

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: P136990

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15835 6LSQLWW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136990  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23675)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6A15D010TE ESQ6A15835 6LSQLWW1LI  
Description: PORTFOLIO LED SQUARE 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL  
WASH LUMINAIRE  
SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER  
Light Source: (1) HIGH LUMEN LED 3500K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1227.5 lumens  
Efficiency: N/A  
Efficacy: 54.3 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.06 / 1.13  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

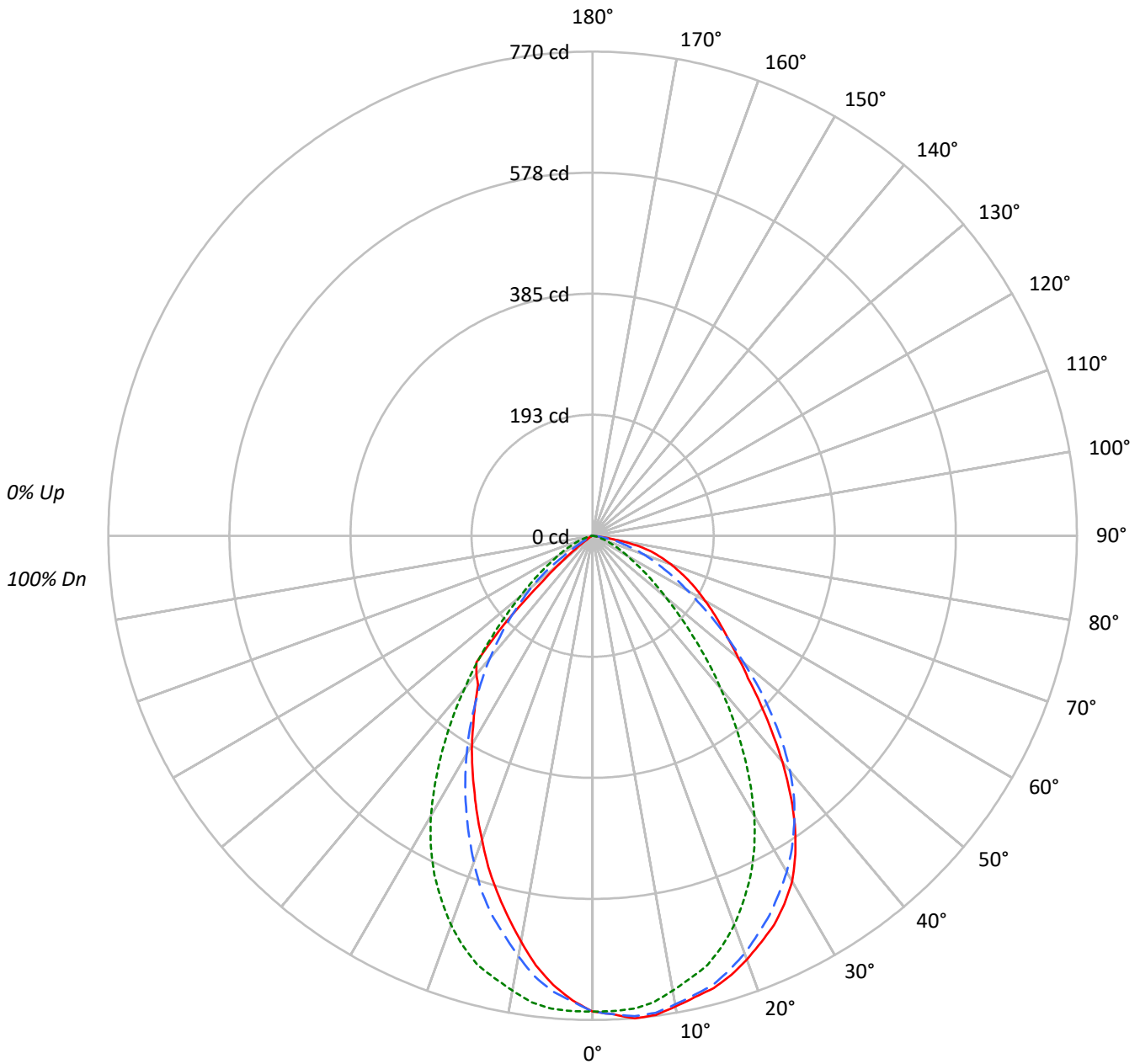
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	70																			
4	89	80	72	67	87	78	71	66	76	70	65	74	69	65	72	67	64	62																			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55																			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50																			
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45																			
8	68	56	49	44	67	56	49	44	55	48	43	53	47	43	52	47	43	41																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38																			
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	32576	32576	32576
5°	33297	32627	30993
10°	33231	32103	28645
15°	33190	31501	26138
20°	32857	30176	23560
25°	32433	28266	21159
30°	31545	25564	19066
35°	29466	21871	17082
40°	26383	17783	16142
45°	22931	13718	12044
50°	20269	10134	4374
55°	18714	7484	1036
60°	17765	5477	594
65°	17167	4034	346
70°	16667	2820	214
75°	16020	1713	283
80°	9819	843	422
85°	0	0	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	5.8
10°-20°	192.0	15.6
20°-30°	264.6	21.6
30°-40°	271.8	22.1
40°-50°	212.3	17.3
50°-60°	119.5	9.7
60°-70°	65.0	5.3
70°-80°	29.0	2.4
80°-90°	2.7	0.2
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°	527.2	42.9
0°-40°	799.0	65.1
0°-60°	1130.8	92.1
0°-90°	1227.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1227.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	757	757	757	757	757	
5°	770	767	755	727	717	73
15°	745	739	707	622	586	210
25°	683	666	595	476	445	313
35°	561	559	416	325	325	348
45°	377	402	225	186	198	292
55°	249	237	100	57	14	224
65°	168	126	40	5	3	167
75°	96	50	10	2	2	97
85°	0	2	0	2	2	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6
2.5°	761.8	766.9	765.2	768.6	770.4	770.4	770.4	763.5	765.2	761.8	761.8
5°	770.4	773.8	772.1	775.5	777.2	777.2	777.2	770.4	772.1	766.9	766.9
7.5°	768.6	772.1	770.4	773.8	777.2	777.2	775.5	770.4	770.4	765.2	765.2
10°	760.1	763.5	763.5	765.2	768.6	768.6	766.9	761.8	761.8	756.6	756.6
12.5°	751.5	756.6	754.9	758.3	760.1	760.1	760.1	753.2	753.2	748.0	748.0
15°	744.6	749.7	748.0	751.5	753.2	753.2	751.5	746.3	744.6	739.4	739.4
17.5°	732.5	737.7	734.3	737.7	741.1	739.4	737.7	732.5	730.8	723.9	723.9
20°	717.1	720.5	718.8	720.5	723.9	723.9	722.2	715.3	713.6	706.7	705.0
22.5°	699.9	703.3	701.6	703.3	706.7	705.0	703.3	696.4	693.0	686.1	684.4
25°	682.7	686.1	684.4	686.1	689.5	687.8	684.4	677.5	674.1	665.5	663.8
27.5°	660.3	663.8	662.0	665.5	668.9	667.2	663.8	656.9	651.7	641.4	639.7
30°	634.5	638.0	636.2	638.0	641.4	641.4	638.0	632.8	627.6	617.3	612.2
32.5°	600.1	605.3	603.6	608.7	612.2	612.2	612.2	605.3	600.1	589.8	582.9
35°	560.6	565.7	564.0	569.2	574.3	577.8	579.5	576.1	572.6	558.9	550.3
37.5°	515.9	521.0	519.3	526.2	533.1	538.2	541.7	539.9	538.2	526.2	515.9
40°	469.4	472.9	472.9	478.0	488.4	495.2	500.4	500.4	498.7	488.4	479.8
42.5°	421.3	426.5	426.5	433.3	441.9	450.5	454.0	457.4	459.1	447.1	438.5
45°	376.6	380.0	380.0	385.2	395.5	404.1	409.3	412.7	414.4	402.4	393.8
47.5°	335.3	338.8	340.5	347.4	352.5	359.4	364.5	366.3	368.0	359.4	349.1
50°	302.6	304.4	306.1	311.2	314.7	319.8	323.3	325.0	325.0	313.0	304.4
52.5°	273.4	275.1	275.1	280.3	283.7	287.2	287.2	287.2	285.4	275.1	261.4
55°	249.3	251.1	251.1	254.5	256.2	257.9	256.2	252.8	249.3	237.3	223.5
57.5°	227.0	228.7	228.7	230.4	230.4	230.4	227.0	223.5	216.7	202.9	190.9
60°	206.3	208.1	208.1	209.8	209.8	208.1	202.9	196.0	187.4	173.7	161.6
62.5°	187.4	189.2	189.2	189.2	189.2	185.7	178.8	170.2	159.9	149.6	137.6
65°	168.5	170.2	168.5	170.2	168.5	163.4	154.8	146.2	135.8	125.5	115.2
67.5°	149.6	151.3	149.6	149.6	146.2	141.0	132.4	123.8	115.2	104.9	94.6
70°	132.4	132.4	130.7	129.0	123.8	118.7	110.1	103.2	94.6	86.0	77.4
72.5°	113.5	115.2	111.8	108.3	103.2	96.3	89.4	82.5	75.7	67.1	60.2
75°	96.3	96.3	91.1	87.7	82.5	77.4	70.5	63.6	56.7	49.9	44.7
77.5°	72.2	72.2	67.1	65.3	60.2	56.7	49.9	44.7	39.6	36.1	31.0
80°	39.6	39.6	37.8	36.1	34.4	32.7	29.2	27.5	24.1	20.6	17.2
82.5°	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	8.6	6.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	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°	95°	100°	105°
0°	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6
2.5°	760.1	763.5	758.3	763.5	761.8	751.5	761.8	756.6	753.2	756.6	751.5
5°	765.2	766.9	761.8	766.9	763.5	753.2	760.1	754.9	751.5	753.2	746.3
7.5°	763.5	765.2	760.1	763.5	758.3	748.0	754.9	748.0	742.9	742.9	734.3
10°	754.9	756.6	749.7	753.2	748.0	736.0	742.9	734.3	729.1	725.7	717.1
12.5°	746.3	746.3	741.1	742.9	737.7	725.7	729.1	720.5	713.6	710.2	698.1
15°	736.0	736.0	730.8	732.5	725.7	713.6	717.1	706.7	698.1	693.0	679.2
17.5°	720.5	720.5	713.6	715.3	706.7	694.7	698.1	684.4	675.8	667.2	653.4
20°	699.9	698.1	691.3	691.3	682.7	668.9	672.4	658.6	646.6	638.0	622.5
22.5°	679.2	675.8	668.9	667.2	656.9	641.4	643.1	627.6	615.6	605.3	588.1
25°	655.2	650.0	641.4	638.0	627.6	612.2	612.2	595.0	582.9	569.2	552.0
27.5°	631.1	624.2	612.2	607.0	593.3	576.1	574.3	557.1	543.4	529.6	510.7
30°	601.9	593.3	577.8	570.9	555.4	536.5	531.3	514.2	498.7	483.2	467.7
32.5°	569.2	558.9	541.7	531.3	512.4	491.8	486.6	466.0	452.2	436.8	419.6
35°	534.8	521.0	502.1	488.4	467.7	447.1	436.8	416.1	402.4	386.9	373.1
37.5°	498.7	481.5	459.1	443.7	419.6	400.7	386.9	366.3	352.5	338.8	326.7
40°	460.8	440.2	416.1	395.5	371.4	352.5	337.0	316.4	304.4	292.3	282.0
42.5°	419.6	397.2	371.4	349.1	323.3	304.4	287.2	270.0	257.9	245.9	237.3
45°	374.9	352.5	325.0	302.6	276.9	257.9	242.5	225.3	214.9	204.6	197.8
47.5°	328.4	307.8	280.3	257.9	233.9	216.7	201.2	185.7	175.4	168.5	163.4
50°	283.7	263.1	239.0	216.7	194.3	178.8	165.1	151.3	142.7	135.8	130.7
52.5°	242.5	223.5	201.2	182.3	161.6	146.2	134.1	123.8	115.2	108.3	103.2
55°	206.3	189.2	168.5	151.3	134.1	120.4	110.1	99.7	92.9	84.3	79.1
57.5°	173.7	158.2	141.0	125.5	108.3	98.0	89.4	79.1	72.2	67.1	60.2
60°	147.9	134.1	116.9	103.2	89.4	80.8	72.2	63.6	58.5	51.6	46.4
62.5°	123.8	111.8	98.0	84.3	72.2	65.3	58.5	51.6	44.7	39.6	34.4
65°	103.2	91.1	79.1	67.1	58.5	51.6	46.4	39.6	34.4	29.2	24.1
67.5°	84.3	73.9	61.9	53.3	46.4	41.3	36.1	29.2	25.8	20.6	17.2
70°	67.1	58.5	48.1	41.3	36.1	31.0	25.8	22.4	17.2	13.8	10.3
72.5°	51.6	44.7	36.1	31.0	27.5	22.4	18.9	15.5	12.0	10.3	6.9
75°	37.8	31.0	25.8	22.4	18.9	15.5	12.0	10.3	8.6	5.2	3.4
77.5°	25.8	20.6	17.2	13.8	12.0	10.3	6.9	6.9	5.2	3.4	1.7
80°	15.5	10.3	8.6	6.9	5.2	5.2	3.4	3.4	1.7	1.7	0.0
82.5°	5.2	3.4	1.7	1.7	1.7	1.7	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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6	756.6
2.5°	744.6	748.0	744.6	748.0	748.0	741.1	742.9	742.9	737.7	737.7	739.4
5°	737.7	737.7	734.3	736.0	736.0	727.4	727.4	727.4	720.5	718.8	718.8
7.5°	725.7	723.9	717.1	717.1	715.3	706.7	703.3	701.6	694.7	693.0	691.3
10°	706.7	703.3	694.7	693.0	689.5	679.2	674.1	670.6	663.8	660.3	660.3
12.5°	686.1	682.7	672.4	668.9	662.0	650.0	644.8	641.4	631.1	625.9	625.9
15°	665.5	660.3	648.3	641.4	634.5	622.5	615.6	610.4	600.1	595.0	593.3
17.5°	638.0	631.1	619.0	610.4	601.9	589.8	582.9	574.3	565.7	560.6	557.1
20°	605.3	596.7	581.2	574.3	565.7	552.0	543.4	538.2	527.9	522.8	521.0
22.5°	570.9	560.6	545.1	536.5	526.2	514.2	509.0	500.4	491.8	488.4	484.9
25°	533.1	524.5	507.3	498.7	488.4	476.3	471.2	464.3	457.4	455.7	450.5
27.5°	491.8	483.2	469.4	459.1	450.5	438.5	433.3	428.2	421.3	419.6	417.9
30°	448.8	440.2	426.5	417.9	409.3	400.7	395.5	390.3	385.2	385.2	385.2
32.5°	404.1	395.5	385.2	376.6	369.7	362.8	359.4	354.2	350.8	352.5	354.2
35°	357.7	352.5	342.2	337.0	331.9	325.0	323.3	319.8	316.4	318.1	318.1
37.5°	313.0	309.5	302.6	297.5	294.0	288.9	288.9	285.4	282.0	285.4	285.4
40°	270.0	266.5	261.4	259.7	256.2	254.5	252.8	252.8	251.1	254.5	261.4
42.5°	228.7	227.0	223.5	221.8	220.1	218.4	220.1	220.1	223.5	235.6	249.3
45°	190.9	190.9	187.4	187.4	185.7	185.7	187.4	192.6	202.9	216.7	218.4
47.5°	156.5	156.5	153.0	153.0	153.0	153.0	159.9	168.5	166.8	159.9	144.4
50°	125.5	123.8	122.1	122.1	122.1	125.5	129.0	118.7	104.9	89.4	80.8
52.5°	98.0	94.6	92.9	92.9	94.6	94.6	84.3	68.8	58.5	53.3	46.4
55°	73.9	70.5	67.1	67.1	65.3	56.7	44.7	39.6	31.0	27.5	24.1
57.5°	53.3	51.6	46.4	43.0	36.1	29.2	24.1	17.2	15.5	12.0	10.3
60°	39.6	36.1	31.0	25.8	20.6	15.5	10.3	8.6	8.6	6.9	6.9
62.5°	29.2	25.8	20.6	15.5	10.3	6.9	6.9	6.9	5.2	5.2	5.2
65°	20.6	17.2	12.0	8.6	5.2	5.2	5.2	5.2	5.2	3.4	3.4
67.5°	13.8	10.3	5.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
70°	8.6	5.2	1.7	3.4	1.7	1.7	3.4	3.4	3.4	3.4	1.7
72.5°	3.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
85°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	1.7
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: LDSQ6A15D010TE ESQ6A15835 6LSQLWW1LI

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	756.6	756.6	756.6	756.6
2.5°	736.0	736.0	737.7	739.4
5°	715.3	717.1	717.1	717.1
7.5°	687.8	687.8	689.5	689.5
10°	653.4	653.4	655.2	655.2
12.5°	620.8	619.0	620.8	620.8
15°	588.1	586.4	586.4	586.4
17.5°	552.0	550.3	550.3	552.0
20°	515.9	514.2	514.2	514.2
22.5°	479.8	479.8	479.8	479.8
25°	447.1	445.4	445.4	445.4
27.5°	414.4	414.4	414.4	414.4
30°	381.7	381.7	383.5	383.5
32.5°	352.5	352.5	352.5	352.5
35°	318.1	321.6	323.3	325.0
37.5°	287.2	292.3	297.5	299.2
40°	268.3	278.6	285.4	287.2
42.5°	259.7	268.3	271.7	273.4
45°	213.2	204.6	199.5	197.8
47.5°	130.7	118.7	111.8	110.1
50°	75.7	70.5	67.1	65.3
52.5°	41.3	36.1	34.4	34.4
55°	20.6	17.2	15.5	13.8
57.5°	8.6	8.6	8.6	8.6
60°	6.9	6.9	6.9	6.9
62.5°	5.2	5.2	5.2	5.2
65°	3.4	3.4	3.4	3.4
67.5°	3.4	3.4	3.4	3.4
70°	1.7	1.7	1.7	1.7
72.5°	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7
77.5°	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	0.0	1.7
85°	1.7	1.7	1.7	1.7
87.5°	0.0	1.7	0.0	1.7
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)