

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: P136963

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10940 6LSQLWW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136963  
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 ESQ6A10940 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 4000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 846.8 lumens  
Efficiency: N/A  
Efficacy: 60.5 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

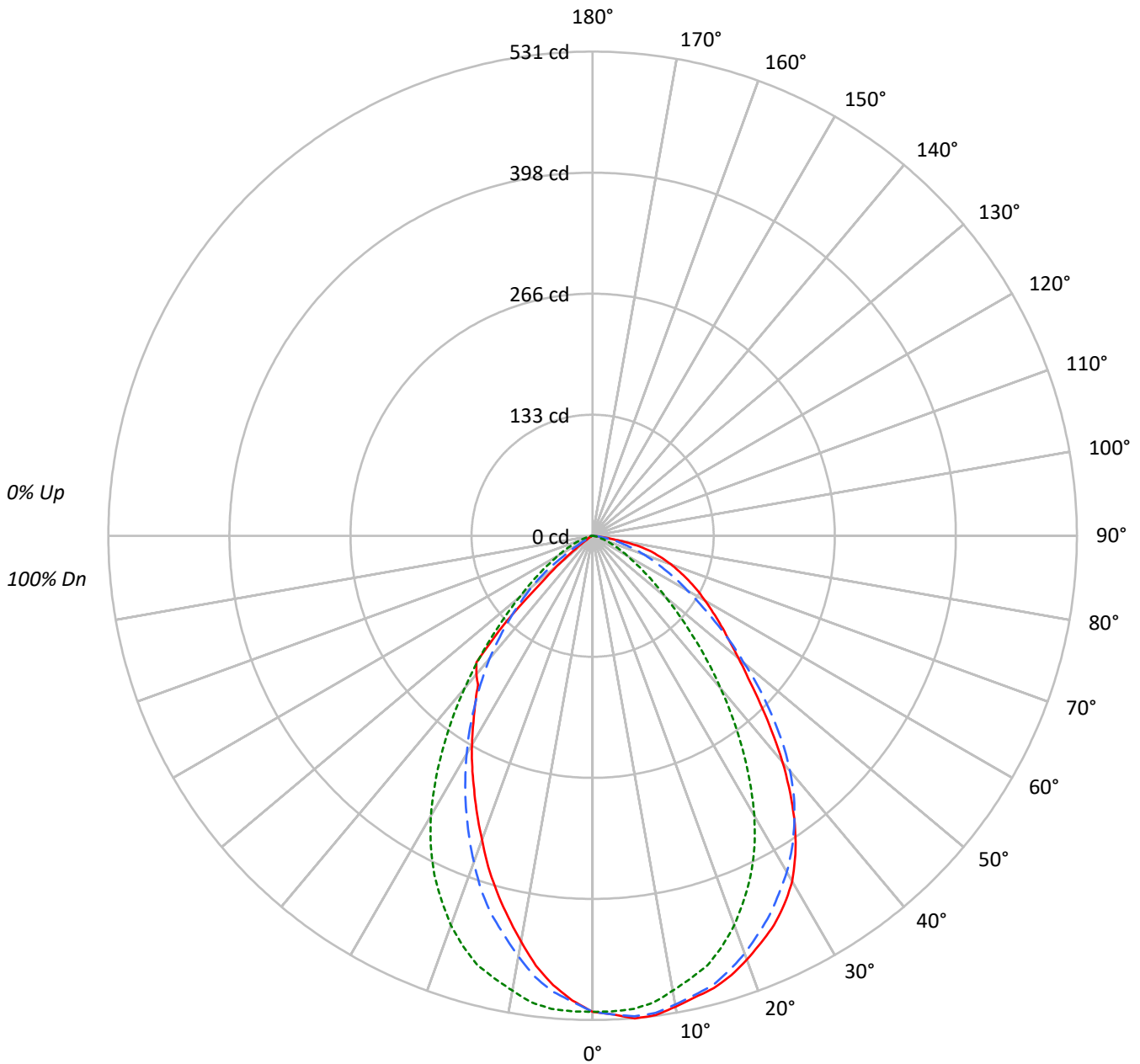
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P136963

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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°	22475	22475	22475
5°	22967	22509	21381
10°	22927	22148	19757
15°	22893	21730	18035
20°	22667	20816	16252
25°	22371	19497	14599
30°	21761	17634	13155
35°	20331	15090	11784
40°	18205	12270	11134
45°	15819	9462	8305
50°	13986	6993	3021
55°	12911	5172	713
60°	12262	3780	413
65°	11838	2781	245
70°	11493	1939	151
75°	11063	1198	200
80°	6769	595	298
85°	0	0	593



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CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10940 6LSQLWW1LI

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.7	5.8
10°-20°	132.5	15.6
20°-30°	182.5	21.6
30°-40°	187.5	22.1
40°-50°	146.5	17.3
50°-60°	82.4	9.7
60°-70°	44.8	5.3
70°-80°	20.0	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°	363.7	42.9
0°-40°	551.2	65.1
0°-60°	780.1	92.1
0°-90°	846.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	846.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	522	522	522	522	522	
5°	531	529	521	502	495	50
15°	514	510	488	429	405	145
25°	471	459	410	329	307	216
35°	387	386	287	224	224	240
45°	260	278	155	128	136	202
55°	172	164	69	39	10	155
65°	116	87	27	4	2	115
75°	66	34	7	1	1	67
85°	0	1	0	1	1	6
90°	0	0	0	0	0	



TEST NUMBER: P136963

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0
2.5°	525.6	529.0	527.9	530.2	531.4	531.4	531.4	526.7	527.9	525.6	525.6
5°	531.4	533.8	532.6	535.0	536.2	536.2	536.2	531.4	532.6	529.0	529.0
7.5°	530.2	532.6	531.4	533.8	536.2	536.2	535.0	531.4	531.4	527.9	527.9
10°	524.4	526.7	526.7	527.9	530.2	530.2	529.0	525.6	525.6	522.0	522.0
12.5°	518.4	522.0	520.8	523.2	524.4	524.4	524.4	519.6	519.6	516.0	516.0
15°	513.6	517.2	516.0	518.4	519.6	519.6	518.4	514.8	513.6	510.1	510.1
17.5°	505.4	508.9	506.6	508.9	511.3	510.1	508.9	505.4	504.2	499.4	499.4
20°	494.7	497.1	495.9	497.1	499.4	499.4	498.2	493.5	492.3	487.5	486.4
22.5°	482.8	485.2	484.0	485.2	487.5	486.4	485.2	480.5	478.1	473.3	472.1
25°	470.9	473.3	472.1	473.3	475.7	474.5	472.1	467.4	465.1	459.1	457.9
27.5°	455.5	457.9	456.7	459.1	461.5	460.3	457.9	453.1	449.6	442.5	441.3
30°	437.7	440.1	438.9	440.1	442.5	442.5	440.1	436.5	433.0	425.9	422.3
32.5°	414.0	417.6	416.4	420.0	422.3	422.3	422.3	417.6	414.0	406.9	402.2
35°	386.8	390.3	389.1	392.6	396.2	398.6	399.8	397.4	395.0	385.6	379.6
37.5°	355.9	359.5	358.3	363.0	367.8	371.3	373.7	372.5	371.3	363.0	355.9
40°	323.9	326.3	326.3	329.7	336.9	341.7	345.2	345.2	344.1	336.9	330.9
42.5°	290.6	294.2	294.2	298.9	304.9	310.8	313.2	315.5	316.7	308.4	302.5
45°	259.8	262.2	262.2	265.8	272.8	278.8	282.4	284.7	285.9	277.6	271.6
47.5°	231.3	233.7	234.9	239.6	243.2	248.0	251.5	252.6	253.8	248.0	240.8
50°	208.8	209.9	211.1	214.7	217.1	220.7	223.0	224.2	224.2	215.9	209.9
52.5°	188.6	189.8	189.8	193.3	195.7	198.1	198.1	198.1	196.9	189.8	180.3
55°	172.0	173.2	173.2	175.6	176.7	177.9	176.7	174.4	172.0	163.7	154.2
57.5°	156.6	157.8	157.8	159.0	159.0	159.0	156.6	154.2	149.5	140.0	131.6
60°	142.4	143.6	143.6	144.8	144.8	143.6	140.0	135.2	129.3	119.8	111.5
62.5°	129.3	130.4	130.4	130.4	130.4	128.2	123.4	117.4	110.3	103.2	94.9
65°	116.2	117.4	116.2	117.4	116.2	112.7	106.8	100.8	93.7	86.6	79.5
67.5°	103.2	104.4	103.2	103.2	100.8	97.3	91.3	85.4	79.5	72.3	65.3
70°	91.3	91.3	90.1	89.0	85.4	81.9	75.9	71.1	65.3	59.3	53.4
72.5°	78.3	79.5	77.1	74.7	71.1	66.5	61.7	56.9	52.2	46.3	41.5
75°	66.5	66.5	62.9	60.5	56.9	53.4	48.7	43.9	39.1	34.4	30.8
77.5°	49.8	49.8	46.3	45.1	41.5	39.1	34.4	30.8	27.3	24.9	21.4
80°	27.3	27.3	26.1	24.9	23.7	22.6	20.2	19.0	16.6	14.2	11.8
82.5°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.0	4.8
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°	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0
2.5°	524.4	526.7	523.2	526.7	525.6	518.4	525.6	522.0	519.6	522.0	518.4
5°	527.9	529.0	525.6	529.0	526.7	519.6	524.4	520.8	518.4	519.6	514.8
7.5°	526.7	527.9	524.4	526.7	523.2	516.0	520.8	516.0	512.5	512.5	506.6
10°	520.8	522.0	517.2	519.6	516.0	507.7	512.5	506.6	503.0	500.6	494.7
12.5°	514.8	514.8	511.3	512.5	508.9	500.6	503.0	497.1	492.3	489.9	481.7
15°	507.7	507.7	504.2	505.4	500.6	492.3	494.7	487.5	481.7	478.1	468.5
17.5°	497.1	497.1	492.3	493.5	487.5	479.3	481.7	472.1	466.3	460.3	450.8
20°	482.8	481.7	476.9	476.9	470.9	461.5	463.9	454.3	446.1	440.1	429.4
22.5°	468.5	466.3	461.5	460.3	453.1	442.5	443.7	433.0	424.7	417.6	405.7
25°	451.9	448.4	442.5	440.1	433.0	422.3	422.3	410.4	402.2	392.6	380.8
27.5°	435.4	430.6	422.3	418.8	409.2	397.4	396.2	384.4	374.9	365.4	352.3
30°	415.2	409.2	398.6	393.8	383.2	370.1	366.6	354.7	344.1	333.3	322.7
32.5°	392.6	385.6	373.7	366.6	353.5	339.3	335.7	321.5	312.0	301.3	289.4
35°	368.9	359.5	346.4	336.9	322.7	308.4	301.3	287.1	277.6	267.0	257.4
37.5°	344.1	332.1	316.7	306.1	289.4	276.4	267.0	252.6	243.2	233.7	225.4
40°	317.9	303.7	287.1	272.8	256.2	243.2	232.5	218.3	209.9	201.7	194.5
42.5°	289.4	274.0	256.2	240.8	223.0	209.9	198.1	186.3	177.9	169.6	163.7
45°	258.6	243.2	224.2	208.8	191.0	177.9	167.3	155.4	148.3	141.2	136.4
47.5°	226.6	212.3	193.3	177.9	161.3	149.5	138.8	128.2	121.0	116.2	112.7
50°	195.7	181.5	164.9	149.5	134.0	123.4	113.9	104.4	98.5	93.7	90.1
52.5°	167.3	154.2	138.8	125.8	111.5	100.8	92.5	85.4	79.5	74.7	71.1
55°	142.4	130.4	116.2	104.4	92.5	83.1	75.9	68.9	64.1	58.1	54.5
57.5°	119.8	109.2	97.3	86.6	74.7	67.7	61.7	54.5	49.8	46.3	41.5
60°	102.0	92.5	80.7	71.1	61.7	55.7	49.8	43.9	40.3	35.6	32.0
62.5°	85.4	77.1	67.7	58.1	49.8	45.1	40.3	35.6	30.8	27.3	23.7
65°	71.1	62.9	54.5	46.3	40.3	35.6	32.0	27.3	23.7	20.2	16.6
67.5°	58.1	51.0	42.7	36.8	32.0	28.5	24.9	20.2	17.8	14.2	11.8
70°	46.3	40.3	33.2	28.5	24.9	21.4	17.8	15.4	11.8	9.5	7.2
72.5°	35.6	30.8	24.9	21.4	19.0	15.4	13.0	10.6	8.3	7.2	4.8
75°	26.1	21.4	17.8	15.4	13.0	10.6	8.3	7.2	6.0	3.6	2.4
77.5°	17.8	14.2	11.8	9.5	8.3	7.2	4.8	4.8	3.6	2.4	1.2
80°	10.6	7.2	6.0	4.8	3.6	3.6	2.4	2.4	1.2	1.2	0.0
82.5°	3.6	2.4	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



TEST NUMBER: P136963

CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10940 6LSQLWW1LI

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0	522.0
2.5°	513.6	516.0	513.6	516.0	516.0	511.3	512.5	512.5	508.9	508.9	510.1
5°	508.9	508.9	506.6	507.7	507.7	501.8	501.8	501.8	497.1	495.9	495.9
7.5°	500.6	499.4	494.7	494.7	493.5	487.5	485.2	484.0	479.3	478.1	476.9
10°	487.5	485.2	479.3	478.1	475.7	468.5	465.1	462.7	457.9	455.5	455.5
12.5°	473.3	470.9	463.9	461.5	456.7	448.4	444.9	442.5	435.4	431.8	431.8
15°	459.1	455.5	447.2	442.5	437.7	429.4	424.7	421.1	414.0	410.4	409.2
17.5°	440.1	435.4	427.1	421.1	415.2	406.9	402.2	396.2	390.3	386.8	384.4
20°	417.6	411.6	401.0	396.2	390.3	380.8	374.9	371.3	364.2	360.6	359.5
22.5°	393.8	386.8	376.0	370.1	363.0	354.7	351.1	345.2	339.3	336.9	334.5
25°	367.8	361.8	349.9	344.1	336.9	328.6	325.1	320.3	315.5	314.3	310.8
27.5°	339.3	333.3	323.9	316.7	310.8	302.5	298.9	295.4	290.6	289.4	288.3
30°	309.6	303.7	294.2	288.3	282.4	276.4	272.8	269.2	265.8	265.8	265.8
32.5°	278.8	272.8	265.8	259.8	255.0	250.3	248.0	244.4	242.0	243.2	244.4
35°	246.8	243.2	236.1	232.5	228.9	224.2	223.0	220.7	218.3	219.5	219.5
37.5°	215.9	213.5	208.8	205.3	202.9	199.3	199.3	196.9	194.5	196.9	196.9
40°	186.3	183.9	180.3	179.1	176.7	175.6	174.4	174.4	173.2	175.6	180.3
42.5°	157.8	156.6	154.2	153.0	151.8	150.6	151.8	151.8	154.2	162.5	172.0
45°	131.6	131.6	129.3	129.3	128.2	128.2	129.3	132.8	140.0	149.5	150.6
47.5°	108.0	108.0	105.6	105.6	105.6	105.6	110.3	116.2	115.0	110.3	99.6
50°	86.6	85.4	84.2	84.2	84.2	86.6	89.0	81.9	72.3	61.7	55.7
52.5°	67.7	65.3	64.1	64.1	65.3	65.3	58.1	47.5	40.3	36.8	32.0
55°	51.0	48.7	46.3	46.3	45.1	39.1	30.8	27.3	21.4	19.0	16.6
57.5°	36.8	35.6	32.0	29.7	24.9	20.2	16.6	11.8	10.6	8.3	7.2
60°	27.3	24.9	21.4	17.8	14.2	10.6	7.2	6.0	6.0	4.8	4.8
62.5°	20.2	17.8	14.2	10.6	7.2	4.8	4.8	4.8	3.6	3.6	3.6
65°	14.2	11.8	8.3	6.0	3.6	3.6	3.6	3.6	3.6	2.4	2.4
67.5°	9.5	7.2	3.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
70°	6.0	3.6	1.2	2.4	1.2	1.2	2.4	2.4	2.4	2.4	1.2
72.5°	2.4	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





TEST NUMBER: P136963

CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10940 6LSQLWW1LI

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	522.0	522.0	522.0	522.0
2.5°	507.7	507.7	508.9	510.1
5°	493.5	494.7	494.7	494.7
7.5°	474.5	474.5	475.7	475.7
10°	450.8	450.8	451.9	451.9
12.5°	428.2	427.1	428.2	428.2
15°	405.7	404.6	404.6	404.6
17.5°	380.8	379.6	379.6	380.8
20°	355.9	354.7	354.7	354.7
22.5°	330.9	330.9	330.9	330.9
25°	308.4	307.3	307.3	307.3
27.5°	285.9	285.9	285.9	285.9
30°	263.4	263.4	264.6	264.6
32.5°	243.2	243.2	243.2	243.2
35°	219.5	221.9	223.0	224.2
37.5°	198.1	201.7	205.3	206.5
40°	185.1	192.1	196.9	198.1
42.5°	179.1	185.1	187.5	188.6
45°	147.1	141.2	137.6	136.4
47.5°	90.1	81.9	77.1	75.9
50°	52.2	48.7	46.3	45.1
52.5°	28.5	24.9	23.7	23.7
55°	14.2	11.8	10.6	9.5
57.5°	6.0	6.0	6.0	6.0
60°	4.8	4.8	4.8	4.8
62.5°	3.6	3.6	3.6	3.6
65°	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4
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)