

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: P1212542

Luminaire Tested: **LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°**

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: P1212542
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26686)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

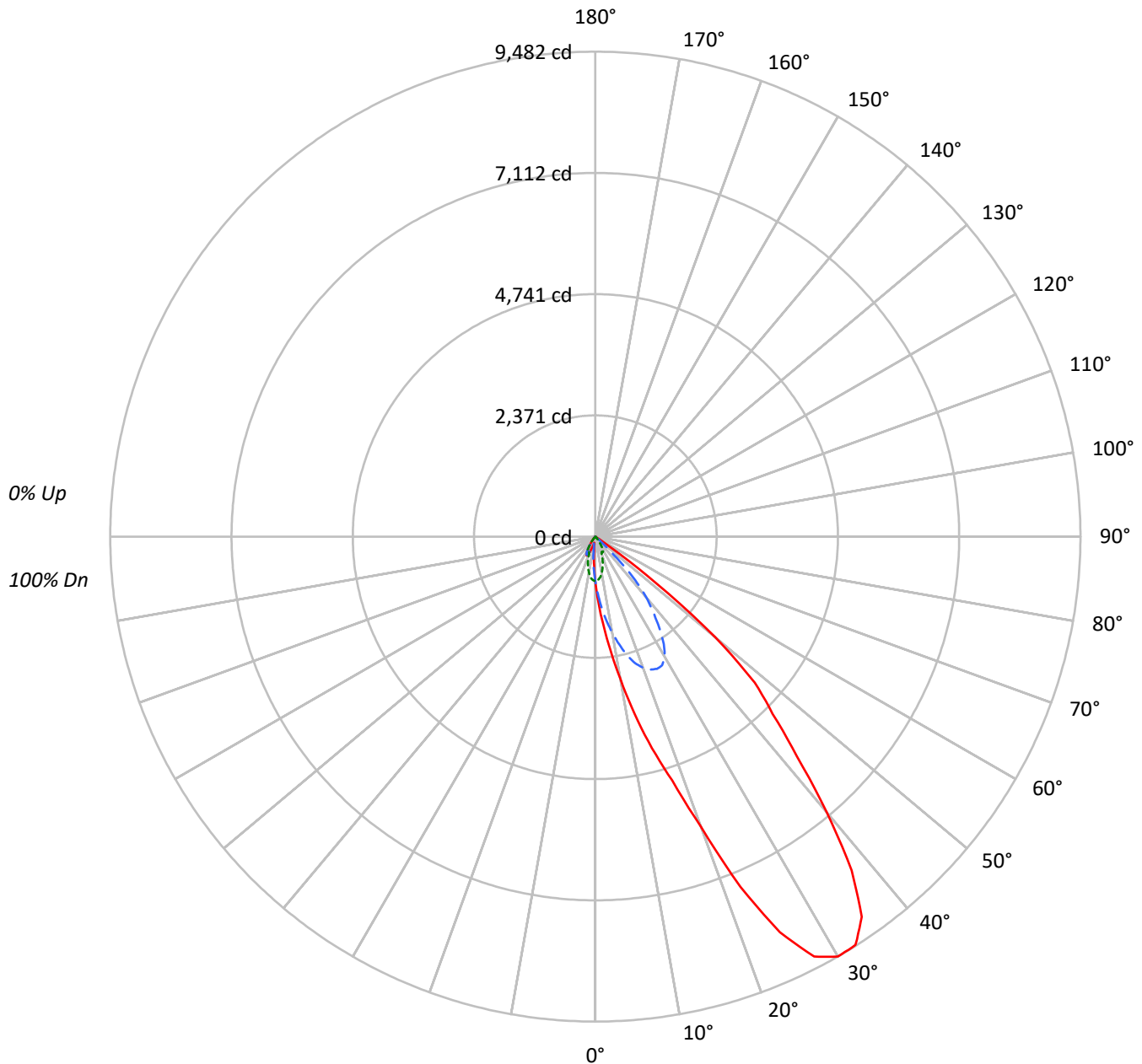
Lumens per Lamp: N/A
Luminaire Lumens: 3095.8 lumens
Efficiency: N/A
Efficacy: 62.2 lumens/watt
Spacing Criteria (0/90/45): 2.35 / 0.6 / 1.31
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 49.8
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

TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

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	97	96	96	94	93	91		
2	105	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	82		
3	99	91	85	80	96	89	84	80	87	82	78	84	80	77	82	79	76	74		
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66		
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	69	65	61	60		
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54		
7	75	64	56	51	73	63	56	51	62	55	51	60	55	50	59	54	50	49		
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44		
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40		
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	41	38	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	37626	37626	

TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.7	3.0
10°-20°	387.6	12.5
20°-30°	884.1	28.6
30°-40°	1023.2	33.0
40°-50°	617.1	19.9
50°-60°	83.8	2.7
60°-70°	2.7	0.1
70°-80°	2.9	0.1
80°-90°	2.7	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°	1363.4	44.0
0°-40°	2386.6	77.1
0°-60°	3087.4	99.7
0°-90°	3095.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3095.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	874	874	874	874	874	
5°	1687	1381	830	454	280	196
15°	4283	2407	562	173	194	1268
25°	8534	2853	331	398	407	3862
35°	9078	2175	150	153	149	5471
45°	4900	592	17	20	20	3831
55°	378	4	4	3	1	741
65°	2	2	4	2	0	3
75°	0	3	4	3	0	0
85°	0	3	5	3	0	0
90°	0	0	0	0	0	

TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	1263.9	1252.2	1257.2	1244.2	1211.7	1204.9	1204.2	1195.6	1168.0	1146.4	1120.6
5°	1687.0	1686.4	1689.5	1661.8	1604.6	1586.8	1578.2	1557.3	1490.2	1438.6	1381.4
7.5°	2215.3	2211.7	2208.0	2157.6	2067.7	2033.3	2011.2	1935.6	1843.3	1751.6	1649.5
10°	2833.5	2831.6	2817.5	2729.0	2585.0	2521.6	2478.6	2358.7	2210.5	2080.1	1906.6
12.5°	3551.2	3534.6	3509.4	3379.6	3182.2	3113.3	3018.7	2828.5	2601.0	2401.1	2158.8
15°	4282.6	4258.5	4213.6	4047.0	3802.2	3684.7	3567.2	3317.0	3008.1	2717.8	2407.3
17.5°	4997.8	4971.3	4866.2	4583.3	4344.0	4200.7	4070.3	3726.5	3363.6	2990.3	2596.7
20°	6031.1	5935.1	5751.9	5305.9	4861.3	4603.0	4450.5	4087.0	3638.0	3203.2	2731.4
22.5°	7411.2	7198.4	6807.9	6083.4	5448.0	5075.3	4825.6	4342.2	3835.4	3342.2	2814.4
25°	8534.3	8437.7	7993.6	6962.8	5971.4	5532.3	5184.8	4545.1	3979.3	3435.0	2852.6
27.5°	9258.2	9234.2	8726.8	7691.1	6398.9	5822.6	5434.5	4679.2	4048.8	3454.7	2834.1
30°	9482.1	9519.5	9032.5	7938.3	6522.5	5881.0	5456.6	4681.0	3995.3	3365.5	2716.0
32.5°	9465.4	9467.3	8870.1	7724.9	6321.4	5711.3	5272.1	4525.4	3797.8	3142.2	2491.5
35°	9078.0	8982.6	8307.3	7069.3	5853.4	5315.1	4906.8	4224.1	3472.5	2806.4	2174.8
37.5°	8227.4	8102.5	7315.3	6229							

TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	1087.4	1065.2	1032.7	1011.1	990.2	970.5	937.9	919.4	886.3	855.5	829.1
5°	1312.5	1257.2	1190.1	1132.9	1096.0	1059.7	993.9	945.3	884.5	829.7	779.3
7.5°	1540.1	1442.2	1332.2	1238.1	1180.8	1124.9	1026.5	947.7	861.7	783.5	709.1
10°	1746.7	1599.7	1444.1	1309.4	1231.9	1159.4	1029.6	925.0	814.3	717.7	624.2
12.5°	1938.6	1737.4	1534.5	1358.6	1262.7	1175.3	1016.6	888.7	757.2	642.7	533.8
15°	2109.6	1851.2	1600.4	1386.9	1274.3	1171.1	986.5	837.7	689.4	561.5	423.8
17.5°	2239.4	1922.0	1629.3	1382.6	1253.5	1138.4	934.9	773.8	617.5	462.5	306.9
20°	2318.1	1952.1	1623.1	1349.4	1208.6	1086.8	873.4	704.2	530.8	355.5	270.6
22.5°	2351.3	1949.7	1594.2	1299.6	1153.2	1030.2	814.3	636.6	439.7	321.7	282.3
25°	2356.8	1924.5	1553.6	1244.9	1098.4	976.0	754.6	559.7	382.0	330.9	316.2
27.5°	2314.4	1865.4	1477.3	1166.2	1021.5	894.9	665.5	444.6	358.6	329.7	339.5
30°	2189.0	1730.7	1342.6	1027.7	888.1	761.4	475.5	348.7	297.7	299.6	302.0
32.5°	1968.1	1506.9	1126.2	825.4	672.8	501.8	295.8	233.1	226.3	226.3	225.1
35°	1673.5	1233.2	883.8	522.1	334.6	241.1	153.1	153.8	150.7	150.1	149.4
37.5°	1369.1	973.0	559.7	215.9	145.2	100.9	90.4	91.7	90.4	92.3	91.0
40°											

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	806.3	778.0	764.5	745.5	731.9	701.8	689.4	668.6	651.4	623.1	624.9
5°	736.2	682.7	646.4	618.1	598.4	550.4	518.5	484.6	453.9	415.8	401.7
7.5°	639.0	573.2	517.9	484.1	458.8	394.9	324.1	268.7	226.9	196.8	185.1
10°	541.8	456.3	368.4	316.2	279.9	218.3	187.0	172.2	158.7	142.1	131.0
12.5°	428.7	306.9	226.9	206.0	191.3	171.0	150.7	134.7	137.8	138.4	142.7
15°	292.8	220.8	195.6	181.4	165.5	153.8	160.5	164.8	172.8	173.4	179.0
17.5°	238.0	207.3	187.0	186.3	187.6	194.4	204.8	210.3	220.8	223.2	231.3
20°	238.0	220.2	237.4	237.4	240.4	249.7	263.2	271.3	282.9	287.2	297.0
22.5°	271.3	283.5	305.1	307.5	308.7	318.6	335.8	343.8	357.3	359.8	370.3
25°	330.9	342.0	361.7	363.5	364.1	371.5	384.4	388.7	397.9	393.0	399.2
27.5°	350.0	354.9	367.2	368.4	365.3	368.4	373.4	373.4	376.5	366.6	368.4
30°	307.5	308.7	314.9	315.5	308.7	310.0	310.6	310.0	309.4	298.9	298.9
32.5°	228.2	228.2	236.2	234.4	226.9	228.7	228.7	228.7	228.2	219.6	218.3
35°	151.3	152.0	158.7	157.5	152.0	153.1	153.1	154.9	153.1	148.2	147.0
37.5°	92.3	92.8	95.9	96.6	94.7	95.3	95.9	95.3	96.6	94.1	92.8
40°	53.5	54.8	57.2	57.8	57.2	57.2	57.8	58.4	60.9	57.8	56.6
42.5°	31.4	32.0	33.2	3							

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212542

CATALOG NUMBER: LDSQA6A40927D010TE LARH20SP 6LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	602.1	588.0	581.8	591.7	586.7	572.0	575.1	565.9
5°	359.2	337.6	324.1	330.3	310.6	292.8	292.8	279.9
7.5°	173.4	166.6	163.0	164.2	159.9	154.4	151.3	151.3
10°	121.8	119.3	120.0	120.0	123.6	123.0	124.8	124.2
12.5°	144.5	145.8	146.3	148.9	152.0	152.0	153.8	152.5
15°	185.1	183.9	187.6	188.2	193.1	193.8	196.2	193.8
17.5°	235.6	238.0	241.7	241.1	251.0	251.5	251.5	251.0
20°	303.2	305.1	308.7	310.0	321.7	322.9	327.2	327.9
22.5°	377.0	377.0	378.9	381.3	392.4	393.0	394.9	394.9
25°	402.2	398.6	399.2	402.2	408.4	405.9	407.7	406.6
27.5°	369.6	364.1	362.8	367.2	371.5	364.8	367.2	367.2
30°	300.1	295.2	294.0	298.3	301.4	294.0	296.5	297.7
32.5°	219.6	216.5	215.9	219.0	221.4	215.2	217.7	219.6
35°	148.2	147.0	145.8	146.3	150.1	145.2	147.6	148.9
37.5°	94.1	91.7	92.3	93.5	95.9	92.8	95.3	95.3
40°	57.8	56.6	56.6	57.8	59.0	56.6	57.8	58.4
42.5°	33.8	33.8	33.8	34.5	35.1	33.8	33.8	34.5
45°	19.7	19.0	19.0	19.7	20.3	19.0	19.7	19.7
47.5°	11.1	10.4	10.4	11.1	11.1	10.4	11.1	11.1
50°	6.2	5.5	5.5	6.2	6.2	5.5	5.5	5.5
52.5°	3.1	3.1	3.1	3.1	3.1	3.1	2.4	2.4
55°	1.8	1.8	1.3	1.3	1.3	1.3	1.3	0.6
57.5°	1.3	1.3	0.6	0.6	0.6	0.6	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



— 0°-180° - - 45°-225° - - - 90°-270°

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)