

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: P331999

Luminaire Tested: **S123DIP-S775D1195U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331999
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7491.3 lumens
Efficiency: N/A
Efficacy: 131.7 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

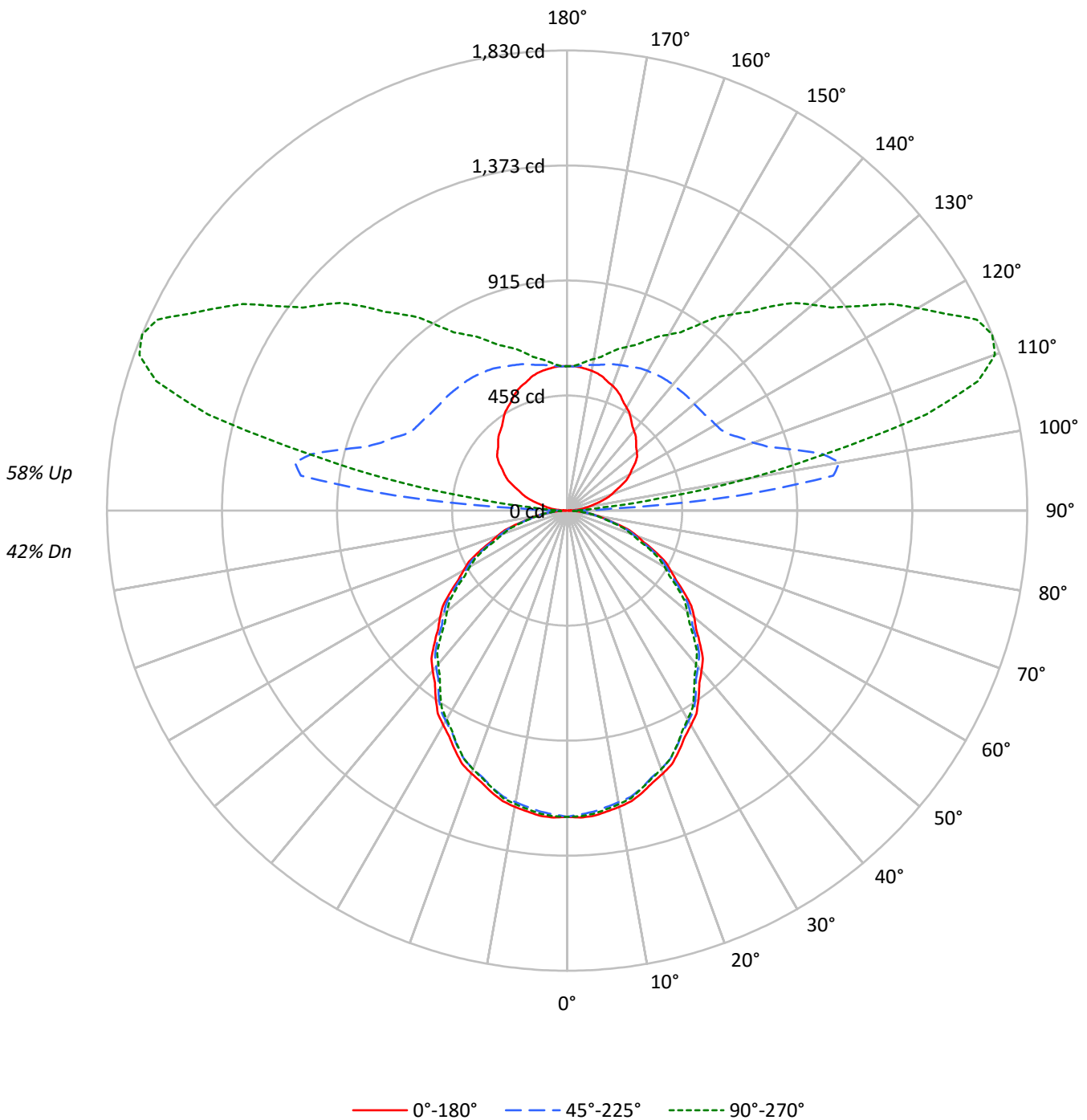
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	34	31	30	25
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	28	25	22
5	67	55	47	41	61	51	44	38	42	37	33	34	31	27	27	24	22	19
6	62	50	42	36	56	46	39	33	38	33	29	31	27	24	25	22	19	16
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	19	17	15
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	21	18	15	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13108	13108	13108
5°	13169	12988	13078
10°	13081	12875	12955
15°	12929	12730	12754
20°	12749	12521	12534
25°	12511	12275	12250
30°	12246	11999	11908
35°	11971	11709	11557
40°	11682	11387	11212
45°	11365	11094	10823
50°	11047	10731	10433
55°	10631	10355	10042
60°	10211	9918	9604
65°	9841	9442	9146
70°	9294	8897	8500
75°	8492	8189	7839
80°	7662	7333	7271
85°	6719	6472	6212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	1.5
10°-20°	323.9	4.3
20°-30°	478.4	6.4
30°-40°	558.9	7.5
40°-50°	561.9	7.5
50°-60°	493.6	6.6
60°-70°	367.7	4.9
70°-80°	209.5	2.8
80°-90°	64.6	0.9
90°-100°	319.4	4.3
100°-110°	904.4	12.1
110°-120°	889.7	11.9
120°-130°	709.7	9.5
130°-140°	559.5	7.5
140°-150°	417.6	5.6
150°-160°	291.1	3.9
160°-170°	171.0	2.3
170°-180°	55.6	0.7
0°-30°	917.1	12.2
0°-40°	1475.9	19.7
0°-60°	2531.4	33.8
0°-90°	3173.2	42.4
90°-120°	2113.6	28.2
90°-150°	3800.4	50.7
90°-180°	4318.0	57.6
0°-180°	7491.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1219	1213	1202	1212	1210	115
15°	1160	1155	1142	1150	1144	327
25°	1053	1047	1034	1034	1031	485
35°	911	904	891	885	880	570
45°	747	742	729	717	711	576
55°	566	565	552	541	535	507
65°	386	381	371	363	359	381
75°	204	200	197	192	188	218
85°	54	52	52	50	50	60
90°	2	14	29	33	34	6
95°	40	128	689	201	135	43
105°	135	199	934	1634	1478	143
115°	238	297	714	1567	1797	236
125°	331	391	667	1208	1418	294
135°	388	463	658	995	1149	300
145°	443	507	650	816	898	277
155°	503	543	629	715	745	231
165°	550	565	602	638	650	155
175°	573	573	577	586	584	54
180°	574	574	574	574	574	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1221.9	1221.2	1220.5	1219.7	1219.0	1217.6	1215.5	1213.5	1211.4	1209.4	1211.2
5°	1218.8	1217.6	1216.5	1215.3	1214.1	1212.3	1209.7	1207.2	1204.6	1202.0	1204.4
7.5°	1206.9	1205.7	1204.5	1203.4	1202.2	1200.3	1197.6	1195.0	1192.3	1189.7	1191.8
10°	1196.8	1195.6	1194.5	1193.3	1192.2	1190.1	1187.0	1184.0	1181.0	1178.0	1180.1
12.5°	1183.4	1182.4	1181.5	1180.5	1179.5	1177.6	1174.8	1171.9	1169.1	1166.2	1167.8
15°	1160.2	1159.2	1158.3	1157.4	1156.4	1154.5	1151.4	1148.4	1145.4	1142.4	1144.2
17.5°	1133.1	1131.9	1130.7	1129.5	1128.3	1126.2	1123.2	1120.1	1117.1	1114.1	1115.4
20°	1113.0	1111.6	1110.3	1108.9	1107.5	1105.2	1102.2	1099.2	1096.2	1093.1	1094.1
22.5°	1090.4	1089.0	1087.6	1086.2	1084.8	1082.6	1079.6	1076.6	1073.6	1070.5	1071.3
25°	1053.4	1052.0	1050.6	1049.2	1047.8	1045.6	1042.5	1039.5	1036.5	1033.5	1033.7
27.5°	1013.8	1012.4	1011.1	1009.7	1008.4	1006.1	1002.8	999.6	996.3	993.0	993.2
30°	985.3	984.1	983.0	981.8	980.6	978.4	975.2	971.9	968.7	965.4	965.4
32.5°	956.8	955.3	953.7	952.2	950.7	948.7	946.1	943.6	941.1	938.6	937.3
35°	911.0	909.6	908.2	906.8	905.4	903.2	900.1	897.1	894.1	891.1	889.7
37.5°	864.0	862.3	860.5	858.7	857.0	854.6	851.5	848.4	845.3	842.3	840.6
40°	831.4	830.0	828.6	827.2	825.8	823.5	820.2	817.0	813.7	810.4	808.6
42.5°	798.7	797.1	795.5	794.0	792.4	790.0	786.7	783.4	780.2	776.9	775.1
45°	746.6	745.6	744.7	743.8	742.8	740.9	737.8	734.8	731.8	728.8	726.0
47.5°	694.8	693.5	692.1	690.8	689.4	687.3	684.5	681.7	678.8	676.0	673.2
50°	659.7	658.5	657.3	656.2	655.0	652.9	649.9	646.9	643.8	640.8	638.3
52.5°	622.8	622.0	621.2	620.4	619.6	617.6	614.4	611.2	608.0	604.8	602.6
55°	566.5	566.2	566.0	565.8	565.5	563.9	560.9	557.9	554.8	551.8	549.3
57.5°	512.9	512.1	511.3	510.5	509.7	508.1	505.7	503.2	500.8	498.4	496.1
60°	474.3	474.1	473.9	473.6	473.4	471.9	469.1	466.3	463.5	460.7	458.6
62.5°	440.0	439.4	438.8	438.2	437.6	435.9	433.1	430.3	427.5	424.7	422.6
65°	386.4	385.2	384.0	382.9	381.7	380.0	377.6	375.3	373.0	370.7	368.8
67.5°	329.6	328.6	327.6	326.5	325.5	324.1	322.4	320.6	318.8	317.1	315.4
70°	295.3	293.9	292.5	291.1	289.7	288.3	286.9	285.5	284.1	282.7	281.1
72.5°	259.3	258.2	257.2	256.2	255.2	253.9	252.3	250.7	249.1	247.5	246.1
75°	204.2	203.2	202.3	201.4	200.5	199.6	198.9	198.2	197.5	196.9	195.7
77.5°	155.4	154.9	154.4	153.9	153.3	152.7	151.8	151.0	150.2	149.3	148.5
80°	123.6	122.9	122.2	121.5	120.8	120.2	119.7	119.3	118.8	118.3	118.1
82.5°	92.6	92.4	92.3	92.1	92.0	91.9	91.8	91.7	91.6	91.5	91.1
85°	54.4	54.0	53.5	53.1	52.6	52.4	52.4	52.4	52.4	52.4	51.9
87.5°	22.2	22.2	22.1	22.2	22.1	22.2	22.7	23.2	23.7	24.2	23.8
90°	2.3	4.6	7.0	10.5	12.8	15.1	18.6	22.1	25.6	29.0	27.9
92.5°	14.4	21.4	31.1	40.2	50.0	67.2	97.6	147.6	196.6	178.7	134.8
95°	39.5	43.0	55.8	75.5	105.7	151.0	249.8	422.9	613.5	689.0	558.8
97.5°	67.4	68.5	78.5	95.7	125.5	174.5	268.9	464.0	781.7	1067.7	1142.3
100°	86.0	87.1	95.3	111.5	139.4	184.7	266.1	438.0	743.6	1100.3	1329.2
102.5°	105.5	107.6	114.8	130.1	155.2	196.8	269.8	415.7	687.8	1039.9	1338.4
105°	134.8	138.3	145.2	159.2	181.2	217.3	280.0	399.7	619.3	934.1	1267.6
107.5°	165.9	169.4	176.1	189.8	210.5	244.0	299.1	398.5	575.6	840.7	1143.5
110°	188.2	191.7	197.5	210.3	230.0	262.6	314.9	403.2	558.8	787.7	1065.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.7	212.2	218.0	230.7	250.5	282.1	330.7	412.5	549.6	752.4	997.6
115°	238.2	242.8	249.8	261.4	281.2	312.5	356.7	427.6	546.1	714.5	915.5
117.5°	267.7	273.0	278.8	289.5	311.6	340.7	384.3	447.5	548.2	692.2	866.0
120°	288.1	291.6	297.4	309.1	331.1	360.2	402.0	462.4	551.9	682.0	840.0
122.5°	305.8	309.3	315.1	327.6	348.8	379.7	420.6	476.4	558.4	675.5	818.6
125°	331.1	333.5	340.4	353.2	375.3	406.6	447.3	498.4	568.1	666.9	791.2
127.5°	350.4	353.9	362.5	375.5	399.9	431.3	470.5	516.6	579.3	662.7	767.1
130°	362.5	366.0	376.4	390.4	414.8	446.1	484.5	528.6	586.7	659.9	754.0
132.5°	371.8	376.2	387.6	404.3	428.7	459.2	496.6	539.8	592.3	659.0	742.0
135°	388.1	392.7	405.5	422.9	447.3	478.7	514.7	554.2	600.7	657.6	726.2
137.5°	403.4	408.3	420.8	439.4	463.6	492.6	527.2	564.9	606.3	655.0	712.4
140°	413.6	419.4	431.0	449.6	472.9	501.9	535.6	570.5	610.0	654.1	704.1
142.5°	424.8	429.7	442.2	458.9	482.2	509.4	542.1	576.0	612.8	652.3	696.6
145°	442.7	446.1	456.6	474.0	493.8	520.5	550.7	582.1	614.6	649.5	686.7
147.5°	460.8	462.9	473.1	488.2	507.3	530.0	557.7	585.8	614.6	645.1	676.9
150°	472.9	474.0	483.3	498.4	514.7	535.6	562.3	586.7	614.6	641.3	670.4
152.5°	485.0	485.2	494.5	507.7	522.1	542.1	565.1	588.6	611.8	636.7	663.0
155°	503.1	503.1	510.1	521.7	534.4	550.7	570.5	589.1	608.8	628.6	651.8
157.5°	517.5	518.4	524.0	534.2	545.1	557.7	573.5	590.2	604.9	621.4	639.2
160°	528.6	528.6	533.3	542.6	550.7	562.3	576.3	590.2	603.0	615.8	630.9
162.5°	537.0	537.0	540.7	548.2	555.4	565.1	577.2	589.3	599.3	610.2	622.5
165°	549.6	548.4	550.7	556.5	561.2	569.3	578.6	586.7	593.7	601.8	611.1
167.5°	559.1	557.7	558.8	563.3	566.5	571.6	578.4	584.9	588.1	593.5	600.2
170°	564.7	562.3	563.5	567.0	569.3	571.6	577.4	582.1	584.4	587.9	593.7
172.5°	568.4	567.0	567.2	569.8	571.2	572.6	577.4	581.2	581.6	583.2	587.2
175°	572.8	571.6	570.5	572.8	572.8	574.0	576.3	578.6	577.4	577.4	579.8
177.5°	574.9	574.0	573.0	574.0	574.0	574.0	574.9	576.7	574.9	574.0	574.9
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1213.1	1215.0	1216.8	1217.7	1217.5	1217.3	1217.1	1216.9
5°	1206.7	1209.0	1211.4	1212.3	1211.8	1211.4	1210.9	1210.4
7.5°	1193.9	1196.0	1198.1	1199.0	1198.7	1198.4	1198.1	1197.9
10°	1182.2	1184.2	1186.3	1187.2	1186.7	1186.2	1185.8	1185.3
12.5°	1169.3	1170.8	1172.4	1173.0	1172.7	1172.4	1172.2	1171.9
15°	1146.1	1147.9	1149.8	1150.0	1148.6	1147.2	1145.9	1144.5
17.5°	1116.7	1118.0	1119.3	1119.7	1119.2	1118.7	1118.2	1117.7
20°	1095.0	1095.9	1096.9	1097.0	1096.3	1095.6	1094.9	1094.2
22.5°	1072.0	1072.8	1073.5	1073.4	1072.6	1071.7	1070.8	1069.9
25°	1033.9	1034.2	1034.4	1034.2	1033.5	1032.8	1032.1	1031.4
27.5°	993.4	993.6	993.8	993.4	992.6	991.7	990.8	989.9
30°	965.4	965.4	965.4	964.6	963.0	961.3	959.7	958.1
32.5°	936.0	934.7	933.4	932.3	931.4	930.5	929.6	928.8
35°	888.3	886.9	885.5	884.2	883.0	881.9	880.7	879.5
37.5°	838.9	837.2	835.6	834.4	833.6	832.9	832.1	831.4
40°	806.7	804.9	803.0	801.6	800.7	799.7	798.8	797.9
42.5°	773.2	771.3	769.5	768.1	767.2	766.2	765.3	764.4
45°	723.2	720.4	717.6	715.6	714.5	713.3	712.1	711.0
47.5°	670.5	667.8	665.0	663.1	662.1	661.1	660.1	659.0
50°	635.7	633.1	630.6	628.6	627.2	625.8	624.4	623.0
52.5°	600.4	598.2	596.0	594.3	592.9	591.5	590.1	588.7
55°	546.7	544.1	541.6	539.7	538.5	537.4	536.2	535.1
57.5°	493.8	491.6	489.3	487.5	486.1	484.8	483.4	482.1
60°	456.5	454.4	452.3	450.7	449.5	448.4	447.2	446.1
62.5°	420.5	418.4	416.3	414.9	414.1	413.3	412.5	411.7
65°	366.9	365.1	363.2	361.9	361.2	360.5	359.8	359.1
67.5°	313.8	312.2	310.5	309.2	308.3	307.3	306.3	305.3
70°	279.5	277.8	276.2	274.8	273.6	272.5	271.3	270.1
72.5°	244.6	243.2	241.8	240.7	240.1	239.5	238.9	238.3
75°	194.5	193.4	192.2	191.3	190.6	189.9	189.2	188.5
77.5°	147.7	146.9	146.1	145.8	145.8	145.8	145.8	145.8
80°	117.9	117.6	117.4	117.3	117.3	117.3	117.3	117.3
82.5°	90.7	90.3	89.8	89.5	89.4	89.2	89.0	88.8
85°	51.4	51.0	50.5	50.3	50.3	50.3	50.3	50.3
87.5°	23.9	23.9	24.0	24.3	24.1	24.3	24.6	24.3
90°	29.0	30.2	31.4	33.7	32.5	33.7	34.9	33.7
92.5°	97.8	77.6	68.5	62.5	60.4	56.9	58.1	56.0
95°	418.3	283.5	221.9	180.1	158.0	147.6	139.4	134.8
97.5°	1042.6	835.1	685.3	546.3	460.6	408.3	376.9	366.9
100°	1369.8	1275.7	1139.8	974.8	857.4	772.6	727.3	728.5
102.5°	1478.6	1475.5	1396.3	1291.7	1200.4	1133.3	1095.4	1068.7
105°	1510.4	1626.6	1648.7	1618.5	1565.0	1520.9	1483.7	1477.9
107.5°	1418.8	1607.5	1709.3	1750.7	1751.6	1736.7	1724.2	1713.5
110°	1331.5	1545.3	1691.7	1773.0	1805.5	1814.8	1812.5	1810.2



TEST NUMBER: P331999

CATALOG NUMBER: S123DIP-S775D1195U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1245.0	1463.5	1627.5	1732.1	1791.6	1820.4	1829.2	1829.7
115°	1130.5	1332.6	1503.4	1630.1	1717.2	1768.3	1791.6	1797.4
117.5°	1047.5	1222.0	1375.4	1503.9	1594.8	1653.3	1686.8	1694.7
120°	1003.8	1160.7	1300.1	1417.5	1509.2	1574.3	1602.2	1609.2
122.5°	969.4	1111.4	1240.6	1349.6	1431.2	1489.7	1520.4	1529.2
125°	923.7	1050.3	1161.8	1254.8	1329.2	1380.3	1409.3	1417.5
127.5°	883.7	996.6	1097.2	1181.8	1248.1	1291.7	1318.0	1325.4
130°	858.6	963.2	1057.3	1136.3	1197.9	1239.7	1264.1	1273.4
132.5°	835.4	931.6	1019.2	1094.5	1152.3	1194.1	1215.8	1222.3
135°	804.0	886.5	962.0	1028.2	1085.2	1120.0	1140.9	1149.1
137.5°	775.4	843.0	908.1	965.5	1013.4	1048.7	1066.3	1071.7
140°	758.7	817.9	873.7	923.7	967.8	1000.4	1018.9	1017.8
142.5°	742.9	793.8	842.1	885.6	923.2	952.0	968.7	967.6
145°	723.8	762.2	799.4	833.0	862.1	886.5	895.8	898.1
147.5°	708.3	738.7	768.7	792.6	814.7	831.2	840.0	840.9
150°	697.1	723.8	748.2	770.3	787.7	800.5	807.5	807.5
152.5°	686.9	709.9	731.5	749.9	763.6	775.4	779.6	779.6
155°	671.5	690.1	707.6	721.5	732.0	741.3	743.6	744.7
157.5°	655.3	670.9	684.3	695.2	704.3	711.3	713.1	712.9
160°	646.0	658.8	670.4	678.5	686.7	693.6	693.6	692.5
162.5°	634.8	645.8	656.4	663.6	669.0	675.0	675.0	673.9
165°	620.4	627.4	635.5	641.3	646.0	650.6	649.5	649.5
167.5°	607.9	613.2	617.9	622.1	624.1	627.4	626.2	626.2
170°	599.5	603.0	607.6	610.0	611.1	613.5	612.3	612.3
172.5°	592.1	594.6	598.4	599.7	600.0	602.3	600.2	599.3
175°	582.1	583.2	585.6	585.6	585.6	586.7	585.6	584.4
177.5°	575.8	576.7	577.7	577.7	576.7	577.7	575.8	575.8
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0

(END OF REPORT)