

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: P331997-930

Luminaire Tested: **S123DIP-S775D1195U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331997-930
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-S775D1195U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6475.1 lumens
Efficiency: N/A
Efficacy: 113.8 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-Indirect

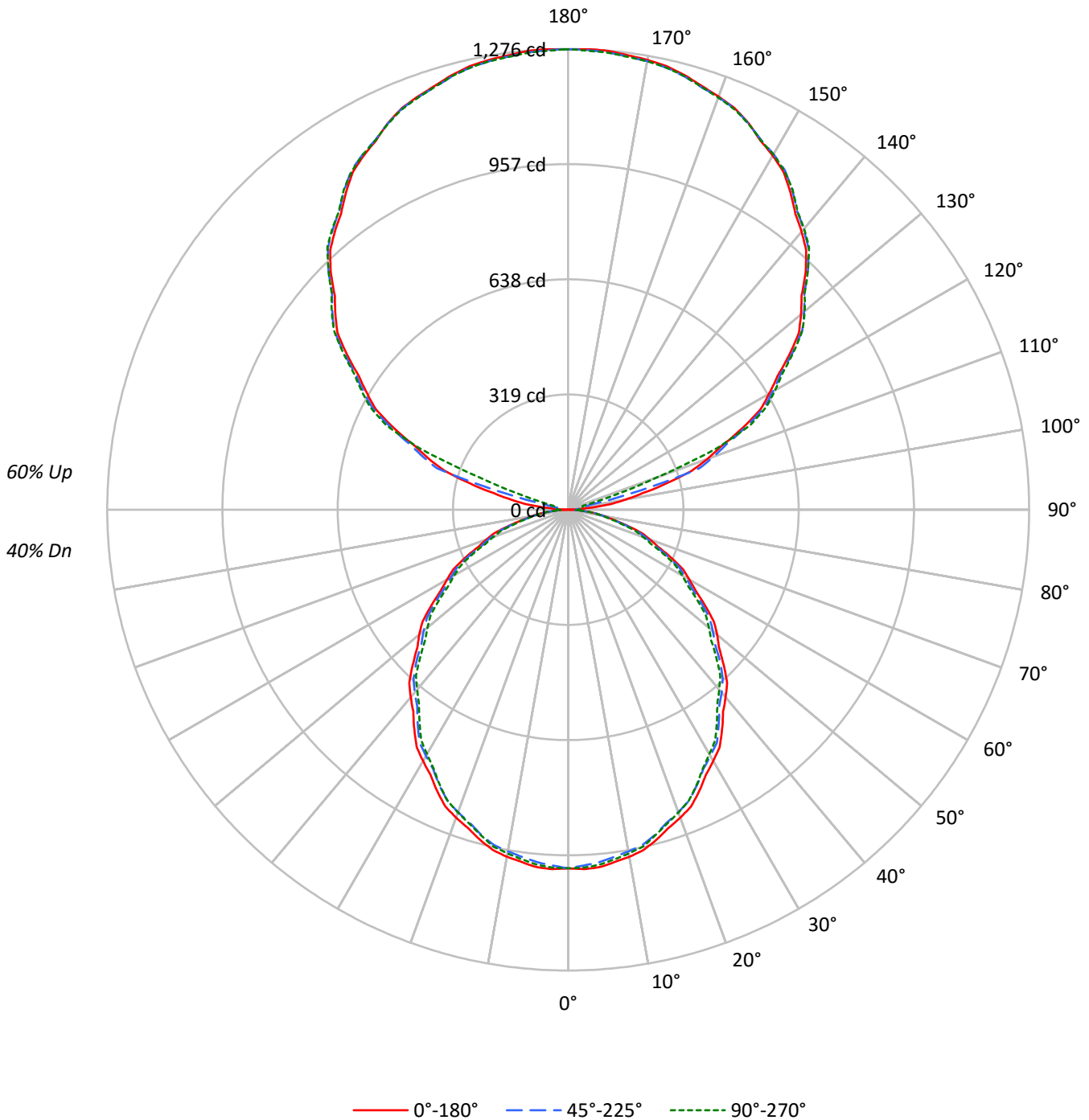
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	91	87	84	87	83	80	77	68	66	64	54	53	51	41	40	39	34
2	87	80	74	68	79	73	67	63	60	56	53	47	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	19	15
7	56	44	37	31	51	41	34	29	34	29	25	27	23	21	21	19	16	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10687	10687	10687
5°	10737	10589	10662
10°	10665	10497	10563
15°	10541	10379	10398
20°	10394	10208	10219
25°	10200	10007	9987
30°	9984	9783	9708
35°	9759	9546	9423
40°	9524	9284	9140
45°	9266	9045	8824
50°	9008	8748	8505
55°	8668	8443	8188
60°	8325	8086	7830
65°	8023	7697	7457
70°	7578	7254	6930
75°	6924	6675	6392
80°	6248	5976	5926
85°	5483	5274	5064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	1.4
10°-20°	264.1	4.1
20°-30°	390.1	6.0
30°-40°	455.7	7.0
40°-50°	458.1	7.1
50°-60°	402.4	6.2
60°-70°	299.8	4.6
70°-80°	170.8	2.6
80°-90°	52.6	0.8
90°-100°	46.4	0.7
100°-110°	220.9	3.4
110°-120°	530.6	8.2
120°-130°	675.7	10.4
130°-140°	722.0	11.2
140°-150°	675.1	10.4
150°-160°	544.6	8.4
160°-170°	351.5	5.4
170°-180°	121.1	1.9
0°-30°	747.7	11.5
0°-40°	1203.3	18.6
0°-60°	2063.8	31.9
0°-90°	2587.0	40.0
90°-120°	797.9	12.3
90°-150°	2870.8	44.3
90°-180°	3888.0	60.0
0°-180°	6475.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	994	989	980	988	987	94
15°	946	942	931	938	933	267
25°	859	853	843	843	841	395
35°	743	737	726	721	717	464
45°	609	605	594	584	580	470
55°	462	460	450	441	436	414
65°	315	310	302	296	293	311
75°	166	163	160	156	154	178
85°	44	43	43	41	41	49
90°	1	11	23	26	28	5
95°	58	22	29	36	36	71
105°	282	287	207	49	42	299
115°	530	535	544	553	557	522
125°	746	754	758	760	762	666
135°	929	935	939	941	939	715
145°	1072	1079	1081	1083	1083	671
155°	1181	1179	1180	1184	1179	544
165°	1246	1243	1242	1249	1243	352
175°	1275	1270	1271	1277	1270	121
180°	1275	1275	1275	1275	1275	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	996.2	995.6	995.1	994.4	993.8	992.7	991.0	989.4	987.7	986.0	987.5
5°	993.7	992.7	991.8	990.8	989.9	988.4	986.3	984.2	982.1	980.0	981.9
7.5°	984.0	983.0	982.0	981.1	980.2	978.6	976.4	974.3	972.1	970.0	971.7
10°	975.8	974.8	973.9	972.9	972.0	970.3	967.8	965.3	962.9	960.4	962.1
12.5°	964.8	964.0	963.3	962.5	961.6	960.1	957.8	955.4	953.2	950.8	952.1
15°	945.9	945.1	944.4	943.6	942.8	941.3	938.7	936.3	933.8	931.4	932.9
17.5°	923.8	922.8	921.9	920.9	919.9	918.2	915.7	913.2	910.8	908.3	909.4
20°	907.4	906.3	905.2	904.1	902.9	901.1	898.6	896.2	893.7	891.2	892.0
22.5°	889.0	887.9	886.7	885.6	884.4	882.6	880.2	877.8	875.3	872.8	873.4
25°	858.8	857.7	856.6	855.4	854.3	852.5	849.9	847.5	845.1	842.6	842.8
27.5°	826.6	825.4	824.3	823.2	822.1	820.3	817.6	815.0	812.3	809.6	809.8
30°	803.3	802.3	801.4	800.5	799.5	797.7	795.1	792.4	789.8	787.1	787.1
32.5°	780.1	778.9	777.6	776.3	775.1	773.5	771.4	769.3	767.3	765.2	764.2
35°	742.7	741.6	740.5	739.3	738.2	736.4	733.9	731.4	729.0	726.5	725.4
37.5°	704.4	703.0	701.6	700.1	698.7	696.8	694.2	691.7	689.2	686.7	685.3
40°	677.8	676.7	675.6	674.4	673.3	671.4	668.7	666.1	663.4	660.7	659.3
42.5°	651.2	649.9	648.6	647.3	646.0	644.1	641.4	638.7	636.1	633.4	631.9
45°	608.7	607.9	607.2	606.4	605.6	604.1	601.5	599.1	596.6	594.2	591.9
47.5°	566.5	565.4	564.3	563.2	562.1	560.4	558.1	555.8	553.4	551.1	548.9
50°	537.9	536.9	535.9	535.0	534.0	532.3	529.9	527.4	524.9	522.4	520.4
52.5°	507.8	507.1	506.5	505.8	505.2	503.5	500.9	498.3	495.7	493.1	491.3
55°	461.9	461.6	461.5	461.3	461.1	459.7	457.3	454.9	452.3	449.9	447.8
57.5°	418.2	417.5	416.9	416.2	415.6	414.3	412.3	410.3	408.3	406.3	404.5
60°	386.7	386.5	386.4	386.1	386.0	384.7	382.5	380.2	377.9	375.6	373.9
62.5°	358.7	358.2	357.8	357.3	356.8	355.4	353.1	350.8	348.5	346.3	344.5
65°	315.0	314.1	313.1	312.2	311.2	309.8	307.9	306.0	304.1	302.2	300.7
67.5°	268.7	267.9	267.1	266.2	265.4	264.2	262.9	261.4	259.9	258.5	257.1
70°	240.8	239.6	238.5	237.3	236.2	235.1	233.9	232.8	231.6	230.5	229.2
72.5°	211.4	210.5	209.7	208.9	208.1	207.0	205.7	204.4	203.1	201.8	200.6
75°	166.5	165.7	164.9	164.2	163.5	162.7	162.2	161.6	161.0	160.5	159.6
77.5°	126.7	126.3	125.9	125.5	125.0	124.5	123.8	123.1	122.5	121.7	121.1
80°	100.8	100.2	99.6	99.1	98.5	98.0	97.6	97.3	96.9	96.4	96.3
82.5°	75.5	75.3	75.3	75.1	75.0	74.9	74.8	74.8	74.7	74.6	74.3
85°	44.4	44.0	43.6	43.3	42.9	42.7	42.7	42.7	42.7	42.7	42.3
87.5°	17.9	17.9	17.9	17.9	17.8	18.0	18.3	18.8	19.2	19.6	19.6
90°	1.0	3.0	5.1	7.3	9.4	11.8	14.5	17.3	20.0	22.7	23.6
92.5°	17.6	17.0	16.5	15.8	15.2	16.0	18.1	20.1	22.2	24.2	25.6
95°	57.8	49.2	40.5	31.9	23.2	20.1	22.4	24.7	27.1	29.4	30.8
97.5°	116.1	112.3	108.4	104.5	100.6	91.2	76.0	60.8	45.7	30.5	32.2
100°	160.0	164.3	168.5	172.7	176.9	162.6	129.8	96.9	64.1	31.2	32.9
102.5°	210.1	213.1	216.1	219.2	222.3	205.8	169.9	134.0	98.2	62.3	57.1
105°	282.3	284.6	286.9	289.2	291.6	283.2	264.2	245.3	226.4	207.4	170.2
107.5°	358.4	360.3	362.2	363.9	365.8	368.3	371.3	374.2	377.2	380.3	352.9
110°	409.2	410.9	412.5	414.3	416.0	417.9	420.3	422.6	424.9	427.2	420.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	457.7	459.2	460.7	462.3	463.7	465.7	468.0	470.3	472.6	474.9	475.1
115°	529.5	530.8	532.0	533.3	534.5	536.1	538.0	539.9	541.8	543.7	545.8
117.5°	599.0	600.5	602.1	603.7	605.3	606.5	607.5	608.5	609.4	610.4	612.0
120°	642.2	644.1	646.0	647.9	649.8	651.1	651.7	652.3	653.0	653.5	655.3
122.5°	686.2	687.7	689.3	690.8	692.4	693.6	694.4	695.2	695.9	696.8	698.0
125°	746.4	748.1	749.7	751.5	753.2	754.4	755.2	756.1	756.9	757.7	758.2
127.5°	804.8	806.4	808.1	809.8	811.5	812.9	813.8	814.9	815.9	816.8	817.6
130°	841.1	842.9	844.5	846.2	847.8	849.1	849.9	850.8	851.7	852.5	853.4
132.5°	876.0	877.7	879.4	881.0	882.7	883.9	884.6	885.3	885.9	886.6	887.5
135°	929.2	930.5	931.7	933.0	934.3	935.3	936.2	937.0	937.8	938.7	939.3
137.5°	974.7	976.3	977.9	979.5	981.1	982.1	982.6	983.1	983.5	984.0	985.0
140°	1005.0	1006.2	1007.5	1008.8	1010.1	1011.0	1011.6	1012.3	1012.9	1013.5	1014.4
142.5°	1033.1	1034.3	1035.6	1036.8	1038.1	1039.0	1039.7	1040.3	1041.0	1041.5	1042.3
145°	1072.3	1073.7	1075.2	1076.7	1078.2	1079.1	1079.5	1079.9	1080.4	1080.8	1081.2
147.5°	1109.2	1110.2	1111.2	1112.1	1113.0	1113.8	1114.2	1114.6	1115.0	1115.4	1115.9
150°	1132.0	1132.5	1133.2	1133.8	1134.5	1135.0	1135.4	1135.8	1136.3	1136.7	1137.1
152.5°	1152.4	1152.7	1153.0	1153.2	1153.6	1153.8	1154.1	1154.4	1154.6	1154.9	1155.6
155°	1181.2	1180.8	1180.3	1179.9	1179.5	1179.4	1179.6	1179.8	1180.1	1180.2	1181.3
157.5°	1203.5	1203.5	1203.5	1203.4	1203.4	1203.2	1203.1	1202.8	1202.6	1202.4	1203.7
160°	1217.2	1217.0	1216.8	1216.6	1216.3	1216.1	1215.9	1215.7	1215.5	1215.3	1216.6
162.5°	1230.0	1229.6	1229.0	1228.4	1227.8	1227.5	1227.3	1227.1	1226.9	1226.6	1228.1
165°	1245.6	1245.0	1244.3	1243.7	1243.1	1242.7	1242.4	1242.2	1242.0	1241.8	1243.5
167.5°	1257.8	1256.9	1256.1	1255.2	1254.3	1253.9	1253.9	1253.9	1253.9	1253.9	1255.6
170°	1264.5	1263.7	1262.9	1262.0	1261.2	1260.8	1260.8	1260.8	1260.8	1260.8	1262.4
172.5°	1269.1	1268.1	1267.1	1266.1	1265.0	1264.6	1264.8	1264.9	1265.1	1265.3	1267.0
175°	1275.0	1273.9	1272.8	1271.8	1270.7	1270.3	1270.6	1270.7	1271.0	1271.1	1272.7
177.5°	1276.5	1275.6	1274.8	1274.0	1273.1	1272.8	1272.9	1273.1	1273.3	1273.4	1274.8
180°	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	989.0	990.6	992.1	992.8	992.6	992.5	992.3	992.1
5°	983.8	985.7	987.7	988.4	988.0	987.7	987.2	986.8
7.5°	973.4	975.1	976.8	977.5	977.3	977.1	976.8	976.6
10°	963.8	965.5	967.2	967.9	967.5	967.1	966.8	966.4
12.5°	953.3	954.6	955.9	956.3	956.1	955.9	955.7	955.4
15°	934.4	935.9	937.4	937.6	936.5	935.3	934.3	933.1
17.5°	910.4	911.5	912.6	912.9	912.5	912.1	911.7	911.3
20°	892.8	893.5	894.3	894.4	893.8	893.2	892.7	892.1
22.5°	874.0	874.7	875.2	875.1	874.5	873.8	873.0	872.3
25°	842.9	843.2	843.3	843.2	842.6	842.0	841.5	840.9
27.5°	809.9	810.1	810.2	809.9	809.3	808.5	807.8	807.1
30°	787.1	787.1	787.1	786.4	785.1	783.7	782.4	781.1
32.5°	763.1	762.1	761.0	760.1	759.4	758.6	757.9	757.2
35°	724.2	723.1	721.9	720.9	719.9	719.0	718.0	717.1
37.5°	684.0	682.6	681.3	680.3	679.6	679.1	678.4	677.8
40°	657.7	656.2	654.7	653.5	652.8	652.0	651.3	650.5
42.5°	630.4	628.8	627.4	626.2	625.5	624.7	623.9	623.2
45°	589.6	587.3	585.1	583.4	582.5	581.6	580.6	579.7
47.5°	546.7	544.5	542.2	540.6	539.8	539.0	538.2	537.3
50°	518.3	516.2	514.1	512.5	511.4	510.2	509.1	507.9
52.5°	489.5	487.7	485.9	484.5	483.4	482.2	481.1	480.0
55°	445.7	443.6	441.6	440.0	439.0	438.1	437.2	436.3
57.5°	402.6	400.8	398.9	397.5	396.3	395.3	394.1	393.1
60°	372.2	370.5	368.8	367.5	366.5	365.6	364.6	363.7
62.5°	342.8	341.1	339.4	338.3	337.6	337.0	336.3	335.7
65°	299.1	297.7	296.1	295.1	294.5	293.9	293.3	292.8
67.5°	255.8	254.5	253.2	252.1	251.4	250.5	249.7	248.9
70°	227.9	226.5	225.2	224.0	223.1	222.2	221.2	220.2
72.5°	199.4	198.3	197.1	196.2	195.8	195.3	194.8	194.3
75°	158.6	157.7	156.7	156.0	155.4	154.8	154.3	153.7
77.5°	120.4	119.8	119.1	118.9	118.9	118.9	118.9	118.9
80°	96.1	95.9	95.7	95.6	95.6	95.6	95.6	95.6
82.5°	73.9	73.6	73.2	73.0	72.9	72.7	72.6	72.4
85°	41.9	41.6	41.2	41.0	41.0	41.0	41.0	41.0
87.5°	19.6	19.6	19.6	19.6	19.8	19.9	20.0	20.1
90°	24.4	25.3	26.1	26.7	27.1	27.6	28.0	28.5
92.5°	26.9	28.3	29.7	30.4	30.7	31.0	31.2	31.5
95°	32.3	33.8	35.2	36.0	36.0	36.0	36.0	36.0
97.5°	33.8	35.5	37.3	38.2	38.4	38.6	38.8	39.1
100°	34.7	36.3	38.0	39.0	39.1	39.4	39.5	39.8
102.5°	51.9	46.6	41.4	39.1	39.4	39.8	40.2	40.5
105°	132.9	95.6	58.4	40.0	40.4	40.8	41.3	41.7
107.5°	325.5	298.2	270.9	243.2	215.2	187.0	159.0	130.9
110°	413.3	406.3	399.4	380.9	350.8	320.7	290.6	260.5



TEST NUMBER: P331997-930

CATALOG NUMBER: S123DIP-S775D1195U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	475.2	475.3	475.5	472.3	465.9	459.6	453.2	446.9
115°	547.9	550.0	552.1	553.6	554.4	555.3	556.1	556.9
117.5°	613.8	615.5	617.1	618.1	618.2	618.4	618.6	618.7
120°	657.0	658.6	660.3	661.1	661.1	661.1	661.1	661.1
122.5°	699.1	700.3	701.5	702.1	702.3	702.5	702.7	702.9
125°	758.6	759.0	759.5	759.9	760.3	760.8	761.2	761.6
127.5°	818.2	818.9	819.5	819.7	819.3	818.9	818.5	818.0
130°	854.2	855.0	855.9	856.1	855.7	855.2	854.8	854.4
132.5°	888.3	889.2	890.0	890.1	889.5	888.9	888.4	887.7
135°	940.0	940.6	941.3	941.3	940.6	940.0	939.3	938.7
137.5°	986.0	987.0	988.0	988.3	987.9	987.5	987.1	986.6
140°	1015.2	1016.0	1016.9	1017.1	1016.7	1016.3	1015.9	1015.5
142.5°	1042.9	1043.6	1044.2	1044.3	1043.7	1043.1	1042.5	1042.0
145°	1081.7	1082.1	1082.5	1082.6	1082.6	1082.6	1082.6	1082.6
147.5°	1116.3	1116.7	1117.1	1116.9	1115.9	1114.9	1113.9	1113.0
150°	1137.5	1137.9	1138.3	1138.2	1137.6	1137.0	1136.4	1135.7
152.5°	1156.3	1157.2	1157.9	1157.8	1156.8	1155.8	1154.9	1153.9
155°	1182.3	1183.4	1184.5	1184.3	1183.1	1181.9	1180.6	1179.3
157.5°	1204.9	1206.2	1207.5	1207.3	1205.7	1204.0	1202.3	1200.7
160°	1217.8	1219.0	1220.3	1220.3	1218.8	1217.3	1215.8	1214.3
162.5°	1229.6	1230.9	1232.4	1232.4	1231.1	1229.8	1228.5	1227.2
165°	1245.2	1246.8	1248.5	1248.6	1247.2	1245.7	1244.2	1242.8
167.5°	1257.3	1259.0	1260.7	1260.7	1259.0	1257.3	1255.6	1253.9
170°	1264.1	1265.8	1267.5	1267.5	1265.8	1264.1	1262.4	1260.8
172.5°	1268.7	1270.3	1272.0	1271.9	1270.1	1268.3	1266.4	1264.5
175°	1274.1	1275.6	1277.1	1276.9	1275.3	1273.6	1271.9	1270.2
177.5°	1276.1	1277.5	1278.8	1278.6	1277.0	1275.3	1273.6	1271.9
180°	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0

(END OF REPORT)