

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: P331979-935

Luminaire Tested: **S123DIP-S775D805U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331979-935  
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-S775D805U935-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5493.8 lumens  
Efficiency: N/A  
Efficacy: 119.7 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: General Diffuse

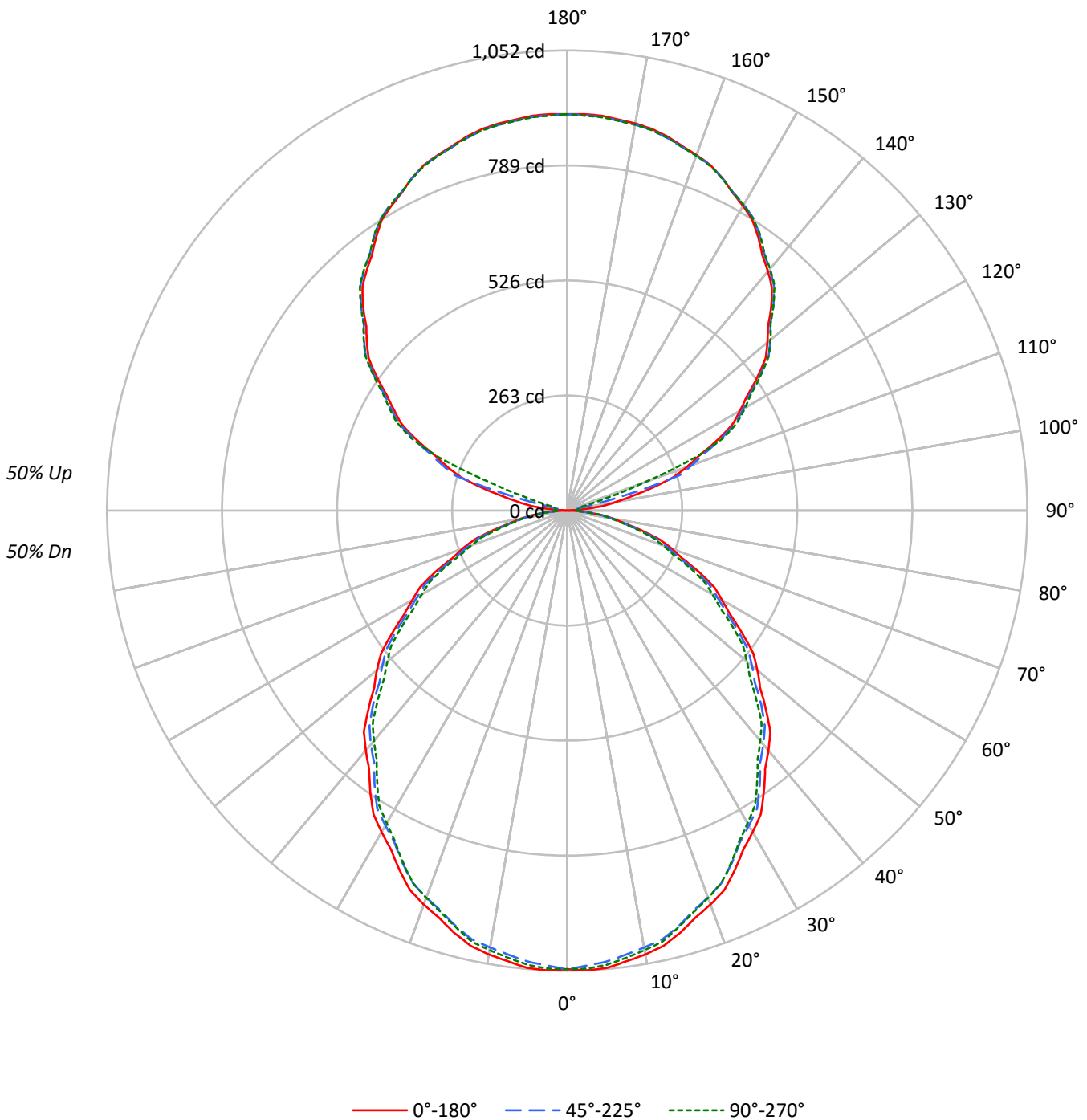
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	56	56	56	50
1	98	93	89	86	90	86	83	80	73	70	68	61	59	57	49	48	47	47	47	47	42
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	40	40	40	40	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	34	34	34	30
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	29	29	29	25
5	68	56	48	42	62	52	45	40	45	39	35	38	33	30	31	28	25	25	25	25	22
6	63	51	42	37	58	47	40	34	40	35	30	34	30	26	28	25	22	22	22	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	26	22	20	20	20	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	18	18	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	16	16	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	14	14	14	13

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.8	1.8
10°-20°	278.9	5.1
20°-30°	411.9	7.5
30°-40°	481.2	8.8
40°-50°	483.8	8.8
50°-60°	425.0	7.7
60°-70°	316.6	5.8
70°-80°	180.4	3.3
80°-90°	54.3	1.0
90°-100°	32.9	0.6
100°-110°	157.0	2.9
110°-120°	377.1	6.9
120°-130°	480.2	8.7
130°-140°	513.1	9.3
140°-150°	479.8	8.7
150°-160°	387.0	7.0
160°-170°	249.8	4.5
170°-180°	86.1	1.6
0°-30°	789.6	14.4
0°-40°	1270.8	23.1
0°-60°	2179.5	39.7
0°-90°	2730.8	49.7
90°-120°	567.0	10.3
90°-150°	2040.1	37.1
90°-180°	2763.0	50.3
0°-180°	5493.8	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°	1	8	16	19	20	4
95°	41	15	21	25	26	51
105°	201	204	147	35	30	213
115°	376	380	386	393	396	371
125°	530	536	538	540	541	474
135°	660	664	667	669	667	508
145°	762	766	768	769	769	477
155°	839	838	839	842	838	387
165°	885	883	882	887	883	250
175°	906	903	903	907	903	86
180°	906	906	906	906	906	



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**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°	18.9	18.7	18.5	18.3	18.2	18.2	18.4	18.7	18.9	19.1	19.0
90°	0.7	2.2	3.7	5.2	6.6	8.4	10.3	12.2	14.2	16.2	16.8
92.5°	12.5	12.1	11.7	11.3	10.8	11.4	12.8	14.3	15.8	17.2	18.2
95°	41.1	35.0	28.8	22.6	16.5	14.3	15.9	17.6	19.2	20.8	22.0
97.5°	82.5	79.8	77.1	74.3	71.5	64.7	54.0	43.2	32.5	21.7	22.9
100°	113.7	116.8	119.8	122.7	125.7	115.5	92.2	68.9	45.5	22.2	23.4
102.5°	149.3	151.4	153.6	155.8	157.9	146.3	120.8	95.2	69.7	44.3	40.6
105°	200.6	202.2	203.9	205.5	207.2	201.3	187.8	174.4	160.8	147.4	121.0
107.5°	254.7	256.1	257.4	258.6	259.9	261.7	263.8	266.0	268.0	270.2	250.8
110°	290.8	292.0	293.2	294.4	295.6	297.0	298.7	300.3	302.0	303.6	298.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.3	326.3	327.4	328.5	329.6	330.9	332.6	334.2	335.9	337.5	337.6
115°	376.3	377.2	378.1	379.0	379.9	381.0	382.4	383.7	385.0	386.4	387.9
117.5°	425.7	426.8	427.9	429.0	430.1	431.0	431.7	432.4	433.1	433.8	435.0
120°	456.4	457.7	459.1	460.4	461.8	462.7	463.1	463.6	464.0	464.4	465.6
122.5°	487.6	488.7	489.8	490.9	492.1	492.8	493.4	494.0	494.6	495.2	496.0
125°	530.5	531.6	532.8	534.0	535.2	536.1	536.7	537.3	537.9	538.5	538.8
127.5°	571.9	573.1	574.3	575.5	576.7	577.6	578.3	579.1	579.8	580.5	581.0
130°	597.7	598.9	600.1	601.3	602.5	603.4	604.0	604.6	605.2	605.8	606.4
132.5°	622.5	623.7	624.9	626.1	627.3	628.1	628.6	629.0	629.6	630.1	630.7
135°	660.3	661.2	662.1	663.1	663.9	664.7	665.3	665.9	666.5	667.1	667.5
137.5°	692.7	693.8	694.9	696.0	697.2	697.9	698.3	698.6	698.9	699.2	700.0
140°	714.2	715.1	716.0	716.9	717.8	718.4	718.9	719.4	719.8	720.2	720.8
142.5°	734.1	735.0	735.9	736.8	737.7	738.4	738.8	739.3	739.7	740.2	740.6
145°	762.0	763.0	764.1	765.1	766.2	766.8	767.2	767.4	767.8	768.0	768.4
147.5°	788.2	788.9	789.6	790.3	791.0	791.5	791.8	792.0	792.4	792.6	793.0
150°	804.3	804.9	805.3	805.7	806.2	806.6	806.8	807.2	807.4	807.8	808.0
152.5°	818.9	819.2	819.3	819.6	819.8	819.9	820.1	820.3	820.5	820.7	821.2
155°	839.4	839.1	838.8	838.5	838.2	838.1	838.3	838.4	838.5	838.7	839.5
157.5°	855.2	855.2	855.2	855.1	855.1	855.1	854.9	854.8	854.6	854.5	855.4
160°	865.0	864.8	864.7	864.5	864.4	864.2	864.1	863.9	863.8	863.6	864.5
162.5°	874.1	873.7	873.3	873.0	872.5	872.3	872.1	872.0	871.8	871.7	872.7
165°	885.2	884.7	884.2	883.8	883.4	883.0	883.0	882.8	882.6	882.4	883.6
167.5°	893.8	893.2	892.6	892.0	891.4	891.0	891.0	891.0	891.0	891.0	892.3
170°	898.6	898.0	897.4	896.8	896.2	896.0	896.0	896.0	896.0	896.0	897.2
172.5°	901.8	901.1	900.4	899.7	899.0	898.7	898.8	898.9	899.1	899.1	900.3
175°	906.0	905.3	904.6	903.8	903.0	902.8	902.8	903.0	903.2	903.4	904.4
177.5°	907.1	906.5	905.9	905.3	904.7	904.5	904.6	904.7	904.8	904.9	905.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0



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**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°	19.0	18.9	18.9	18.9	19.0	19.0	19.1	19.2
90°	17.4	17.9	18.5	19.0	19.3	19.6	19.9	20.2
92.5°	19.1	20.1	21.1	21.6	21.8	22.0	22.1	22.4
95°	23.0	24.0	25.1	25.6	25.6	25.6	25.6	25.6
97.5°	24.1	25.2	26.4	27.1	27.3	27.5	27.6	27.7
100°	24.6	25.8	27.0	27.6	27.8	28.0	28.2	28.2
102.5°	36.9	33.1	29.4	27.7	28.0	28.2	28.5	28.8
105°	94.5	68.0	41.5	28.4	28.8	29.0	29.4	29.6
107.5°	231.4	212.0	192.5	172.8	152.9	132.9	113.0	93.0
110°	293.7	288.8	283.9	270.7	249.3	227.9	206.5	185.1





TEST NUMBER: P331979-935

CATALOG NUMBER: S123DIP-S775D805U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.7	337.8	337.9	335.6	331.1	326.6	322.1	317.6
115°	389.3	390.9	392.4	393.4	394.0	394.6	395.2	395.8
117.5°	436.2	437.4	438.5	439.2	439.4	439.5	439.5	439.7
120°	466.8	468.0	469.2	469.8	469.8	469.8	469.8	469.8
122.5°	496.8	497.7	498.5	498.9	499.1	499.2	499.4	499.5
125°	539.1	539.4	539.7	540.0	540.3	540.6	540.9	541.2
127.5°	581.4	581.9	582.4	582.5	582.2	581.9	581.6	581.3
130°	607.0	607.6	608.2	608.4	608.0	607.8	607.4	607.2
132.5°	631.2	631.8	632.4	632.5	632.1	631.7	631.3	630.9
135°	668.0	668.4	668.8	668.8	668.4	668.0	667.5	667.1
137.5°	700.7	701.4	702.1	702.3	702.1	701.7	701.5	701.1
140°	721.4	722.0	722.6	722.8	722.5	722.2	721.9	721.6
142.5°	741.1	741.6	742.1	742.1	741.7	741.2	740.9	740.5
145°	768.6	769.0	769.2	769.4	769.4	769.4	769.4	769.4
147.5°	793.2	793.6	793.8	793.7	793.0	792.3	791.6	790.9
150°	808.3	808.7	808.9	808.9	808.4	808.0	807.5	807.1
152.5°	821.7	822.3	822.9	822.8	822.1	821.4	820.7	820.0
155°	840.2	840.9	841.7	841.6	840.8	839.8	839.0	838.0
157.5°	856.3	857.1	858.1	857.9	856.8	855.6	854.5	853.3
160°	865.4	866.3	867.2	867.1	866.1	865.0	864.0	863.0
162.5°	873.7	874.8	875.7	875.8	874.9	873.9	873.1	872.1
165°	884.8	886.1	887.3	887.3	886.3	885.2	884.2	883.1
167.5°	893.5	894.7	895.9	895.9	894.7	893.5	892.3	891.0
170°	898.3	899.5	900.7	900.7	899.5	898.3	897.2	896.0
172.5°	901.6	902.8	904.0	903.9	902.6	901.3	899.9	898.6
175°	905.4	906.5	907.5	907.4	906.3	905.1	903.9	902.7
177.5°	906.9	907.8	908.8	908.7	907.5	906.3	905.1	903.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0

(END OF REPORT)