

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: P332436-840

Luminaire Tested: **S123RDIW-S775D755U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332436-840
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: S123RDIW-S775D755U840-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5998.4 lumens
Efficiency: N/A
Efficacy: 133.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

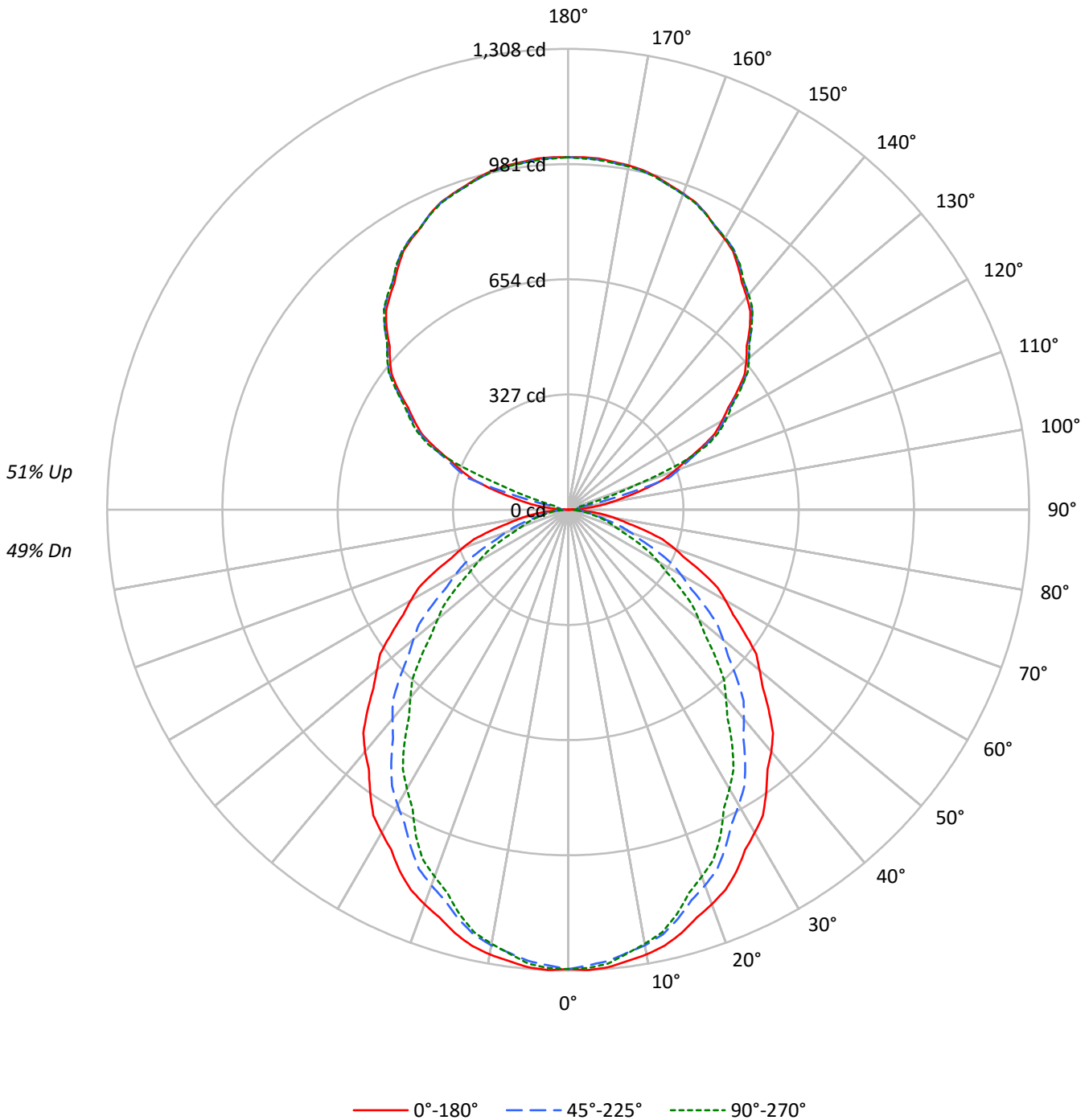
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	94	90	87	90	87	83	80	73	71	69	61	59	58	49	48	47	42
2	89	82	76	71	82	76	71	66	64	61	57	54	51	49	44	42	40	36
3	82	73	65	60	75	67	61	56	57	52	49	48	44	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	32	30	27
5	69	57	49	44	63	53	46	41	46	40	36	38	34	31	32	29	26	23
6	64	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	44	37	32	37	32	28	32	28	24	26	23	21	18
8	55	42	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	48	36	28	24	44	33	27	23	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14034	14034	14034
5°	14088	13894	13973
10°	14008	13719	13672
15°	13857	13397	13256
20°	13651	12997	12693
25°	13438	12545	12144
30°	13155	12026	11368
35°	12867	11506	10657
40°	12600	10891	9777
45°	12250	10286	8983
50°	11863	9597	8092
55°	11470	8811	7263
60°	11108	7967	6351
65°	10639	7055	5440
70°	10049	5923	4393
75°	9191	4662	4134
80°	8195	4135	3800
85°	6916	3656	3396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	2.0
10°-20°	340.6	5.7
20°-30°	490.5	8.2
30°-40°	552.5	9.2
40°-50°	528.6	8.8
50°-60°	432.9	7.2
60°-70°	292.0	4.9
70°-80°	146.9	2.4
80°-90°	41.7	0.7
90°-100°	36.4	0.6
100°-110°	173.3	2.9
110°-120°	416.3	6.9
120°-130°	530.1	8.8
130°-140°	566.4	9.4
140°-150°	529.7	8.8
150°-160°	427.3	7.1
160°-170°	275.7	4.6
170°-180°	95.0	1.6
0°-30°	953.6	15.9
0°-40°	1506.1	25.1
0°-60°	2467.5	41.1
0°-90°	2948.2	49.1
90°-120°	626.0	10.4
90°-150°	2252.2	37.5
90°-180°	3050.0	50.8
0°-180°	5998.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1304	1298	1286	1295	1293	124
15°	1244	1231	1202	1197	1190	350
25°	1132	1104	1056	1035	1022	520
35°	979	940	876	832	811	613
45°	805	755	676	617	590	621
55°	611	557	470	410	387	548
65°	418	358	277	227	214	413
75°	221	170	112	102	99	236
85°	56	34	30	28	28	63
90°	1	8	18	21	22	5
95°	45	17	23	28	28	56
105°	222	225	163	39	33	235
115°	415	420	427	434	437	410
125°	586	591	594	596	597	523
135°	729	733	736	738	736	561
145°	841	846	848	849	849	526
155°	927	925	926	929	925	427
165°	977	975	974	980	975	276
175°	1000	997	997	1002	996	95
180°	1000	1000	1000	1000	1000	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1308.0	1307.3	1306.5	1305.8	1305.0	1303.5	1301.2	1299.0	1296.8	1294.4	1296.6
5°	1303.8	1302.6	1301.4	1300.3	1299.1	1297.1	1294.2	1291.4	1288.6	1285.9	1287.9
7.5°	1291.7	1290.5	1289.2	1287.9	1286.7	1284.1	1280.5	1276.9	1273.2	1269.5	1270.7
10°	1281.6	1279.9	1278.3	1276.7	1275.0	1272.0	1267.8	1263.6	1259.4	1255.2	1255.4
12.5°	1267.2	1265.4	1263.5	1261.7	1259.9	1256.4	1251.2	1246.1	1240.8	1235.7	1235.6
15°	1243.5	1240.9	1238.3	1235.8	1233.1	1228.6	1222.0	1215.5	1208.8	1202.2	1201.1
17.5°	1213.7	1210.7	1207.7	1204.7	1201.6	1196.0	1187.6	1179.2	1170.8	1162.6	1160.0
20°	1191.7	1187.9	1184.2	1180.4	1176.7	1170.3	1161.3	1152.5	1143.6	1134.6	1131.6
22.5°	1167.2	1162.9	1158.5	1154.2	1149.8	1143.0	1133.5	1124.0	1114.5	1105.0	1101.2
25°	1131.5	1125.6	1119.6	1113.8	1107.9	1099.5	1088.7	1077.9	1067.1	1056.3	1051.4
27.5°	1088.0	1081.6	1075.1	1068.6	1062.2	1052.9	1040.9	1028.9	1016.7	1004.7	997.8
30°	1058.4	1051.4	1044.4	1037.3	1030.3	1020.2	1007.0	993.8	980.7	967.6	959.6
32.5°	1028.9	1020.9	1012.9	1004.9	996.9	985.9	972.0	958.2	944.2	930.3	921.6
35°	979.2	970.7	962.2	953.8	945.3	933.8	919.3	904.6	890.1	875.6	865.5
37.5°	928.9	919.4	910.0	900.6	891.2	878.8	863.2	847.7	832.1	816.6	805.1
40°	896.7	886.4	876.0	865.7	855.4	841.8	825.2	808.5	791.7	775.1	762.9
42.5°	860.3	850.0	839.6	829.3	819.0	805.2	787.9	770.6	753.5	736.2	722.9
45°	804.7	794.2	783.6	773.0	762.3	748.1	729.9	711.9	693.8	675.7	662.3
47.5°	749.1	737.5	725.9	714.3	702.7	687.8	669.7	651.6	633.5	615.4	600.9
50°	708.4	697.4	686.4	675.3	664.3	649.2	630.3	611.2	592.2	573.1	558.6
52.5°	672.1	660.1	648.1	636.1	624.2	608.7	589.9	571.1	552.2	533.3	518.3
55°	611.2	599.7	588.1	576.6	565.1	549.4	529.4	509.5	489.5	469.5	455.9
57.5°	554.9	542.4	529.9	517.3	504.7	488.5	468.4	448.3	428.2	408.2	395.3
60°	516.0	503.1	490.2	477.3	464.3	448.1	428.6	409.1	389.6	370.1	357.4
62.5°	477.1	464.1	451.2	438.3	425.5	409.2	389.7	370.2	350.7	331.1	319.2
65°	417.7	404.8	391.8	378.9	366.0	350.3	332.0	313.7	295.4	277.0	265.5
67.5°	358.3	345.2	332.1	319.0	306.0	290.6	273.1	255.5	237.9	220.4	211.8
70°	319.3	306.7	294.0	281.2	268.6	254.0	237.5	221.2	204.7	188.2	180.0
72.5°	280.4	267.9	255.4	242.9	230.5	216.7	201.8	186.8	171.9	156.9	150.2
75°	221.0	209.7	198.4	187.1	175.9	163.8	150.9	137.9	125.0	112.1	109.8
77.5°	166.8	156.6	146.4	136.2	126.0	116.8	108.5	100.2	91.9	83.5	82.3
80°	132.2	122.5	112.9	103.3	93.6	86.3	81.4	76.4	71.6	66.7	65.9
82.5°	99.2	90.9	82.5	74.2	65.9	60.6	58.3	55.9	53.7	51.4	50.7
85°	56.0	50.9	45.7	40.5	35.3	32.4	31.7	31.0	30.3	29.6	29.2
87.5°	20.5	18.7	17.0	15.2	13.5	12.8	13.2	13.7	14.1	14.5	14.5
90°	0.7	2.4	4.0	5.7	7.4	9.3	11.4	13.5	15.7	17.9	18.5
92.5°	13.8	13.3	12.9	12.4	12.0	12.5	14.1	15.8	17.4	19.0	20.1
95°	45.3	38.6	31.8	25.0	18.3	15.8	17.6	19.4	21.2	23.0	24.2
97.5°	91.1	88.1	85.0	82.0	79.0	71.5	59.6	47.7	35.9	23.9	25.2
100°	125.6	128.9	132.2	135.5	138.8	127.5	101.8	76.0	50.3	24.5	25.9
102.5°	164.8	167.2	169.6	172.0	174.3	161.5	133.3	105.1	77.1	48.9	44.8
105°	221.5	223.3	225.1	226.9	228.7	222.2	207.3	192.5	177.6	162.8	133.5
107.5°	281.1	282.7	284.1	285.6	287.0	288.9	291.2	293.6	296.0	298.3	276.8
110°	321.0	322.3	323.7	325.0	326.3	327.9	329.7	331.5	333.4	335.2	329.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	359.1	360.2	361.4	362.6	363.9	365.4	367.2	369.0	370.8	372.6	372.7
115°	415.4	416.4	417.4	418.4	419.4	420.6	422.1	423.5	425.1	426.6	428.2
117.5°	470.0	471.2	472.4	473.6	474.8	475.8	476.6	477.4	478.1	478.9	480.2
120°	503.8	505.3	506.9	508.3	509.8	510.8	511.3	511.8	512.3	512.7	514.1
122.5°	538.4	539.6	540.8	542.0	543.2	544.1	544.7	545.4	546.0	546.6	547.5
125°	585.6	586.9	588.2	589.6	590.9	591.9	592.5	593.2	593.8	594.5	594.8
127.5°	631.4	632.7	634.0	635.3	636.6	637.7	638.5	639.2	640.1	640.9	641.4
130°	659.8	661.3	662.6	663.9	665.2	666.2	666.8	667.5	668.1	668.8	669.4
132.5°	687.2	688.5	689.8	691.2	692.6	693.5	694.0	694.5	695.0	695.6	696.2
135°	729.0	730.0	730.9	732.0	733.0	733.8	734.5	735.1	735.8	736.4	736.9
137.5°	764.7	765.9	767.2	768.4	769.7	770.5	770.8	771.2	771.6	771.9	772.7
140°	788.4	789.4	790.4	791.4	792.4	793.1	793.7	794.2	794.7	795.2	795.8
142.5°	810.4	811.4	812.4	813.4	814.5	815.2	815.7	816.2	816.7	817.2	817.7
145°	841.2	842.3	843.5	844.7	845.9	846.6	846.9	847.3	847.6	847.9	848.2
147.5°	870.2	870.9	871.7	872.4	873.2	873.7	874.1	874.4	874.7	875.0	875.5
150°	888.1	888.5	889.0	889.5	890.0	890.4	890.8	891.1	891.4	891.7	892.1
152.5°	904.0	904.3	904.5	904.7	905.0	905.2	905.4	905.6	905.8	906.1	906.6
155°	926.7	926.3	926.0	925.6	925.3	925.2	925.4	925.6	925.7	925.9	926.8
157.5°	944.2	944.2	944.1	944.1	944.1	944.0	943.8	943.6	943.5	943.3	944.3
160°	954.9	954.7	954.6	954.4	954.2	954.1	953.9	953.7	953.6	953.4	954.4
162.5°	965.0	964.6	964.1	963.7	963.3	963.0	962.8	962.7	962.5	962.3	963.5
165°	977.2	976.7	976.2	975.7	975.2	974.9	974.7	974.5	974.4	974.2	975.5
167.5°	986.7	986.0	985.4	984.7	984.1	983.7	983.7	983.7	983.7	983.7	985.0
170°	992.1	991.4	990.8	990.1	989.5	989.1	989.1	989.1	989.1	989.1	990.4
172.5°	995.6	994.8	994.0	993.3	992.5	992.1	992.3	992.4	992.5	992.7	994.0
175°	1000.3	999.4	998.6	997.7	996.9	996.6	996.7	996.9	997.1	997.2	998.5
177.5°	1001.4	1000.8	1000.1	999.5	998.8	998.6	998.7	998.8	999.0	999.1	1000.1
180°	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1298.6	1300.7	1302.7	1303.6	1303.2	1302.8	1302.4	1302.1
5°	1290.0	1292.1	1294.2	1295.1	1294.6	1294.1	1293.6	1293.2
7.5°	1271.9	1273.0	1274.2	1274.4	1273.6	1272.8	1272.0	1271.2
10°	1255.7	1255.9	1256.1	1255.7	1254.5	1253.2	1252.1	1250.9
12.5°	1235.4	1235.3	1235.2	1234.4	1233.0	1231.6	1230.3	1228.9
15°	1199.9	1198.7	1197.6	1196.2	1194.6	1192.9	1191.2	1189.6
17.5°	1157.5	1155.1	1152.6	1150.1	1147.6	1145.2	1142.8	1140.3
20°	1128.5	1125.4	1122.4	1119.4	1116.6	1113.8	1111.0	1108.1
22.5°	1097.4	1093.6	1089.7	1086.5	1083.9	1081.3	1078.6	1076.0
25°	1046.5	1041.6	1036.6	1032.9	1030.3	1027.6	1025.1	1022.5
27.5°	991.0	984.2	977.3	971.9	968.0	964.0	960.1	956.1
30°	951.6	943.5	935.5	929.7	925.9	922.2	918.4	914.6
32.5°	912.8	904.1	895.3	889.0	885.0	881.1	877.2	873.2
35°	855.4	845.3	835.2	828.0	823.7	819.5	815.3	811.0
37.5°	793.6	782.1	770.6	762.3	757.1	751.8	746.7	741.4
40°	750.6	738.4	726.2	717.4	712.0	706.6	701.1	695.8
42.5°	709.4	696.1	682.8	673.7	668.8	664.0	659.1	654.3
45°	648.9	635.5	622.1	612.6	606.9	601.3	595.7	590.1
47.5°	586.2	571.7	557.1	547.3	542.3	537.2	532.3	527.3
50°	544.0	529.4	514.8	504.8	499.5	494.0	488.7	483.2
52.5°	503.1	488.0	472.8	462.8	458.0	453.1	448.3	443.4
55°	442.2	428.6	415.0	405.8	401.1	396.4	391.7	387.0
57.5°	382.4	369.5	356.7	348.2	344.3	340.2	336.2	332.2
60°	344.7	332.0	319.3	311.0	307.0	303.0	299.0	295.0
62.5°	307.3	295.4	283.5	275.4	271.1	267.0	262.9	258.6
65°	254.0	242.5	231.0	223.9	221.4	218.7	216.2	213.6
67.5°	203.2	194.6	185.9	180.3	177.5	174.7	172.0	169.2
70°	171.8	163.5	155.3	150.0	147.3	144.7	142.2	139.6
72.5°	143.5	136.7	130.1	126.1	125.0	124.0	122.9	121.8
75°	107.3	105.0	102.7	101.3	100.8	100.4	99.9	99.4
77.5°	81.0	79.7	78.5	77.6	77.2	76.6	76.1	75.7
80°	65.2	64.5	63.8	63.2	62.7	62.3	61.8	61.3
82.5°	50.0	49.3	48.6	48.2	48.1	48.0	47.9	47.8
85°	28.7	28.2	27.8	27.5	27.5	27.5	27.5	27.5
87.5°	14.4	14.4	14.3	14.2	14.1	14.0	13.9	13.7
90°	19.2	19.8	20.5	21.0	21.3	21.6	21.9	22.3
92.5°	21.1	22.2	23.2	23.8	24.0	24.2	24.4	24.6
95°	25.3	26.5	27.7	28.3	28.3	28.3	28.3	28.3
97.5°	26.6	27.9	29.2	30.0	30.1	30.3	30.5	30.6
100°	27.2	28.5	29.8	30.6	30.7	30.9	31.0	31.2
102.5°	40.7	36.7	32.5	30.6	30.9	31.2	31.5	31.8
105°	104.3	75.0	45.8	31.4	31.7	32.0	32.4	32.7
107.5°	255.4	234.0	212.6	190.9	168.7	146.7	124.7	102.7
110°	324.3	318.8	313.4	298.8	275.2	251.6	227.9	204.4



TEST NUMBER: P332436-840

CATALOG NUMBER: S123RDIW-S775D755U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	372.8	372.9	373.0	370.5	365.6	360.6	355.6	350.6
115°	429.9	431.5	433.1	434.3	434.9	435.7	436.3	437.0
117.5°	481.5	482.8	484.1	484.8	485.0	485.1	485.2	485.4
120°	515.4	516.7	518.1	518.7	518.7	518.7	518.7	518.7
122.5°	548.5	549.4	550.4	550.9	551.0	551.1	551.3	551.4
125°	595.1	595.5	595.8	596.1	596.5	596.8	597.1	597.4
127.5°	642.0	642.5	643.0	643.1	642.8	642.4	642.1	641.8
130°	670.1	670.8	671.5	671.7	671.3	671.0	670.7	670.2
132.5°	696.9	697.5	698.2	698.3	697.8	697.4	696.9	696.4
135°	737.4	737.9	738.4	738.4	737.9	737.4	736.9	736.4
137.5°	773.6	774.4	775.2	775.4	775.1	774.7	774.4	774.1
140°	796.5	797.1	797.8	798.0	797.6	797.3	797.0	796.6
142.5°	818.2	818.7	819.2	819.3	818.8	818.4	817.9	817.4
145°	848.6	848.9	849.2	849.4	849.4	849.4	849.4	849.4
147.5°	875.8	876.1	876.5	876.2	875.5	874.6	873.9	873.1
150°	892.4	892.7	893.0	893.0	892.5	892.0	891.5	891.0
152.5°	907.2	907.8	908.4	908.3	907.6	906.8	906.1	905.2
155°	927.6	928.4	929.3	929.2	928.2	927.2	926.1	925.1
157.5°	945.3	946.2	947.3	947.2	945.8	944.5	943.3	942.0
160°	955.4	956.4	957.4	957.4	956.1	955.0	953.8	952.7
162.5°	964.6	965.7	966.8	966.8	965.8	964.8	963.8	962.8
165°	976.8	978.2	979.5	979.6	978.5	977.2	976.1	974.9
167.5°	986.3	987.7	989.1	989.1	987.7	986.3	985.0	983.7
170°	991.7	993.1	994.4	994.4	993.1	991.7	990.4	989.1
172.5°	995.3	996.6	997.9	997.8	996.4	995.0	993.5	992.1
175°	999.6	1000.8	1001.9	1001.8	1000.5	999.2	997.8	996.5
177.5°	1001.2	1002.2	1003.3	1003.1	1001.8	1000.5	999.2	997.8
180°	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3

(END OF REPORT)