

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331967-935

Luminaire Tested: **S123DIP-S775D585U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331967-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D585U935-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4798.7 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

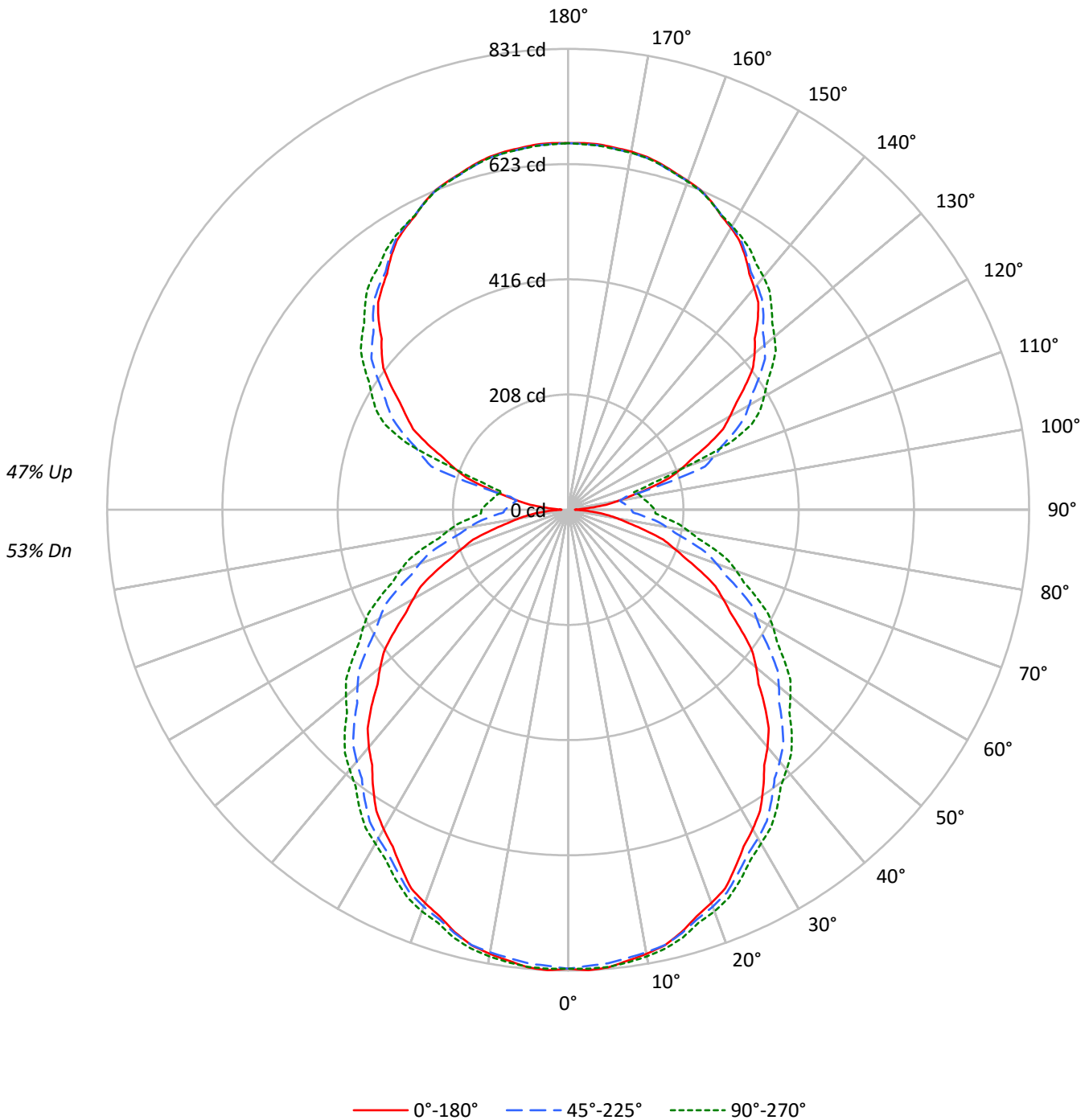
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	47	43	39	38	35	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	45	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

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

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.5	1.6
10°-20°	223.7	4.7
20°-30°	334.5	7.0
30°-40°	399.5	8.3
40°-50°	418.0	8.7
50°-60°	392.2	8.2
60°-70°	327.6	6.8
70°-80°	234.4	4.9
80°-90°	141.6	3.0
90°-100°	111.7	2.3
100°-110°	179.0	3.7
110°-120°	318.1	6.6
120°-130°	374.9	7.8
130°-140°	385.3	8.0
140°-150°	352.4	7.3
150°-160°	282.4	5.9
160°-170°	182.2	3.8
170°-180°	62.8	1.3
0°-30°	636.6	13.3
0°-40°	1036.1	21.6
0°-60°	1846.2	38.5
0°-90°	2549.8	53.1
90°-120°	608.9	12.7
90°-150°	1721.5	35.9
90°-180°	2249.0	46.9
0°-180°	4798.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	12	62	114	145	156	9
95°	40	57	104	135	145	45
105°	154	179	175	117	123	162
115°	279	294	330	355	365	276
125°	390	395	422	441	449	348
135°	484	486	498	514	518	372
145°	557	559	560	568	572	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.1	34.3	44.4	54.7	64.8	75.2	85.7	96.2	106.7	117.2	124.1
90°	12.2	23.2	34.0	44.9	55.9	67.2	78.8	90.4	102.0	113.7	120.9
92.5°	20.1	28.7	37.2	45.8	54.3	64.1	75.3	86.4	97.6	108.7	116.1
95°	39.9	43.2	46.6	49.9	53.2	60.4	71.5	82.5	93.4	104.4	111.4
97.5°	69.1	74.0	79.1	84.2	89.2	92.5	94.0	95.6	97.0	98.6	105.4
100°	91.1	99.7	108.3	116.9	125.4	125.9	118.0	110.3	102.5	94.6	101.3
102.5°	116.3	123.6	131.0	138.4	145.7	144.6	135.0	125.5	116.0	106.4	109.3
105°	153.5	159.5	165.6	171.6	177.6	179.9	178.7	177.5	176.3	175.1	161.4
107.5°	191.9	197.0	202.1	207.1	212.2	219.6	229.3	239.0	248.7	258.4	249.6
110°	217.6	222.1	226.5	231.0	235.5	242.3	251.5	260.7	269.9	279.1	280.8



TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.7	246.4	250.2	253.9	257.7	264.0	272.9	281.8	290.7	299.6	304.7
115°	279.1	282.1	285.2	288.2	291.3	296.9	305.1	313.2	321.5	329.7	335.5
117.5°	314.9	317.2	319.4	321.8	324.1	328.8	336.1	343.4	350.7	357.9	363.6
120°	336.6	338.5	340.5	342.5	344.5	349.0	355.9	362.8	369.8	376.7	382.2
122.5°	359.4	360.7	362.0	363.3	364.6	368.7	375.4	382.1	388.8	395.5	400.5
125°	389.7	390.5	391.4	392.3	393.1	396.7	402.9	409.2	415.4	421.7	426.1
127.5°	419.9	420.6	421.3	422.0	422.6	425.6	430.9	436.3	441.6	446.9	451.3
130°	438.8	439.5	440.1	440.8	441.4	444.0	448.5	452.9	457.4	461.8	466.1
132.5°	456.2	456.9	457.8	458.7	459.4	461.7	465.2	468.7	472.3	475.9	479.9
135°	483.5	484.0	484.5	484.9	485.3	486.9	489.6	492.2	494.8	497.5	501.4
137.5°	507.0	507.6	508.2	508.9	509.6	510.7	512.2	513.7	515.1	516.6	520.3
140°	521.9	522.6	523.2	523.9	524.5	525.4	526.2	527.2	528.1	529.1	532.5
142.5°	536.5	537.0	537.4	538.0	538.5	538.9	539.3	539.8	540.3	540.7	543.7
145°	556.8	557.3	557.9	558.5	559.0	559.5	559.6	559.9	560.1	560.3	562.1
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	579.0
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	131.0	137.9	144.8	149.3	151.4	153.3	155.4	157.5
90°	128.1	135.4	142.7	147.4	149.6	151.8	154.0	156.3
92.5°	123.4	130.7	138.1	142.8	144.7	146.7	148.7	150.7
95°	118.4	125.4	132.3	136.9	138.9	140.9	142.8	144.9
97.5°	112.3	119.1	126.0	130.4	132.5	134.7	136.7	138.9
100°	108.0	114.7	121.4	125.8	127.9	130.0	132.1	134.2
102.5°	112.3	115.3	118.2	120.8	123.0	125.2	127.3	129.6
105°	147.7	134.1	120.4	114.5	116.5	118.6	120.5	122.6
107.5°	240.8	232.0	223.3	212.4	199.7	186.8	174.1	161.3
110°	282.4	284.0	285.6	279.4	265.4	251.4	237.4	223.4





TEST NUMBER: P331967-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	309.8	315.0	320.0	321.8	320.3	318.7	317.3	315.7
115°	341.5	347.3	353.3	357.2	359.3	361.3	363.3	365.4
117.5°	369.2	374.9	380.5	384.1	385.8	387.4	389.1	390.7
120°	387.7	393.1	398.6	402.1	403.5	404.8	406.3	407.7
122.5°	405.6	410.7	415.7	419.0	420.5	422.0	423.4	425.0
125°	430.6	435.0	439.5	442.5	444.0	445.7	447.3	448.9
127.5°	455.6	459.9	464.2	466.9	468.0	469.2	470.4	471.5
130°	470.3	474.5	478.8	481.4	482.3	483.4	484.3	485.3
132.5°	484.1	488.1	492.2	494.8	495.8	496.9	497.9	499.0
135°	505.3	509.3	513.2	515.5	516.2	516.9	517.5	518.2
137.5°	524.0	527.7	531.4	533.6	534.4	535.2	536.0	536.7
140°	536.0	539.4	542.9	544.9	545.7	546.5	547.3	548.1
142.5°	546.7	549.8	552.8	554.7	555.4	556.1	556.8	557.5
145°	564.0	565.8	567.6	568.9	569.7	570.5	571.4	572.1
147.5°	579.7	580.4	581.1	581.5	581.8	581.9	582.2	582.5
150°	589.7	590.0	590.1	590.3	590.4	590.5	590.6	590.6
152.5°	599.5	599.9	600.3	600.3	599.9	599.4	599.0	598.6
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)