

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: P136957

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10830 6LSQLWW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136957  
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: LDSQ6A10D010TE ESQ6A10830 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 3000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 881.1 lumens  
Efficiency: N/A  
Efficacy: 62.9 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

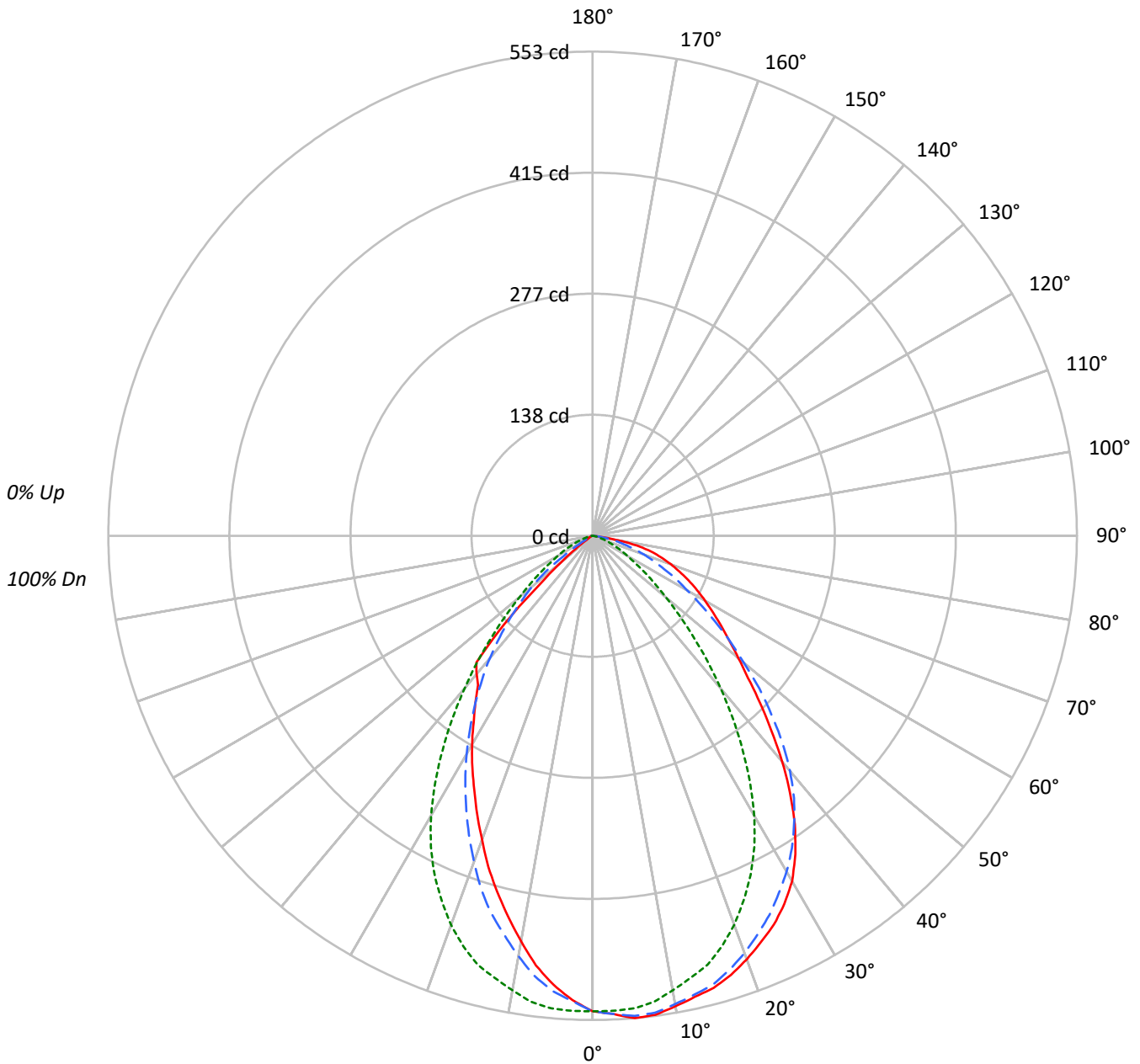
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				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	100	100	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89	89	89	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79	79	79	79
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	70	70	70	70
4	89	80	72	67	87	78	71	66	76	70	65	74	69	65	72	67	64	62	62	62	62
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55	55	55	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50	50	50	50
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45	45	45	45
8	68	56	49	44	67	56	49	44	55	48	43	53	47	43	52	47	43	41	41	41	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38	38	38	38
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35	35	35	35

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

	0°	90°	180°
0°	23384	23384	23384
5°	23901	23421	22245
10°	23854	23045	20561
15°	23825	22613	18761
20°	23583	21663	16912
25°	23278	20290	15188
30°	22646	18350	13687
35°	21151	15700	12263
40°	18941	12764	11584
45°	16459	9846	8640
50°	14549	7274	3141
55°	13437	5375	743
60°	12753	3935	422
65°	12327	2893	255
70°	11959	2014	151
75°	11495	1231	200
80°	7042	620	298
85°	0	0	593



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.7	5.8
10°-20°	137.8	15.6
20°-30°	189.9	21.6
30°-40°	195.1	22.1
40°-50°	152.4	17.3
50°-60°	85.8	9.7
60°-70°	46.7	5.3
70°-80°	20.8	2.4
80°-90°	1.9	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°	378.4	42.9
0°-40°	573.6	65.1
0°-60°	811.7	92.1
0°-90°	881.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	881.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	543	543	543	543	543	
5°	553	550	542	522	515	52
15°	534	531	507	447	421	151
25°	490	478	427	342	320	225
35°	402	401	299	233	233	250
45°	270	289	162	133	142	210
55°	179	170	72	41	10	161
65°	121	90	28	4	2	120
75°	69	36	7	1	1	70
85°	0	1	0	1	1	6
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°	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1
2.5°	546.8	550.5	549.3	551.7	553.0	553.0	553.0	548.0	549.3	546.8	546.8
5°	553.0	555.5	554.2	556.7	557.9	557.9	557.9	553.0	554.2	550.5	550.5
7.5°	551.7	554.2	553.0	555.5	557.9	557.9	556.7	553.0	553.0	549.3	549.3
10°	545.6	548.0	548.0	549.3	551.7	551.7	550.5	546.8	546.8	543.1	543.1
12.5°	539.4	543.1	541.9	544.3	545.6	545.6	545.6	540.6	540.6	536.9	536.9
15°	534.5	538.2	536.9	539.4	540.6	540.6	539.4	535.7	534.5	530.8	530.8
17.5°	525.8	529.5	527.1	529.5	532.0	530.8	529.5	525.8	524.6	519.7	519.7
20°	514.7	517.2	516.0	517.2	519.7	519.7	518.4	513.5	512.2	507.3	506.1
22.5°	502.4	504.8	503.6	504.8	507.3	506.1	504.8	499.9	497.4	492.5	491.3
25°	490.0	492.5	491.3	492.5	495.0	493.7	491.3	486.3	483.9	477.7	476.5
27.5°	474.0	476.5	475.2	477.7	480.2	478.9	476.5	471.5	467.8	460.4	459.2
30°	455.5	457.9	456.7	457.9	460.4	460.4	457.9	454.2	450.5	443.1	439.4
32.5°	430.8	434.5	433.3	437.0	439.4	439.4	439.4	434.5	430.8	423.4	418.4
35°	402.4	406.1	404.9	408.6	412.3	414.7	416.0	413.5	411.0	401.2	395.0
37.5°	370.3	374.0	372.8	377.7	382.6	386.3	388.8	387.6	386.3	377.7	370.3
40°	337.0	339.4	339.4	343.1	350.6	355.5	359.2	359.2	358.0	350.6	344.4
42.5°	302.4	306.1	306.1	311.1	317.2	323.4	325.9	328.3	329.6	320.9	314.8
45°	270.3	272.8	272.8	276.5	283.9	290.1	293.8	296.2	297.5	288.8	282.7
47.5°	240.7	243.2	244.4	249.3	253.0	258.0	261.7	262.9	264.1	258.0	250.6
50°	217.2	218.5	219.7	223.4	225.9	229.6	232.1	233.3	233.3	224.6	218.5
52.5°	196.3	197.5	197.5	201.2	203.7	206.1	206.1	206.1	204.9	197.5	187.6
55°	179.0	180.2	180.2	182.7	183.9	185.2	183.9	181.4	179.0	170.3	160.5
57.5°	162.9	164.2	164.2	165.4	165.4	165.4	162.9	160.5	155.5	145.7	137.0
60°	148.1	149.4	149.4	150.6	150.6	149.4	145.7	140.7	134.5	124.7	116.0
62.5°	134.5	135.8	135.8	135.8	135.8	133.3	128.4	122.2	114.8	107.4	98.7
65°	121.0	122.2	121.0	122.2	121.0	117.3	111.1	104.9	97.5	90.1	82.7
67.5°	107.4	108.6	107.4	107.4	104.9	101.2	95.0	88.9	82.7	75.3	67.9
70°	95.0	95.0	93.8	92.6	88.9	85.2	79.0	74.1	67.9	61.7	55.5
72.5°	81.5	82.7	80.2	77.8	74.1	69.1	64.2	59.2	54.3	48.1	43.2
75°	69.1	69.1	65.4	63.0	59.2	55.5	50.6	45.7	40.7	35.8	32.1
77.5°	51.8	51.8	48.1	46.9	43.2	40.7	35.8	32.1	28.4	25.9	22.2
80°	28.4	28.4	27.2	25.9	24.7	23.5	21.0	19.7	17.3	14.8	12.3
82.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	6.2	4.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	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°	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1
2.5°	545.6	548.0	544.3	548.0	546.8	539.4	546.8	543.1	540.6	543.1	539.4
5°	549.3	550.5	546.8	550.5	548.0	540.6	545.6	541.9	539.4	540.6	535.7
7.5°	548.0	549.3	545.6	548.0	544.3	536.9	541.9	536.9	533.2	533.2	527.1
10°	541.9	543.1	538.2	540.6	536.9	528.3	533.2	527.1	523.4	520.9	514.7
12.5°	535.7	535.7	532.0	533.2	529.5	520.9	523.4	517.2	512.2	509.8	501.1
15°	528.3	528.3	524.6	525.8	520.9	512.2	514.7	507.3	501.1	497.4	487.6
17.5°	517.2	517.2	512.2	513.5	507.3	498.7	501.1	491.3	485.1	478.9	469.0
20°	502.4	501.1	496.2	496.2	490.0	480.2	482.6	472.8	464.1	457.9	446.8
22.5°	487.6	485.1	480.2	478.9	471.5	460.4	461.6	450.5	441.9	434.5	422.1
25°	470.3	466.6	460.4	457.9	450.5	439.4	439.4	427.1	418.4	408.6	396.2
27.5°	453.0	448.1	439.4	435.7	425.8	413.5	412.3	399.9	390.1	380.2	366.6
30°	432.0	425.8	414.7	409.8	398.7	385.1	381.4	369.1	358.0	346.8	335.7
32.5°	408.6	401.2	388.8	381.4	367.8	353.0	349.3	334.5	324.6	313.5	301.2
35°	383.9	374.0	360.4	350.6	335.7	320.9	313.5	298.7	288.8	277.7	267.9
37.5°	358.0	345.6	329.6	318.5	301.2	287.6	277.7	262.9	253.0	243.2	234.5
40°	330.8	316.0	298.7	283.9	266.6	253.0	241.9	227.1	218.5	209.8	202.4
42.5°	301.2	285.1	266.6	250.6	232.1	218.5	206.1	193.8	185.2	176.5	170.3
45°	269.1	253.0	233.3	217.2	198.7	185.2	174.0	161.7	154.3	146.9	141.9
47.5°	235.8	220.9	201.2	185.2	167.9	155.5	144.4	133.3	125.9	121.0	117.3
50°	203.7	188.9	171.6	155.5	139.5	128.4	118.5	108.6	102.4	97.5	93.8
52.5°	174.0	160.5	144.4	130.8	116.0	104.9	96.3	88.9	82.7	77.8	74.1
55°	148.1	135.8	121.0	108.6	96.3	86.4	79.0	71.6	66.7	60.5	56.8
57.5°	124.7	113.6	101.2	90.1	77.8	70.4	64.2	56.8	51.8	48.1	43.2
60°	106.2	96.3	83.9	74.1	64.2	58.0	51.8	45.7	42.0	37.0	33.3
62.5°	88.9	80.2	70.4	60.5	51.8	46.9	42.0	37.0	32.1	28.4	24.7
65°	74.1	65.4	56.8	48.1	42.0	37.0	33.3	28.4	24.7	21.0	17.3
67.5°	60.5	53.1	44.4	38.3	33.3	29.6	25.9	21.0	18.5	14.8	12.3
70°	48.1	42.0	34.6	29.6	25.9	22.2	18.5	16.0	12.3	9.9	7.4
72.5°	37.0	32.1	25.9	22.2	19.7	16.0	13.6	11.1	8.6	7.4	4.9
75°	27.2	22.2	18.5	16.0	13.6	11.1	8.6	7.4	6.2	3.7	2.5
77.5°	18.5	14.8	12.3	9.9	8.6	7.4	4.9	4.9	3.7	2.5	1.2
80°	11.1	7.4	6.2	4.9	3.7	3.7	2.5	2.5	1.2	1.2	0.0
82.5°	3.7	2.5	1.2	1.2	1.2	1.2	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°	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1	543.1
2.5°	534.5	536.9	534.5	536.9	536.9	532.0	533.2	533.2	529.5	529.5	530.8
5°	529.5	529.5	527.1	528.3	528.3	522.1	522.1	522.1	517.2	516.0	516.0
7.5°	520.9	519.7	514.7	514.7	513.5	507.3	504.8	503.6	498.7	497.4	496.2
10°	507.3	504.8	498.7	497.4	495.0	487.6	483.9	481.4	476.5	474.0	474.0
12.5°	492.5	490.0	482.6	480.2	475.2	466.6	462.9	460.4	453.0	449.3	449.3
15°	477.7	474.0	465.3	460.4	455.5	446.8	441.9	438.2	430.8	427.1	425.8
17.5°	457.9	453.0	444.4	438.2	432.0	423.4	418.4	412.3	406.1	402.4	399.9
20°	434.5	428.3	417.2	412.3	406.1	396.2	390.1	386.3	378.9	375.2	374.0
22.5°	409.8	402.4	391.3	385.1	377.7	369.1	365.4	359.2	353.0	350.6	348.1
25°	382.6	376.5	364.1	358.0	350.6	341.9	338.2	333.3	328.3	327.1	323.4
27.5°	353.0	346.8	337.0	329.6	323.4	314.8	311.1	307.3	302.4	301.2	299.9
30°	322.2	316.0	306.1	299.9	293.8	287.6	283.9	280.2	276.5	276.5	276.5
32.5°	290.1	283.9	276.5	270.3	265.4	260.4	258.0	254.3	251.8	253.0	254.3
35°	256.7	253.0	245.6	241.9	238.2	233.3	232.1	229.6	227.1	228.4	228.4
37.5°	224.6	222.2	217.2	213.5	211.1	207.4	207.4	204.9	202.4	204.9	204.9
40°	193.8	191.3	187.6	186.4	183.9	182.7	181.4	181.4	180.2	182.7	187.6
42.5°	164.2	162.9	160.5	159.2	158.0	156.8	158.0	158.0	160.5	169.1	179.0
45°	137.0	137.0	134.5	134.5	133.3	133.3	134.5	138.2	145.7	155.5	156.8
47.5°	112.3	112.3	109.9	109.9	109.9	109.9	114.8	121.0	119.7	114.8	103.7
50°	90.1	88.9	87.6	87.6	87.6	90.1	92.6	85.2	75.3	64.2	58.0
52.5°	70.4	67.9	66.7	66.7	67.9	67.9	60.5	49.4	42.0	38.3	33.3
55°	53.1	50.6	48.1	48.1	46.9	40.7	32.1	28.4	22.2	19.7	17.3
57.5°	38.3	37.0	33.3	30.9	25.9	21.0	17.3	12.3	11.1	8.6	7.4
60°	28.4	25.9	22.2	18.5	14.8	11.1	7.4	6.2	6.2	4.9	4.9
62.5°	21.0	18.5	14.8	11.1	7.4	4.9	4.9	4.9	3.7	3.7	3.7
65°	14.8	12.3	8.6	6.2	3.7	3.7	3.7	3.7	3.7	2.5	2.5
67.5°	9.9	7.4	3.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
70°	6.2	3.7	1.2	2.5	1.2	1.2	2.5	2.5	2.5	2.5	1.2
72.5°	2.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
85°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0	0.0	1.2
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: LDSQ6A10D010TE ESQ6A10830 6LSQLWW1LI

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	543.1	543.1	543.1	543.1
2.5°	528.3	528.3	529.5	530.8
5°	513.5	514.7	514.7	514.7
7.5°	493.7	493.7	495.0	495.0
10°	469.0	469.0	470.3	470.3
12.5°	445.6	444.4	445.6	445.6
15°	422.1	420.9	420.9	420.9
17.5°	396.2	395.0	395.0	396.2
20°	370.3	369.1	369.1	369.1
22.5°	344.4	344.4	344.4	344.4
25°	320.9	319.7	319.7	319.7
27.5°	297.5	297.5	297.5	297.5
30°	274.0	274.0	275.3	275.3
32.5°	253.0	253.0	253.0	253.0
35°	228.4	230.8	232.1	233.3
37.5°	206.1	209.8	213.5	214.8
40°	192.6	200.0	204.9	206.1
42.5°	186.4	192.6	195.0	196.3
45°	153.1	146.9	143.2	141.9
47.5°	93.8	85.2	80.2	79.0
50°	54.3	50.6	48.1	46.9
52.5°	29.6	25.9	24.7	24.7
55°	14.8	12.3	11.1	9.9
57.5°	6.2	6.2	6.2	6.2
60°	4.9	4.9	4.9	4.9
62.5°	3.7	3.7	3.7	3.7
65°	2.5	2.5	2.5	2.5
67.5°	2.5	2.5	2.5	2.5
70°	1.2	1.2	1.2	1.2
72.5°	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	0.0	1.2
85°	1.2	1.2	1.2	1.2
87.5°	0.0	1.2	0.0	1.2
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)