

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: P331986-840

Luminaire Tested: **S123DIP-S775D1025U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331986-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1025U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6821.2 lumens
Efficiency: N/A
Efficacy: 131.2 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

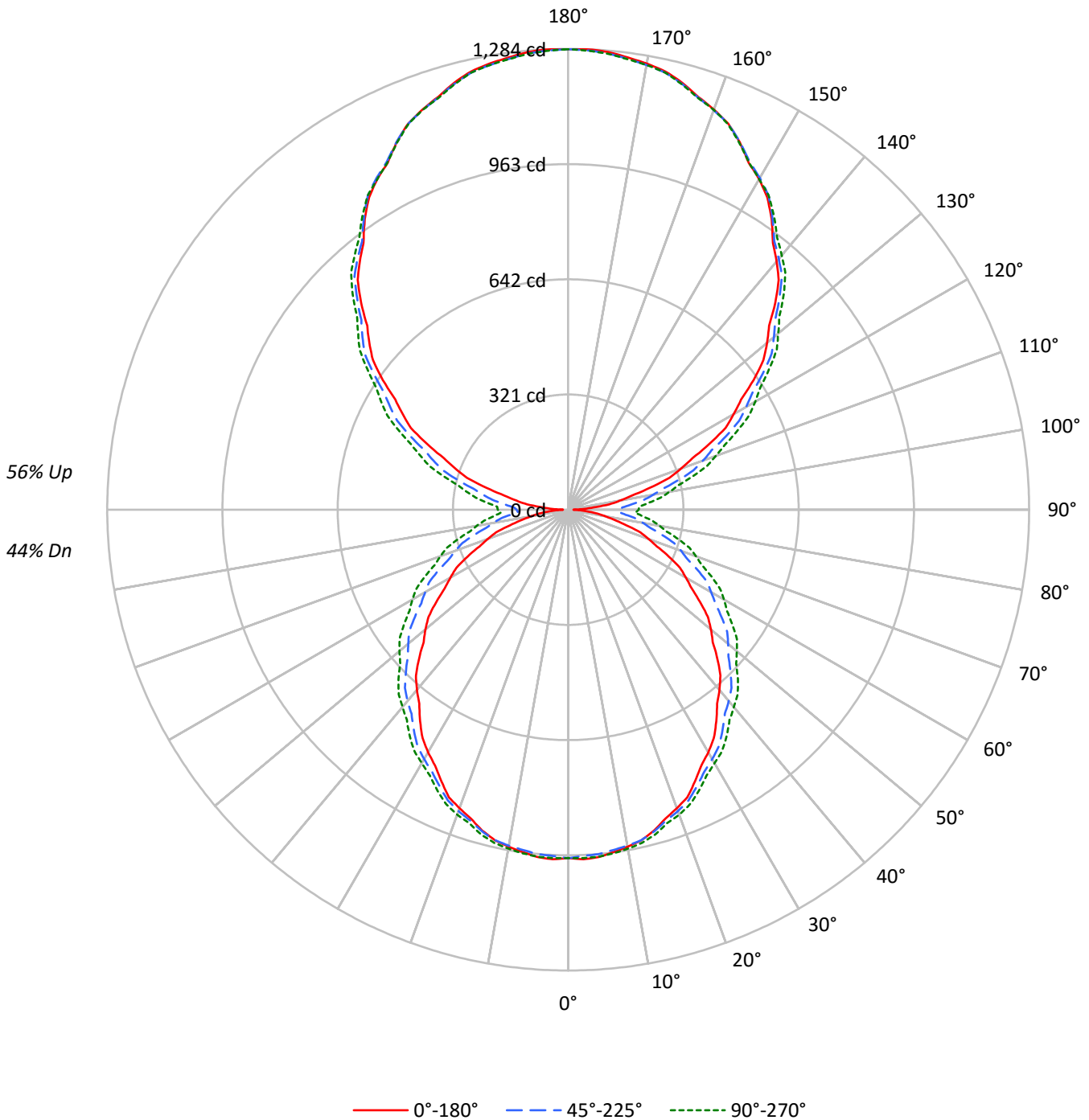
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	50	50	50	44				
1	95	91	87	83	87	83	79	76	69	66	64	55	54	52	43	42	41	35				
2	87	79	72	67	79	72	66	62	60	55	52	48	45	43	37	35	34	29				
3	79	69	61	55	72	63	56	51	52	47	43	42	39	36	33	30	28	24				
4	72	61	53	46	65	56	49	43	46	41	37	37	33	30	29	26	24	20				
5	66	54	46	40	60	50	42	37	41	36	31	33	29	26	26	23	21	17				
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	24	21	18	15				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	22	18	16	13				
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11				
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.3
10°-20°	262.3	3.8
20°-30°	392.3	5.8
30°-40°	468.5	6.9
40°-50°	490.2	7.2
50°-60°	460.0	6.7
60°-70°	384.2	5.6
70°-80°	274.9	4.0
80°-90°	167.7	2.5
90°-100°	186.5	2.7
100°-110°	325.8	4.8
110°-120°	476.0	7.0
120°-130°	588.6	8.6
130°-140°	642.1	9.4
140°-150°	621.2	9.1
150°-160°	520.7	7.6
160°-170°	346.6	5.1
170°-180°	121.4	1.8
0°-30°	746.7	10.9
0°-40°	1215.2	17.8
0°-60°	2165.4	31.7
0°-90°	2992.3	43.9
90°-120°	988.3	14.5
90°-150°	2840.3	41.6
90°-180°	3829.0	56.1
0°-180°	6821.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	15	77	144	182	196	13
95°	71	120	179	215	227	76
105°	235	264	317	346	358	251
115°	434	451	485	511	519	429
125°	630	635	662	679	683	562
135°	816	821	831	846	850	628
145°	988	989	992	999	1000	617
155°	1130	1130	1131	1134	1128	520
165°	1231	1228	1228	1233	1227	347
175°	1280	1276	1276	1282	1275	122
180°	1283	1283	1283	1283	1283	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.4	40.5	52.6	64.7	77.0	89.3	101.9	114.4	126.9	139.6	147.7
90°	14.7	28.5	42.2	56.0	69.8	84.1	99.0	113.9	128.8	143.7	152.6
92.5°	37.3	49.2	61.1	73.0	84.9	97.7	111.1	124.5	137.9	151.4	160.0
95°	71.1	81.8	92.6	103.3	114.0	126.0	139.4	152.7	166.0	179.3	187.4
97.5°	116.0	125.4	134.9	144.3	153.7	164.6	176.9	189.2	201.5	213.8	221.9
100°	146.6	155.5	164.3	173.2	182.1	192.5	204.4	216.3	228.2	240.1	247.6
102.5°	182.1	189.7	197.2	204.8	212.4	222.2	234.3	246.4	258.5	270.5	277.9
105°	235.3	241.4	247.4	253.6	259.6	268.7	280.8	293.0	305.1	317.2	323.8
107.5°	296.1	301.1	306.2	311.2	316.4	324.1	334.5	344.9	355.3	365.7	372.6
110°	334.0	338.6	343.4	348.0	352.6	359.9	369.8	379.6	389.5	399.3	406.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	374.3	378.0	381.7	385.6	389.3	395.7	404.9	413.9	423.0	432.1	439.2
115°	433.7	437.2	440.7	444.1	447.7	453.4	461.4	469.5	477.5	485.4	491.3
117.5°	494.4	496.6	498.8	501.0	503.1	507.9	515.2	522.6	530.0	537.3	542.9
120°	531.5	533.9	536.4	539.0	541.5	546.1	552.7	559.4	566.0	572.6	577.8
122.5°	571.0	572.6	574.1	575.7	577.3	581.6	588.3	595.1	601.9	608.7	613.4
125°	630.2	630.9	631.6	632.2	632.9	636.4	642.8	649.1	655.5	661.9	665.9
127.5°	685.8	687.0	688.2	689.4	690.6	693.8	698.9	704.1	709.2	714.4	717.8
130°	723.0	724.5	726.0	727.6	729.1	732.0	736.0	740.0	744.1	748.0	751.6
132.5°	759.2	760.9	762.7	764.4	766.2	768.7	771.9	775.2	778.5	781.7	785.0
135°	815.6	816.7	817.8	818.9	820.0	821.8	824.2	826.5	828.9	831.2	834.6
137.5°	867.8	868.8	869.7	870.6	871.5	873.0	875.0	877.1	879.2	881.2	883.9
140°	903.2	904.4	905.5	906.7	907.8	908.8	909.7	910.6	911.6	912.5	915.7
142.5°	936.3	937.3	938.2	939.2	940.1	940.8	941.3	941.9	942.4	943.0	945.9
145°	988.0	988.2	988.4	988.6	988.8	989.3	989.9	990.6	991.3	991.9	993.6
147.5°	1032.1	1032.9	1033.7	1034.5	1035.3	1036.0	1036.6	1037.2	1037.8	1038.5	1039.1
150°	1063.5	1064.0	1064.4	1064.8	1065.3	1065.7	1066.2	1066.6	1067.1	1067.5	1067.5
152.5°	1089.3	1089.9	1090.6	1091.2	1091.8	1092.3	1092.6	1092.8	1093.1	1093.4	1093.7
155°	1130.0	1130.0	1130.0	1130.0	1130.0	1130.1	1130.3	1130.5	1130.8	1131.0	1132.0
157.5°	1164.7	1164.5	1164.2	1163.9	1163.7	1163.6	1163.8	1164.0	1164.2	1164.3	1165.3
160°	1186.5	1186.0	1185.6	1185.2	1184.7	1184.5	1184.5	1184.5	1184.5	1184.5	1185.6
162.5°	1205.9	1205.2	1204.6	1204.0	1203.4	1203.2	1203.3	1203.5	1203.7	1203.9	1205.0
165°	1230.8	1230.1	1229.5	1228.8	1228.2	1227.8	1227.8	1227.8	1227.8	1227.8	1229.1
167.5°	1250.8	1249.9	1249.0	1248.1	1247.2	1246.9	1247.1	1247.2	1247.4	1247.6	1249.0
170°	1262.1	1261.2	1260.3	1259.4	1258.5	1258.1	1258.1	1258.1	1258.1	1258.1	1259.6
172.5°	1270.9	1270.1	1269.2	1268.3	1267.4	1266.9	1266.9	1266.9	1266.9	1266.9	1268.3
175°	1280.2	1279.3	1278.4	1277.6	1276.7	1276.2	1276.2	1276.2	1276.2	1276.2	1277.6
177.5°	1284.0	1283.3	1282.6	1281.9	1281.2	1280.8	1280.8	1280.8	1280.8	1280.8	1281.9
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	155.9	164.1	172.2	177.5	180.0	182.4	184.8	187.3
90°	161.5	170.4	179.3	185.1	187.8	190.7	193.5	196.2
92.5°	168.4	177.0	185.5	190.7	192.6	194.5	196.4	198.2
95°	195.6	203.8	212.0	217.2	219.6	222.0	224.3	226.7
97.5°	229.8	237.9	245.9	251.1	253.4	255.6	257.8	260.1
100°	255.2	262.7	270.1	275.3	278.0	280.8	283.7	286.5
102.5°	285.2	292.5	299.8	304.6	306.8	309.1	311.3	313.6
105°	330.3	337.0	343.6	348.1	350.6	353.3	355.8	358.3
107.5°	379.7	386.7	393.7	398.1	399.9	401.7	403.5	405.4
110°	413.3	420.3	427.4	431.5	433.0	434.4	435.9	437.3



TEST NUMBER: P331986-840

CATALOG NUMBER: S123DIP-S775D1025U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	446.2	453.1	460.1	464.6	466.6	468.6	470.6	472.5
115°	497.2	503.1	509.0	512.7	514.3	516.0	517.7	519.3
117.5°	548.5	554.0	559.6	562.9	564.1	565.3	566.5	567.7
120°	583.0	588.1	593.4	596.5	597.7	599.0	600.2	601.4
122.5°	618.0	622.6	627.2	630.1	631.1	632.1	633.2	634.2
125°	669.9	674.0	678.0	680.4	681.2	681.9	682.7	683.4
127.5°	721.1	724.6	728.0	729.9	730.5	731.1	731.6	732.3
130°	755.2	758.7	762.3	764.1	763.9	763.8	763.6	763.4
132.5°	788.1	791.3	794.6	796.3	796.7	797.1	797.5	797.9
135°	837.9	841.2	844.6	846.6	847.3	848.1	848.8	849.5
137.5°	886.8	889.5	892.3	893.8	894.1	894.4	894.8	895.1
140°	919.1	922.4	925.6	927.2	926.8	926.3	925.9	925.5
142.5°	948.9	951.8	954.6	956.1	956.0	956.0	956.0	955.9
145°	995.2	996.9	998.6	999.4	999.5	999.5	999.6	999.6
147.5°	1039.7	1040.2	1040.8	1040.8	1040.3	1039.8	1039.3	1038.7
150°	1067.5	1067.5	1067.5	1067.1	1066.2	1065.3	1064.5	1063.6
152.5°	1094.1	1094.4	1094.8	1094.4	1093.4	1092.3	1091.2	1090.1
155°	1132.9	1133.8	1134.6	1134.3	1132.8	1131.1	1129.5	1128.0
157.5°	1166.2	1167.1	1168.1	1167.9	1166.7	1165.4	1164.2	1162.9
160°	1186.7	1187.8	1188.9	1189.0	1188.2	1187.3	1186.4	1185.5
162.5°	1206.1	1207.2	1208.3	1208.1	1206.7	1205.3	1203.9	1202.4
165°	1230.5	1231.8	1233.1	1233.0	1231.5	1229.9	1228.4	1226.8
167.5°	1250.3	1251.7	1253.1	1253.1	1251.7	1250.3	1249.0	1247.6
170°	1261.2	1262.7	1264.4	1264.4	1262.7	1261.2	1259.6	1258.1
172.5°	1269.7	1271.1	1272.4	1272.4	1270.8	1269.3	1267.7	1266.1
175°	1278.9	1280.2	1281.6	1281.4	1279.9	1278.3	1276.8	1275.2
177.5°	1283.0	1284.0	1285.2	1285.1	1283.8	1282.5	1281.3	1280.0
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2

(END OF REPORT)