

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: P332164-840

Luminaire Tested: **S123DIW-S775D1030U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332164-840
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: S123DIW-S775D1030U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7429.2 lumens
Efficiency: N/A
Efficacy: 141.2 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

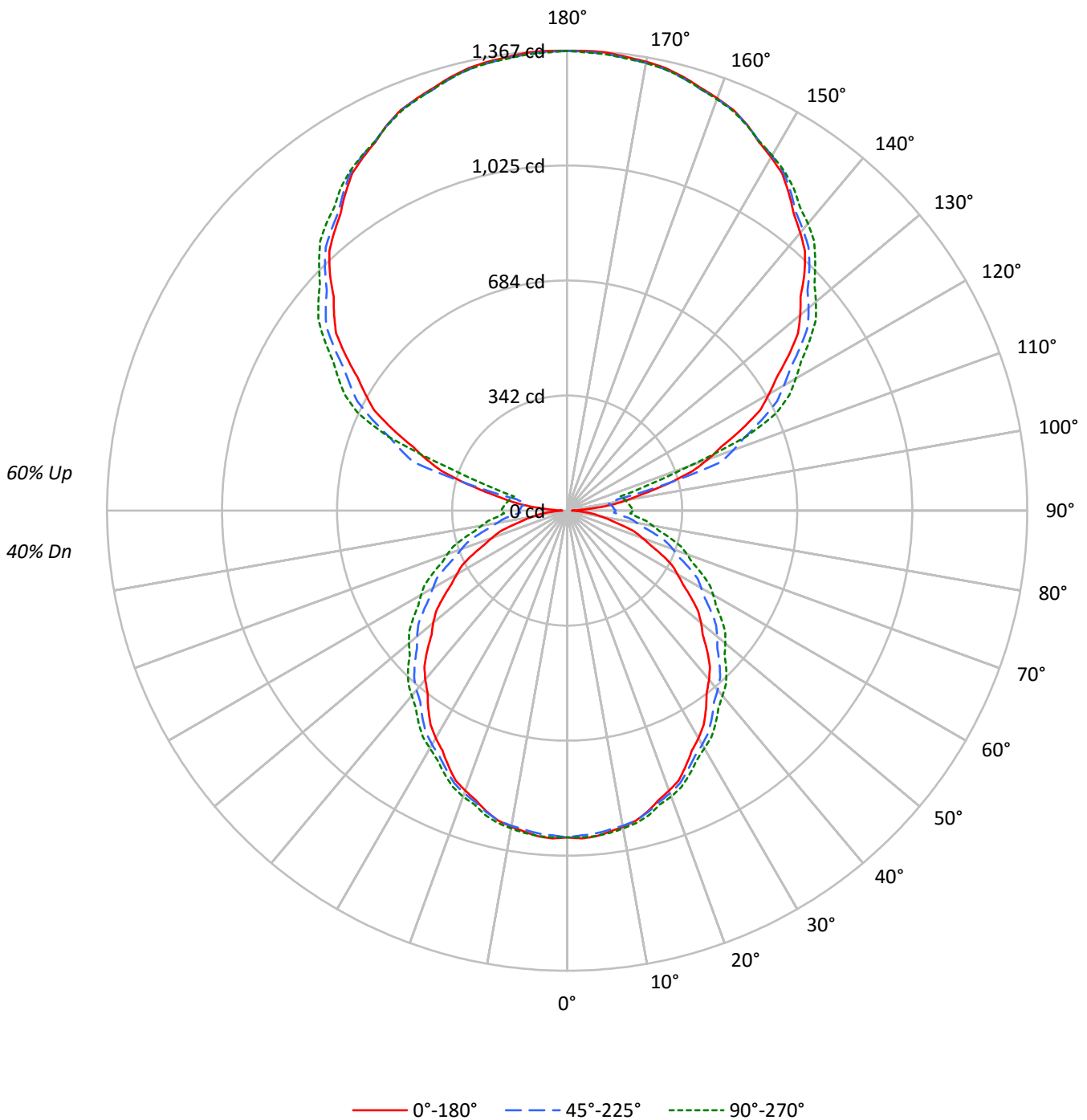
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332164-840

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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	90	86	82	86	82	78	75	67	64	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	30	50	40	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

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	1.2
10°-20°	262.3	3.5
20°-30°	392.3	5.3
30°-40°	468.5	6.3
40°-50°	490.2	6.6
50°-60°	460.0	6.2
60°-70°	384.2	5.2
70°-80°	274.9	3.7
80°-90°	167.7	2.3
90°-100°	152.5	2.1
100°-110°	312.2	4.2
110°-120°	618.7	8.3
120°-130°	752.4	10.1
130°-140°	786.1	10.6
140°-150°	725.7	9.8
150°-160°	583.2	7.9
160°-170°	376.4	5.1
170°-180°	129.7	1.7
0°-30°	746.7	10.1
0°-40°	1215.2	16.4
0°-60°	2165.4	29.1
0°-90°	2992.3	40.3
90°-120°	1083.4	14.6
90°-150°	3347.6	45.1
90°-180°	4437.0	59.7
0°-180°	7429.2	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	12
95°	74	77	136	174	187	86
105°	311	343	301	160	163	329
115°	572	593	638	672	686	565
125°	802	812	845	869	879	717
135°	997	1003	1018	1039	1042	767
145°	1149	1155	1157	1168	1172	719
155°	1265	1263	1264	1268	1263	583
165°	1334	1331	1330	1337	1331	377
175°	1365	1361	1361	1368	1360	130
180°	1365	1365	1365	1365	1365	



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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	64.8	77.0	89.3	101.9	114.4	127.0	139.6	147.7
90°	14.7	28.5	42.3	56.0	69.9	84.2	99.1	114.0	129.0	143.8	152.7
92.5°	31.8	41.5	51.3	61.0	70.8	82.7	96.6	110.7	124.7	138.7	147.9
95°	73.5	73.4	73.3	73.3	73.2	80.2	94.1	108.2	122.1	136.1	145.0
97.5°	134.7	138.9	143.0	147.1	151.2	150.7	145.4	140.2	134.9	129.8	138.6
100°	181.0	193.0	205.0	217.0	229.0	222.9	198.5	174.2	149.9	125.4	134.1
102.5°	233.7	243.7	253.7	263.7	273.7	264.8	237.0	209.2	181.5	153.7	154.7
105°	310.7	318.8	327.0	335.1	343.2	342.1	331.9	321.8	311.6	301.4	268.1
107.5°	391.0	397.8	404.6	411.3	418.1	427.9	440.7	453.4	466.3	479.1	456.1
110°	444.5	450.6	456.6	462.6	468.7	477.6	489.5	501.4	513.2	525.1	523.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.4	501.6	506.6	511.8	516.8	525.1	536.6	548.2	559.7	571.2	577.2
115°	572.3	576.4	580.7	584.8	589.0	596.3	606.8	617.3	627.7	638.2	646.1
117.5°	646.5	649.9	653.4	656.7	660.1	666.3	675.3	684.3	693.3	702.3	709.6
120°	692.0	695.1	698.3	701.6	704.8	710.5	719.0	727.4	735.9	744.3	751.5
122.5°	739.0	741.2	743.6	745.8	748.1	753.4	761.6	769.8	778.1	786.3	792.7
125°	802.4	804.3	806.1	807.9	809.7	814.5	822.1	829.8	837.6	845.3	850.7
127.5°	864.9	866.5	868.1	869.6	871.2	875.4	882.1	888.8	895.5	902.2	907.6
130°	903.9	905.4	907.1	908.6	910.2	913.7	919.4	924.9	930.6	936.1	941.5
132.5°	940.4	942.1	943.9	945.6	947.4	950.5	955.0	959.5	963.9	968.5	973.6
135°	997.1	998.3	999.4	1000.5	1001.6	1003.9	1007.4	1010.9	1014.4	1017.8	1022.8
137.5°	1045.6	1047.1	1048.6	1050.2	1051.8	1053.5	1055.4	1057.3	1059.3	1061.3	1066.1
140°	1077.2	1078.6	1079.9	1081.3	1082.7	1084.0	1085.4	1086.8	1088.1	1089.5	1094.0
142.5°	1107.3	1108.4	1109.6	1110.8	1112.0	1112.9	1113.8	1114.6	1115.4	1116.2	1120.0
145°	1149.2	1150.6	1152.0	1153.3	1154.7	1155.5	1156.0	1156.4	1156.9	1157.3	1159.6
147.5°	1187.8	1188.8	1189.8	1190.8	1191.9	1192.7	1193.1	1193.6	1194.0	1194.5	1195.5
150°	1212.1	1212.7	1213.5	1214.2	1214.8	1215.4	1215.8	1216.3	1216.7	1217.2	1217.6
152.5°	1234.1	1234.4	1234.7	1235.0	1235.3	1235.6	1235.9	1236.1	1236.4	1236.7	1237.5
155°	1264.9	1264.4	1263.9	1263.5	1263.0	1262.9	1263.1	1263.3	1263.6	1263.8	1265.0
157.5°	1288.8	1288.8	1288.7	1288.7	1288.6	1288.5	1288.3	1288.0	1287.8	1287.6	1288.9
160°	1303.4	1303.1	1302.9	1302.7	1302.5	1302.2	1302.0	1301.8	1301.6	1301.4	1302.7
162.5°	1317.2	1316.6	1316.1	1315.5	1314.8	1314.4	1314.2	1314.0	1313.7	1313.5	1315.0
165°	1333.8	1333.1	1332.5	1331.8	1331.1	1330.7	1330.4	1330.2	1330.0	1329.8	1331.6
167.5°	1346.8	1345.9	1345.0	1344.1	1343.2	1342.7	1342.7	1342.7	1342.7	1342.7	1344.5
170°	1354.1	1353.2	1352.3	1351.4	1350.5	1350.1	1350.1	1350.1	1350.1	1350.1	1351.8
172.5°	1359.0	1357.9	1356.9	1355.7	1354.6	1354.2	1354.3	1354.5	1354.7	1354.9	1356.8
175°	1365.2	1364.1	1363.0	1361.9	1360.8	1360.3	1360.5	1360.8	1361.0	1361.2	1362.8
177.5°	1366.9	1365.9	1365.1	1364.2	1363.3	1362.9	1363.1	1363.3	1363.4	1363.6	1365.1
180°	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2



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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	172.3	177.5	180.0	182.5	184.9	187.3
90°	161.6	170.5	179.4	185.2	188.0	190.9	193.7	196.4
92.5°	157.1	166.4	175.6	181.5	183.9	186.3	188.8	191.3
95°	153.8	162.7	171.6	177.2	179.6	181.9	184.2	186.6
97.5°	147.3	156.1	164.9	170.7	173.2	175.8	178.3	181.0
100°	142.7	151.3	160.0	165.5	168.1	170.7	173.3	175.8
102.5°	155.7	156.7	157.8	159.7	162.5	165.2	167.9	170.8
105°	234.8	201.5	168.1	152.8	155.3	157.9	160.5	163.1
107.5°	433.1	410.2	387.2	361.7	333.8	305.7	277.7	249.7
110°	522.5	521.2	519.8	504.0	473.6	443.2	412.9	382.5



TEST NUMBER: P332164-840

CATALOG NUMBER: S123DIW-S775D1030U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	583.3	589.4	595.4	596.0	591.3	586.6	581.9	577.1
115°	654.1	662.0	669.8	675.2	677.9	680.8	683.5	686.3
117.5°	717.1	724.5	731.8	736.6	738.6	740.5	742.6	744.6
120°	758.7	765.9	773.2	777.5	779.2	780.8	782.4	784.2
122.5°	799.3	805.8	812.2	816.4	818.2	820.0	821.8	823.6
125°	856.1	861.4	866.9	870.6	872.6	874.7	876.9	879.0
127.5°	913.0	918.4	923.7	927.0	928.2	929.3	930.4	931.6
130°	946.8	952.2	957.7	960.8	961.7	962.7	963.6	964.6
132.5°	978.8	984.0	989.2	992.2	993.2	994.1	995.1	996.1
135°	1027.6	1032.6	1037.5	1040.2	1040.7	1041.2	1041.7	1042.2
137.5°	1070.9	1075.7	1080.5	1083.2	1084.0	1084.7	1085.4	1086.1
140°	1098.4	1102.9	1107.2	1109.8	1110.5	1111.3	1112.0	1112.8
142.5°	1123.9	1127.8	1131.7	1133.9	1134.4	1135.0	1135.5	1136.1
145°	1162.0	1164.4	1166.7	1168.3	1169.2	1170.1	1171.1	1172.0
147.5°	1196.5	1197.5	1198.5	1198.9	1198.7	1198.5	1198.3	1198.2
150°	1218.1	1218.5	1219.0	1219.1	1218.9	1218.7	1218.5	1218.3
152.5°	1238.3	1239.1	1239.9	1239.8	1238.9	1238.0	1237.0	1236.1
155°	1266.1	1267.2	1268.4	1268.2	1266.9	1265.6	1264.1	1262.8
157.5°	1290.3	1291.6	1292.9	1292.7	1291.0	1289.3	1287.5	1285.8
160°	1304.0	1305.5	1306.8	1306.7	1305.0	1303.5	1301.9	1300.3
162.5°	1316.6	1318.2	1319.7	1319.7	1318.4	1317.0	1315.6	1314.1
165°	1333.3	1335.1	1337.0	1337.1	1335.5	1333.9	1332.3	1330.8
167.5°	1346.4	1348.2	1350.0	1350.0	1348.2	1346.4	1344.5	1342.7
170°	1353.6	1355.4	1357.3	1357.3	1355.4	1353.6	1351.8	1350.1
172.5°	1358.6	1360.3	1362.1	1362.0	1360.1	1358.1	1356.0	1354.1
175°	1364.3	1365.9	1367.6	1367.5	1365.6	1363.8	1362.0	1360.2
177.5°	1366.5	1368.0	1369.4	1369.3	1367.5	1365.6	1363.8	1362.0
180°	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2	1365.2

(END OF REPORT)