

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: P331961-935

Luminaire Tested: **S123DIP-S775D365U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331961-935
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-S775D365U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3978.3 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

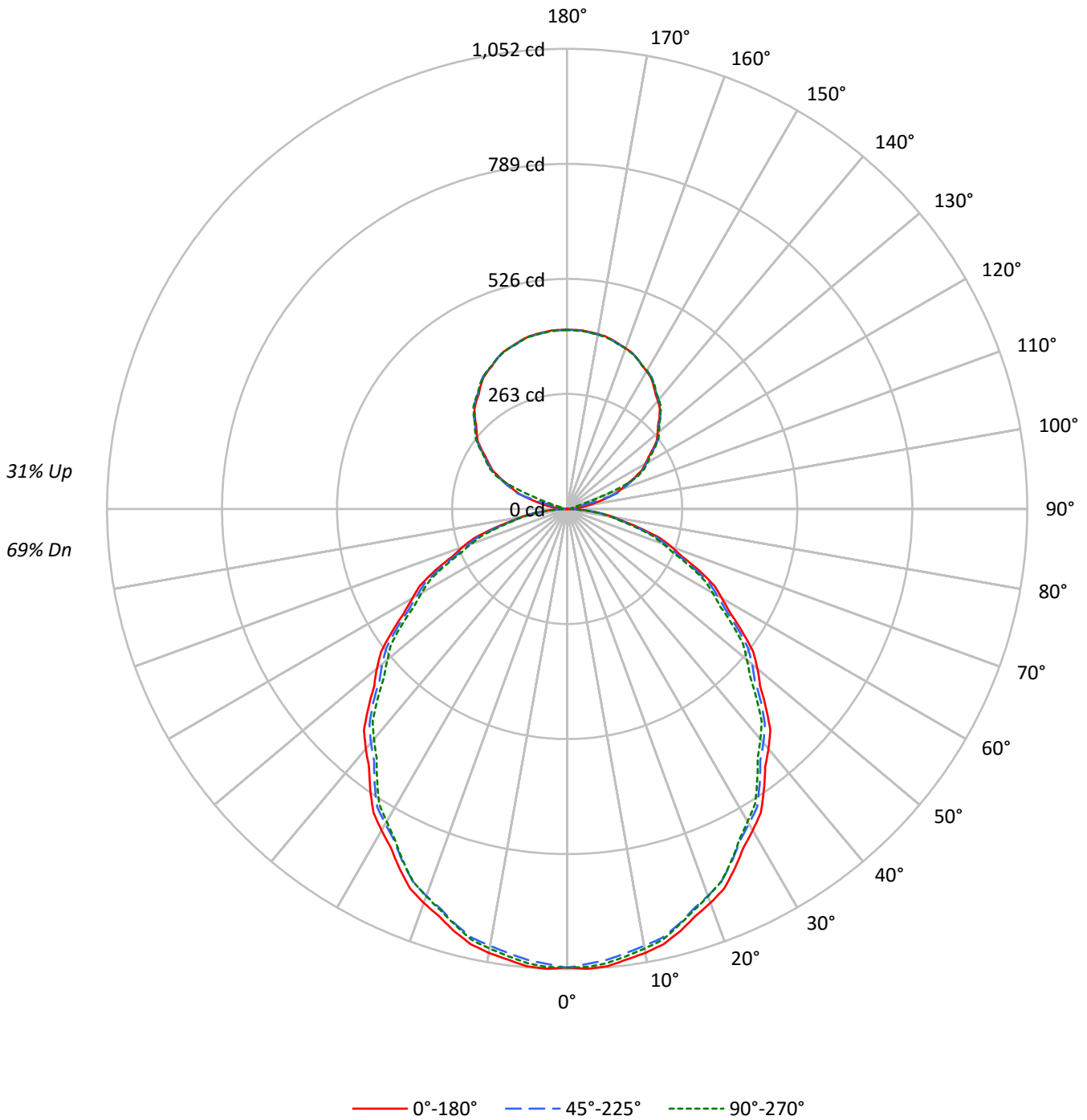
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	102	97	93	90	96	92	89	85	82	79	77	73	71	69	65	63	62	58
2	93	85	79	73	87	80	75	70	72	68	64	64	61	58	57	54	52	48
3	85	75	67	61	80	71	64	58	63	58	54	57	52	49	50	47	44	41
4	77	66	58	52	73	63	55	50	56	50	46	51	46	42	45	41	38	35
5	71	59	51	44	67	56	49	43	51	44	39	45	40	36	41	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29	27
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	34	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	24	32	26	23	29	24	21	19
10	49	37	29	24	47	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11286	11286	11286
5°	11339	11182	11261
10°	11262	11086	11154
15°	11131	10961	10981
20°	10977	10781	10791
25°	10772	10568	10546
30°	10544	10331	10253
35°	10307	10081	9950
40°	10058	9805	9653
45°	9785	9552	9319
50°	9512	9239	8982
55°	9154	8916	8646
60°	8792	8540	8269
65°	8474	8130	7875
70°	8003	7660	7320
75°	7311	7049	6750
80°	6595	6316	6261
85°	5780	5570	5348



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	2.5
10°-20°	278.9	7.0
20°-30°	411.9	10.4
30°-40°	481.2	12.1
40°-50°	483.8	12.2
50°-60°	425.0	10.7
60°-70°	316.6	8.0
70°-80°	180.4	4.5
80°-90°	52.9	1.3
90°-100°	14.9	0.4
100°-110°	71.0	1.8
110°-120°	170.4	4.3
120°-130°	217.0	5.5
130°-140°	231.9	5.8
140°-150°	216.9	5.5
150°-160°	174.9	4.4
160°-170°	112.9	2.8
170°-180°	38.9	1.0
0°-30°	789.6	19.8
0°-40°	1270.8	31.9
0°-60°	2179.5	54.8
0°-90°	2729.4	68.6
90°-120°	256.3	6.4
90°-150°	922.1	23.2
90°-180°	1249.0	31.4
0°-180°	3978.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1049	1045	1035	1043	1042	99
15°	999	995	984	990	985	281
25°	907	901	890	890	888	418
35°	784	779	767	762	757	490
45°	643	639	628	617	612	496
55°	488	486	475	466	461	437
65°	333	328	319	312	309	328
75°	176	172	170	165	162	188
85°	47	45	45	43	43	51
90°	0	3	7	8	9	3
95°	19	7	10	11	12	23
105°	91	92	67	16	13	96
115°	170	172	175	178	179	168
125°	240	242	243	244	245	214
135°	298	300	302	302	302	230
145°	344	346	347	348	348	216
155°	379	379	379	380	379	175
165°	400	399	399	401	399	113
175°	410	408	408	410	408	39
180°	410	410	410	410	410	



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1052.1	1051.5	1050.9	1050.2	1049.6	1048.4	1046.5	1044.8	1043.0	1041.3	1042.8
5°	1049.4	1048.4	1047.4	1046.4	1045.3	1043.8	1041.6	1039.4	1037.2	1034.9	1037.0
7.5°	1039.1	1038.1	1037.1	1036.1	1035.1	1033.5	1031.1	1028.9	1026.6	1024.3	1026.1
10°	1030.4	1029.4	1028.5	1027.4	1026.5	1024.7	1022.0	1019.4	1016.8	1014.3	1016.1
12.5°	1018.9	1018.0	1017.3	1016.4	1015.5	1013.9	1011.5	1009.0	1006.6	1004.1	1005.5
15°	998.9	998.1	997.3	996.5	995.7	994.0	991.4	988.8	986.2	983.6	985.2
17.5°	975.6	974.6	973.5	972.5	971.5	969.7	967.1	964.4	961.8	959.2	960.4
20°	958.3	957.1	956.0	954.8	953.6	951.6	949.0	946.4	943.8	941.2	942.0
22.5°	938.8	937.6	936.4	935.2	934.0	932.1	929.5	927.0	924.4	921.7	922.4
25°	907.0	905.8	904.6	903.4	902.2	900.3	897.6	895.0	892.4	889.8	890.0
27.5°	872.9	871.7	870.6	869.4	868.2	866.3	863.4	860.7	857.8	855.0	855.1
30°	848.3	847.3	846.4	845.3	844.3	842.4	839.6	836.8	834.1	831.2	831.2
32.5°	823.8	822.5	821.1	819.8	818.6	816.8	814.6	812.4	810.3	808.1	807.0
35°	784.4	783.2	782.0	780.8	779.5	777.7	775.0	772.4	769.8	767.2	766.0
37.5°	743.9	742.4	740.9	739.3	737.9	735.8	733.1	730.5	727.8	725.2	723.8
40°	715.8	714.6	713.4	712.2	711.0	709.0	706.2	703.4	700.6	697.8	696.2
42.5°	687.7	686.3	684.9	683.6	682.3	680.2	677.3	674.5	671.8	668.9	667.4
45°	642.8	642.0	641.2	640.4	639.6	637.9	635.2	632.7	630.1	627.5	625.1
47.5°	598.2	597.1	595.9	594.8	593.6	591.8	589.4	586.9	584.4	582.0	579.6
50°	568.0	567.0	565.9	565.0	564.0	562.1	559.6	557.0	554.3	551.7	549.6
52.5°	536.2	535.5	534.9	534.2	533.5	531.8	529.0	526.2	523.5	520.7	518.8
55°	487.8	487.5	487.3	487.2	486.9	485.5	482.9	480.4	477.7	475.1	472.9
57.5°	441.6	440.9	440.2	439.5	438.9	437.5	435.4	433.3	431.2	429.1	427.1
60°	408.4	408.2	408.0	407.8	407.6	406.3	403.9	401.5	399.1	396.7	394.9
62.5°	378.8	378.3	377.8	377.3	376.8	375.3	372.9	370.5	368.1	365.7	363.9
65°	332.7	331.7	330.6	329.7	328.6	327.2	325.1	323.1	321.2	319.2	317.5
67.5°	283.8	282.9	282.1	281.1	280.3	279.1	277.6	276.0	274.5	273.0	271.6
70°	254.3	253.0	251.8	250.6	249.4	248.2	247.0	245.8	244.6	243.4	242.0
72.5°	223.3	222.3	221.4	220.6	219.7	218.6	217.2	215.9	214.5	213.1	211.9
75°	175.8	175.0	174.2	173.4	172.6	171.9	171.3	170.7	170.0	169.5	168.5
77.5°	133.8	133.4	132.9	132.5	132.0	131.5	130.7	130.0	129.3	128.5	127.9
80°	106.4	105.8	105.2	104.6	104.0	103.5	103.1	102.7	102.3	101.9	101.7
82.5°	79.7	79.6	79.5	79.3	79.2	79.1	79.0	79.0	78.9	78.8	78.4
85°	46.8	46.5	46.1	45.7	45.3	45.1	45.1	45.1	45.1	45.1	44.7
87.5°	18.8	18.4	18.1	17.7	17.4	17.3	17.3	17.3	17.3	17.3	17.2
90°	0.3	0.9	1.6	2.3	3.0	3.8	4.6	5.5	6.5	7.3	7.6
92.5°	5.7	5.5	5.3	5.1	4.9	5.2	5.8	6.5	7.1	7.7	8.2
95°	18.6	15.8	13.0	10.2	7.5	6.5	7.2	7.9	8.7	9.5	9.9
97.5°	37.3	36.1	34.8	33.6	32.3	29.3	24.4	19.5	14.6	9.8	10.3
100°	51.4	52.8	54.2	55.4	56.8	52.3	41.7	31.2	20.6	10.1	10.6
102.5°	67.5	68.4	69.4	70.4	71.4	66.1	54.6	43.0	31.5	20.1	18.3
105°	90.7	91.4	92.1	92.9	93.7	91.0	84.9	78.8	72.8	66.6	54.7
107.5°	115.1	115.7	116.3	116.9	117.5	118.3	119.2	120.2	121.1	122.1	113.3
110°	131.5	132.0	132.5	133.0	133.6	134.2	135.0	135.7	136.5	137.2	135.0



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.0	147.5	148.0	148.4	149.0	149.6	150.3	151.1	151.8	152.6	152.6
115°	170.0	170.5	170.9	171.3	171.7	172.2	172.8	173.4	174.0	174.6	175.3
117.5°	192.4	193.0	193.4	193.9	194.4	194.8	195.1	195.4	195.8	196.0	196.6
120°	206.3	206.9	207.5	208.1	208.7	209.1	209.3	209.6	209.7	209.9	210.5
122.5°	220.4	220.9	221.4	221.9	222.4	222.7	223.0	223.3	223.5	223.8	224.2
125°	239.8	240.3	240.8	241.3	241.9	242.3	242.6	242.9	243.1	243.4	243.6
127.5°	258.5	259.1	259.6	260.1	260.6	261.1	261.4	261.7	262.1	262.3	262.6
130°	270.2	270.7	271.2	271.8	272.3	272.8	273.0	273.3	273.5	273.8	274.1
132.5°	281.4	281.9	282.5	283.0	283.5	283.9	284.1	284.4	284.6	284.8	285.1
135°	298.5	298.9	299.3	299.7	300.1	300.4	300.7	301.0	301.3	301.5	301.7
137.5°	313.1	313.6	314.1	314.6	315.1	315.5	315.6	315.7	315.9	316.1	316.4
140°	322.8	323.2	323.6	324.0	324.4	324.8	324.9	325.1	325.4	325.5	325.8
142.5°	331.8	332.3	332.6	333.0	333.5	333.7	334.0	334.2	334.3	334.6	334.8
145°	344.4	344.9	345.3	345.9	346.3	346.6	346.7	346.9	347.0	347.2	347.3
147.5°	356.3	356.6	356.9	357.2	357.5	357.7	357.9	358.0	358.2	358.3	358.4
150°	363.6	363.8	363.9	364.2	364.4	364.5	364.7	364.8	365.0	365.1	365.2
152.5°	370.1	370.2	370.3	370.4	370.5	370.7	370.7	370.7	370.8	370.9	371.2
155°	379.4	379.3	379.1	379.0	378.8	378.8	378.9	378.9	379.0	379.1	379.4
157.5°	386.6	386.6	386.6	386.5	386.5	386.5	386.4	386.3	386.2	386.2	386.6
160°	391.0	390.9	390.8	390.7	390.7	390.6	390.5	390.5	390.5	390.4	390.7
162.5°	395.1	394.9	394.8	394.6	394.4	394.3	394.2	394.2	394.1	394.0	394.4
165°	400.1	399.8	399.7	399.5	399.2	399.2	399.1	399.0	398.9	398.9	399.4
167.5°	404.0	403.7	403.5	403.2	402.9	402.8	402.8	402.8	402.8	402.8	403.3
170°	406.1	405.9	405.6	405.4	405.1	404.9	404.9	404.9	404.9	404.9	405.5
172.5°	407.6	407.3	407.0	406.7	406.3	406.2	406.2	406.3	406.4	406.4	407.0
175°	409.5	409.1	408.8	408.5	408.2	408.0	408.1	408.2	408.2	408.3	408.8
177.5°	410.0	409.7	409.5	409.2	408.9	408.8	408.9	408.9	409.0	409.1	409.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1044.5	1046.1	1047.7	1048.4	1048.3	1048.1	1047.9	1047.8
5°	1039.0	1040.9	1043.0	1043.8	1043.4	1043.0	1042.6	1042.2
7.5°	1027.9	1029.8	1031.6	1032.3	1032.1	1031.8	1031.6	1031.4
10°	1017.9	1019.6	1021.4	1022.2	1021.7	1021.3	1021.0	1020.5
12.5°	1006.8	1008.1	1009.4	1010.0	1009.7	1009.4	1009.3	1009.0
15°	986.8	988.3	990.0	990.2	988.9	987.7	986.6	985.4
17.5°	961.5	962.6	963.7	964.1	963.6	963.2	962.8	962.3
20°	942.8	943.6	944.4	944.5	943.9	943.3	942.7	942.1
22.5°	923.0	923.7	924.3	924.2	923.5	922.7	922.0	921.2
25°	890.2	890.4	890.6	890.4	889.8	889.2	888.6	888.0
27.5°	855.3	855.5	855.7	855.3	854.6	853.9	853.1	852.3
30°	831.2	831.2	831.2	830.5	829.1	827.7	826.3	824.9
32.5°	805.9	804.8	803.7	802.7	801.9	801.2	800.4	799.7
35°	764.8	763.6	762.4	761.3	760.3	759.3	758.3	757.2
37.5°	722.3	720.8	719.5	718.4	717.7	717.1	716.4	715.8
40°	694.6	693.0	691.4	690.2	689.4	688.5	687.8	687.0
42.5°	665.7	664.1	662.5	661.3	660.6	659.7	658.9	658.1
45°	622.7	620.3	617.9	616.1	615.2	614.2	613.1	612.2
47.5°	577.3	575.0	572.6	570.9	570.1	569.2	568.3	567.4
50°	547.3	545.1	542.9	541.2	540.0	538.8	537.6	536.4
52.5°	516.9	515.1	513.2	511.7	510.5	509.3	508.1	506.9
55°	470.7	468.5	466.3	464.7	463.6	462.7	461.7	460.7
57.5°	425.2	423.3	421.3	419.7	418.5	417.4	416.2	415.1
60°	393.0	391.2	389.4	388.1	387.0	386.1	385.0	384.1
62.5°	362.1	360.2	358.4	357.2	356.5	355.9	355.2	354.5
65°	315.9	314.4	312.7	311.6	311.0	310.4	309.8	309.2
67.5°	270.2	268.8	267.3	266.2	265.4	264.6	263.7	262.9
70°	240.6	239.2	237.8	236.6	235.6	234.6	233.6	232.6
72.5°	210.6	209.4	208.2	207.2	206.7	206.2	205.7	205.2
75°	167.5	166.5	165.5	164.7	164.1	163.5	162.9	162.3
77.5°	127.2	126.5	125.8	125.5	125.5	125.5	125.5	125.5
80°	101.5	101.3	101.1	101.0	101.0	101.0	101.0	101.0
82.5°	78.1	77.7	77.3	77.1	77.0	76.8	76.6	76.5
85°	44.3	43.9	43.5	43.3	43.3	43.3	43.3	43.3
87.5°	17.1	17.0	16.9	16.9	16.9	16.9	17.0	17.0
90°	7.8	8.1	8.4	8.6	8.7	8.9	9.0	9.1
92.5°	8.7	9.1	9.6	9.8	9.8	9.9	10.0	10.1
95°	10.4	10.8	11.4	11.5	11.5	11.5	11.5	11.5
97.5°	10.8	11.5	12.0	12.2	12.3	12.4	12.5	12.6
100°	11.1	11.6	12.2	12.5	12.6	12.7	12.7	12.7
102.5°	16.7	15.0	13.3	12.6	12.7	12.7	12.9	13.0
105°	42.7	30.7	18.8	12.8	13.0	13.1	13.3	13.3
107.5°	104.6	95.8	87.0	78.1	69.1	60.1	51.1	42.0
110°	132.8	130.5	128.3	122.3	112.7	103.0	93.3	83.7



TEST NUMBER: P331961-935

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	152.7	152.7	152.7	151.7	149.6	147.7	145.6	143.5
115°	176.0	176.7	177.4	177.8	178.1	178.4	178.7	178.9
117.5°	197.2	197.7	198.2	198.5	198.5	198.6	198.7	198.7
120°	211.0	211.5	212.1	212.4	212.4	212.4	212.4	212.4
122.5°	224.5	225.0	225.3	225.5	225.6	225.7	225.7	225.8
125°	243.7	243.8	243.9	244.1	244.2	244.4	244.5	244.6
127.5°	262.8	263.0	263.3	263.3	263.1	263.0	262.9	262.8
130°	274.4	274.7	274.9	275.0	274.8	274.7	274.6	274.4
132.5°	285.3	285.6	285.9	285.9	285.7	285.5	285.3	285.2
135°	302.0	302.1	302.3	302.3	302.1	302.0	301.7	301.5
137.5°	316.7	317.0	317.4	317.5	317.3	317.2	317.0	316.9
140°	326.1	326.3	326.7	326.7	326.6	326.4	326.3	326.1
142.5°	335.0	335.2	335.4	335.4	335.3	335.0	334.8	334.7
145°	347.4	347.6	347.7	347.8	347.8	347.8	347.8	347.8
147.5°	358.5	358.7	358.9	358.8	358.4	358.1	357.8	357.5
150°	365.4	365.5	365.7	365.6	365.4	365.2	365.0	364.8
152.5°	371.4	371.7	372.0	371.9	371.6	371.3	370.9	370.7
155°	379.8	380.1	380.5	380.4	380.0	379.6	379.2	378.8
157.5°	387.0	387.4	387.9	387.8	387.3	386.8	386.2	385.6
160°	391.2	391.6	392.0	391.9	391.5	391.0	390.5	390.0
162.5°	394.9	395.4	395.8	395.9	395.5	395.0	394.6	394.2
165°	399.9	400.5	401.1	401.1	400.6	400.1	399.7	399.2
167.5°	403.8	404.4	404.9	404.9	404.4	403.8	403.3	402.8
170°	406.0	406.6	407.1	407.1	406.6	406.0	405.5	404.9
172.5°	407.5	408.0	408.5	408.5	407.9	407.3	406.7	406.1
175°	409.2	409.7	410.2	410.2	409.7	409.1	408.5	408.0
177.5°	409.9	410.4	410.8	410.7	410.2	409.7	409.1	408.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5

(END OF REPORT)