	9567.4	9541.9	9411.4	9486.4	9278.0	9204.5	9144.4	9004.9	8935.9
25°	10530.3	10662.2	10572.2	10507.8	10393.8	10488.3	10254.3	10158.4	10068.3	9951.3	9861.3
27.5°	11097.2	11220.2	11199.2	11103.2	10986.2	11077.7	10821.3	10696.8	10569.3	10483.7	10371.3
30°	11457.2	11644.7	11583.2	11374.7	11203.7	11233.7	10945.7	10779.3	10638.3	10549.8	10407.3
32.5°	10726.8	10920.2	10902.3	10750.7	10662.2	10735.7	10485.3	10320.3	10185.4	10114.8	9955.8
35°	9843.3	10069.9	10020.3	9894.4	9829.8	9915.3	9670.9	9532.9	9396.4	9334.9	9160.9
37.5°	8762.0	8974.9	8925.5	8805.5	8742.5	8805.5	8571.5	8444.0	8315.0	8250.6	8132.0
40°	7455.6	7643.1	7590.6	7479.6	7427.1	7472.2	7269.7	7158.7	7049.2	7001.2	6843.7
42.5°	6179.3	6329.3	6281.3	6185.3	6144.8	6174.7	6008.3	5909.4	5813.3	5772.9	5679.8
45°	4869.9	5018.4	4971.9	4889.4	4851.9	4868.4	4728.9	4640.4	4557.9	4520.5	4436.5
47.5°	3494.5	3661.1	3604.0	3533.6	3494.5	3487.1	3364.1	3284.7	3292.1	3164.6	3086.7
50°	1615.3	1756.3	1699.3	1661.8	1624.3	1603.3	1559.8	1469.9	1495.3	1379.8	1334.9
52.5°	586.4	620.9	607.4	595.4	583.5	578.9	564.0	541.4	544.5	516.0	502.5
55°	300.0	316.4	312.0	304.5	304.5	300.0	292.5	283.5	277.5	273.0	268.4
57.5°	138.0	147.0	144.0	141.0	141.0	138.0	135.0	130.5	133.5	125.9	124.5
60°	63.0	67.5	66.0	64.4	64.4	64.4	63.0	61.5	61.5	60.0	58.5
62.5°	30.0	33.0	31.5	31.5	31.5	31.5	30.0	30.0	30.0	30.0	28.5
65°	16.5	16.5	16.5	16.5	16.5	16.5	16.5	15.0	16.5	15.0	15.0
67.5°	9.0	9.0	9.0	9.0	7.5	9.0	9.0	7.5	7.5	7.5	7.5
70°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5	1.5	1.5	1.5
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	1.5	0.0	1.5	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°	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0	222.0
2.5°	408.0	418.4	429.0	425.9	410.9	409.4	403.4	406.5	316.4	256.5	214.4
5°	1034.9	1048.4	1061.9	1054.4	1016.9	1007.9	977.8	971.8	618.0	302.9	205.5
7.5°	1891.2	1898.7	1909.3	1900.3	1844.7	1819.3	1756.3	1694.9	1039.3	366.0	190.5
10°	2819.6	2816.7	2821.2	2809.2	2740.2	2690.7	2593.2	2549.7	1472.8	420.0	169.5
12.5°	3902.5	3890.6	3824.6	3856.0	3758.5	3658.0	3497.6	3362.6	1882.3	449.9	150.0
15°	5166.9	5130.9	5106.9	5070.9	4950.9	4788.9	4544.4	4394.4	2222.7	447.0	130.5
17.5°	6423.8	6365.2	6260.3	6273.8	6134.2	5907.8	5585.3	5328.8	2458.2	409.4	115.5
20°	7613.1	7526.2	7394.1	7383.7	7215.6	6917.2	6510.8	6192.8	2587.2	348.0	104.9
22.5°	8758.9	8624.0	8447.0	8391.6	8175.6	7752.6	7221.7	6834.7	2599.2	291.0	125.9
25°	9661.9	9492.4	9295.9	9199.9	8961.4	8421.5	7760.1	7284.6	2503.2	287.9	241.4
27.5°	10165.8	9973.9	9777.4	9646.9	9405.4	8793.4	8045.1	7496.1	2338.2	308.9	229.5
30°	10192.8	9976.8	9772.9	9607.9	9367.9	8714.0	7919.1	7347.6	2041.2	195.0	87.0
32.5°	9744.4	9513.4	9309.4	9123.5	8886.5	8228.1	7448.1	6902.2	1660.4	136.5	61.5
35°	8960.0	8721.5	8526.5	8330.1	8108.1	7488.6	6773.2	6264.8	1268.8	108.0	46.5
37.5°	7892.1	7671.6	7499.2	7365.6	7125.7	6632.3	5978.3	5439.9	896.8	76.5	28.5
40°	6696.7	6510.8	6369.8	6254.3	6032.3	5594.3	4934.5	4480.0	544.5	54.0	19.5
42.5°	5493.9	5319.9	5195.4	5085.9	4880.5	4493.5	3950.5	3494.5	260.9	37.4	13.5
45°	4273.0	4117.0	4012.0	3913.1	3728.6	3347.6	2917.2	2587.2	169.5	27.0	10.4
47.5°	2918.7	2837.7	2665.2	2557.2	2368.2	2077.3	1673.8	1310.8	112.4	19.5	7.5
50°	1213.4	1171.4	1057.4	983.9	875.9	727.4	527.9	442.5	69.0	13.5	6.0
52.5°	470.9	460.5	431.9	415.5	388.5	349.4	291.0	259.5	42.0	10.4	6.0
55°	253.5	250.5	235.5	226.5	211.5	192.0	157.5	138.0	27.0	7.5	4.5
57.5°	117.0	115.5	108.0	108.0	97.5	90.0	75.0	67.5	16.5	6.0	4.5
60°	55.5	55.5	52.5	52.5	48.0	45.0	37.4	34.5	10.4	4.5	4.5
62.5°	27.0	27.0	27.0	27.0	25.5	23.9	21.0	19.5	7.5	4.5	4.5
65°	15.0	15.0	15.0	15.0	13.5	13.5	12.0	10.4	6.0	4.5	4.5
67.5°	7.5	7.5	7.5	7.5	7.5	7.5	6.0	6.0	4.5	4.5	4.5
70°	4.5	4.5	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.5	4.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
80°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
82.5°	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
85°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5	4.5
87.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
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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CATALOG NUMBER: LDA4A25940D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	222.0	222.0	222.0	222.0
2.5°	184.5	160.5	148.5	145.4
5°	151.5	118.4	102.0	96.0
7.5°	123.0	85.5	72.0	66.0
10°	97.5	67.5	54.0	49.5
12.5°	81.0	54.0	43.5	40.5
15°	69.0	46.5	39.0	37.4
17.5°	63.0	49.5	46.5	48.0
20°	76.5	81.0	94.5	97.5
22.5°	162.0	280.5	381.0	403.4
25°	337.4	404.9	420.0	435.0
27.5°	187.4	145.4	142.5	148.5
30°	76.5	77.9	81.0	84.0
32.5°	57.0	57.0	55.5	57.0
35°	39.0	36.0	34.5	36.0
37.5°	23.9	22.5	21.0	21.0
40°	16.5	15.0	13.5	13.5
42.5°	12.0	9.0	7.5	7.5
45°	9.0	6.0	4.5	3.0
47.5°	7.5	4.5	1.5	1.5
50°	6.0	3.0	1.5	0.0
52.5°	4.5	3.0	1.5	0.0
55°	4.5	3.0	0.0	0.0
57.5°	4.5	3.0	0.0	0.0
60°	4.5	3.0	1.5	0.0
62.5°	4.5	3.0	1.5	1.5
65°	4.5	3.0	1.5	0.0
67.5°	4.5	3.0	1.5	0.0
70°	4.5	3.0	1.5	0.0
72.5°	6.0	3.0	1.5	0.0
75°	6.0	4.5	1.5	0.0
77.5°	6.0	4.5	1.5	0.0
80°	6.0	4.5	1.5	0.0
82.5°	6.0	4.5	1.5	0.0
85°	6.0	4.5	1.5	0.0
87.5°	6.0	4.5	1.5	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)