

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: P332189

Luminaire Tested: **S123DIW-S1000D755U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332189
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: S123DIW-S1000D755U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6819.3 lumens
Efficiency: N/A
Efficacy: 127.2 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

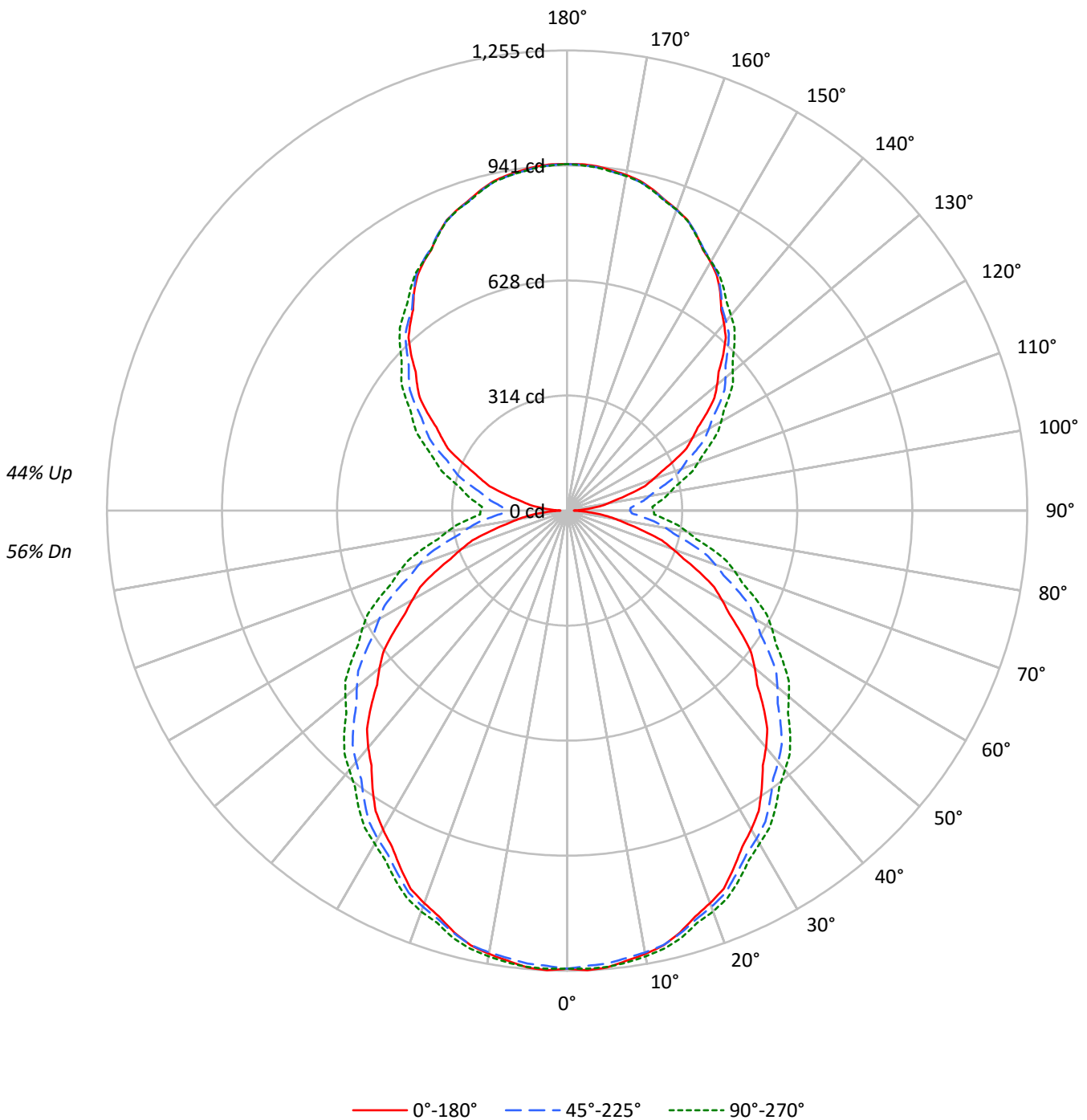
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	0														
RCR																																						
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56																				
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50	45																				
2	89	81	74	68	82	75	69	64	65	60	56	55	51	49	46	43	41	37																				
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31																				
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	29	26																				
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26	22																				
6	62	50	41	35	57	46	39	33	40	34	29	34	30	26	29	25	22	19																				
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17																				
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15																				
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14																				
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14	12																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13448	13448	13448
5°	13490	13110	13117
10°	13370	12808	12744
15°	13197	12465	12336
20°	12951	12074	11888
25°	12647	11623	11416
30°	12335	11217	10938
35°	11987	10789	10556
40°	11653	10399	10147
45°	11284	10024	9821
50°	10920	9654	9461
55°	10517	9275	9136
60°	10125	8890	8804
65°	9723	8481	8409
70°	9115	8019	8005
75°	8351	7490	7593
80°	7467	6971	7122
85°	6653	6616	6850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.4	1.7
10°-20°	337.6	5.0
20°-30°	505.0	7.4
30°-40°	603.1	8.8
40°-50°	631.0	9.3
50°-60°	592.1	8.7
60°-70°	494.5	7.3
70°-80°	353.8	5.2
80°-90°	213.8	3.1
90°-100°	194.0	2.8
100°-110°	281.5	4.1
110°-120°	378.3	5.5
120°-130°	449.3	6.6
130°-140°	479.9	7.0
140°-150°	459.0	6.7
150°-160°	383.4	5.6
160°-170°	255.2	3.7
170°-180°	89.4	1.3
0°-30°	961.1	14.1
0°-40°	1564.1	22.9
0°-60°	2787.2	40.9
0°-90°	3849.4	56.4
90°-120°	853.8	12.5
90°-150°	2242.0	32.9
90°-180°	2970.0	43.6
0°-180°	6819.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1248	1240	1250	1249	119
15°	1191	1195	1194	1206	1206	335
25°	1075	1088	1093	1110	1111	495
35°	926	947	965	985	991	579
45°	757	790	823	848	860	583
55°	577	622	671	706	719	517
65°	399	452	512	551	566	394
75°	216	281	348	392	410	231
85°	67	135	207	251	267	70
90°	18	93	172	219	236	15
95°	59	118	190	233	248	61
105°	178	214	277	314	329	190
115°	322	342	388	420	432	319
125°	466	470	506	530	538	416
135°	602	605	619	640	646	464
145°	728	728	730	740	743	454
155°	832	832	833	835	831	383
165°	906	904	904	908	903	255
175°	943	940	940	944	939	89
180°	945	945	945	945	945	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1254.9	1254.2	1253.4	1252.7	1252.0	1250.6	1248.7	1246.8	1244.8	1242.9	1244.8
5°	1250.8	1250.2	1249.6	1249.0	1248.4	1247.2	1245.4	1243.5	1241.7	1239.9	1242.3
7.5°	1238.5	1238.7	1238.8	1238.9	1239.0	1238.2	1236.5	1234.7	1232.9	1231.2	1234.2
10°	1227.7	1228.3	1228.9	1229.5	1230.1	1229.6	1228.1	1226.6	1225.1	1223.6	1226.6
12.5°	1214.6	1215.4	1216.3	1217.1	1218.0	1217.9	1216.9	1215.8	1214.8	1213.8	1216.6
15°	1190.9	1191.8	1192.7	1193.6	1194.5	1194.8	1194.5	1194.2	1193.9	1193.6	1196.7
17.5°	1161.0	1162.8	1164.6	1166.4	1168.2	1169.1	1169.0	1168.8	1168.7	1168.6	1171.3
20°	1139.2	1141.0	1142.8	1144.6	1146.4	1147.7	1148.3	1148.9	1149.5	1150.1	1152.8
22.5°	1116.3	1118.1	1120.0	1121.8	1123.6	1124.9	1125.8	1126.6	1127.5	1128.3	1131.7
25°	1075.2	1078.2	1081.3	1084.3	1087.3	1089.3	1090.2	1091.1	1092.0	1092.9	1096.8
27.5°	1033.8	1037.3	1040.7	1044.2	1047.6	1050.3	1052.3	1054.2	1056.1	1058.1	1061.5
30°	1004.4	1008.4	1012.3	1016.2	1020.2	1023.3	1025.8	1028.2	1030.6	1033.0	1036.7
32.5°	971.8	976.2	980.6	985.0	989.4	993.2	996.4	999.5	1002.7	1005.8	1009.7
35°	925.5	930.3	935.2	940.0	944.9	949.2	953.2	957.1	961.0	965.0	969.5
37.5°	876.5	882.0	887.4	892.8	898.3	903.4	908.3	913.1	917.9	922.8	927.9
40°	843.8	849.3	854.7	860.2	865.6	871.4	877.4	883.5	889.5	895.6	900.7
42.5°	807.9	814.6	821.2	827.9	834.5	841.0	847.3	853.6	859.9	866.2	871.8
45°	756.7	764.0	771.3	778.5	785.8	793.2	800.7	808.3	815.9	823.4	829.2
47.5°	703.1	711.3	719.6	727.8	736.0	744.5	753.1	761.8	770.4	779.1	785.5
50°	668.3	676.7	685.2	693.7	702.1	711.1	720.4	729.8	739.2	748.6	755.5
52.5°	631.2	640.2	649.2	658.1	667.1	676.7	687.1	697.4	707.7	718.1	725.3
55°	577.1	587.1	597.0	607.0	617.0	627.4	638.3	649.2	660.1	671.0	679.2
57.5°	524.3	534.7	545.1	555.5	565.9	577.1	589.0	600.9	612.8	624.7	632.9
60°	487.3	498.1	509.0	519.9	530.8	542.4	554.8	567.3	579.7	592.1	600.5
62.5°	452.4	463.5	474.7	485.8	496.9	509.1	522.2	535.3	548.4	561.6	570.0
65°	398.8	410.6	422.4	434.2	446.0	458.5	471.8	485.1	498.4	511.8	520.8
67.5°	344.3	356.9	369.4	381.9	394.4	407.5	421.0	434.6	448.1	461.7	471.6
70°	306.2	319.2	332.2	345.3	358.3	372.0	386.5	401.1	415.6	430.1	439.8
72.5°	271.4	284.4	297.4	310.4	323.4	337.4	352.4	367.4	382.4	397.4	407.3
75°	216.4	230.6	244.8	259.1	273.3	287.9	303.1	318.2	333.3	348.4	358.4
77.5°	168.5	182.8	197.2	211.5	225.8	240.6	255.9	271.1	286.4	301.6	312.1
80°	134.7	149.6	164.4	179.2	194.0	209.3	225.0	240.8	256.5	272.2	282.5
82.5°	105.3	120.4	135.5	150.5	165.6	181.1	197.1	213.0	229.0	245.0	255.3
85°	66.7	81.8	96.9	112.1	127.2	142.8	158.8	174.8	190.8	206.9	217.2
87.5°	36.4	51.7	67.1	82.5	97.9	113.5	129.4	145.3	161.1	177.0	187.4
90°	18.4	34.9	51.4	67.8	84.3	101.3	118.9	136.5	154.0	171.6	182.6
92.5°	34.6	49.1	63.5	78.0	92.5	108.0	124.4	140.8	157.2	173.6	184.2
95°	58.8	71.7	84.7	97.6	110.6	125.1	141.2	157.4	173.5	189.7	199.7
97.5°	91.1	102.6	114.1	125.6	137.1	150.4	165.6	180.7	195.8	210.9	220.7
100°	113.2	123.9	134.5	145.2	155.9	168.6	183.3	198.0	212.8	227.5	236.8
102.5°	138.8	148.1	157.4	166.7	176.0	188.1	202.8	217.6	232.4	247.1	256.1
105°	177.9	185.5	193.1	200.7	208.2	219.3	233.8	248.3	262.8	277.2	285.7
107.5°	222.0	228.3	234.7	241.1	247.5	257.1	270.0	283.0	295.9	308.8	317.5
110°	249.4	255.2	260.9	266.7	272.5	281.6	294.0	306.4	318.9	331.3	339.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	279.1	283.8	288.4	293.1	297.8	306.0	317.6	329.3	341.0	352.7	361.1
115°	322.3	326.4	330.5	334.6	338.8	346.1	356.7	367.2	377.8	388.3	395.8
117.5°	366.8	369.4	372.0	374.5	377.1	383.3	393.1	402.9	412.7	422.4	429.6
120°	393.6	396.1	398.6	401.1	403.6	409.5	418.6	427.8	436.9	446.1	452.9
122.5°	422.7	424.2	425.8	427.3	428.8	434.1	443.1	452.2	461.3	470.3	476.6
125°	465.8	466.3	466.7	467.2	467.7	472.2	480.6	489.1	497.5	506.0	511.7
127.5°	506.7	507.5	508.2	509.0	509.7	513.6	520.5	527.4	534.3	541.1	546.2
130°	534.0	535.1	536.1	537.1	538.1	541.4	547.0	552.5	558.1	563.6	568.7
132.5°	560.3	561.5	562.8	564.0	565.3	568.2	572.6	577.1	581.6	586.1	590.8
135°	601.7	602.4	603.1	603.8	604.5	606.4	609.5	612.7	615.9	619.0	623.8
137.5°	640.0	640.6	641.2	641.8	642.4	643.8	646.1	648.4	650.7	653.0	657.1
140°	665.7	666.5	667.3	668.1	669.0	669.9	671.0	672.1	673.1	674.2	678.6
142.5°	690.0	690.6	691.2	691.8	692.3	692.9	693.4	693.8	694.3	694.8	698.7
145°	728.0	728.0	728.1	728.1	728.1	728.4	728.9	729.4	729.9	730.4	732.6
147.5°	759.9	760.5	761.1	761.7	762.3	762.8	763.3	763.7	764.2	764.7	765.4
150°	783.1	783.4	783.7	784.1	784.4	784.7	785.0	785.4	785.7	786.0	786.0
152.5°	802.1	802.5	803.0	803.5	803.9	804.2	804.4	804.6	804.8	805.0	805.3
155°	832.1	832.1	832.1	832.1	832.1	832.1	832.3	832.5	832.6	832.8	833.5
157.5°	857.6	857.4	857.2	857.0	856.8	856.8	856.9	857.0	857.2	857.3	858.0
160°	873.6	873.3	873.0	872.6	872.3	872.1	872.1	872.1	872.1	872.1	873.0
162.5°	887.9	887.4	886.9	886.5	886.0	885.9	886.0	886.1	886.3	886.4	887.2
165°	906.3	905.8	905.3	904.8	904.3	904.0	904.0	904.0	904.0	904.0	905.0
167.5°	921.0	920.3	919.7	919.0	918.3	918.1	918.2	918.3	918.5	918.6	919.6
170°	929.3	928.6	928.0	927.3	926.6	926.3	926.3	926.3	926.3	926.3	927.5
172.5°	935.8	935.2	934.5	933.8	933.2	932.8	932.8	932.8	932.8	932.8	933.9
175°	942.6	942.0	941.3	940.7	940.0	939.7	939.7	939.7	939.7	939.7	940.7
177.5°	945.5	944.9	944.4	943.9	943.4	943.1	943.1	943.1	943.1	943.1	943.9
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1246.8	1248.7	1250.6	1251.5	1251.2	1251.0	1250.8	1250.5
5°	1244.7	1247.2	1249.6	1250.6	1250.3	1250.0	1249.7	1249.4
7.5°	1237.2	1240.3	1243.3	1244.6	1244.3	1243.9	1243.5	1243.2
10°	1229.6	1232.6	1235.7	1236.9	1236.3	1235.7	1235.1	1234.5
12.5°	1219.3	1222.1	1224.9	1226.0	1225.4	1224.8	1224.2	1223.6
15°	1199.7	1202.7	1205.7	1207.1	1206.8	1206.5	1206.2	1205.9
17.5°	1174.0	1176.8	1179.5	1180.6	1180.2	1179.8	1179.4	1178.9
20°	1155.5	1158.2	1161.0	1162.5	1162.8	1163.1	1163.4	1163.7
22.5°	1135.2	1138.6	1142.1	1143.7	1143.5	1143.4	1143.2	1143.0
25°	1100.8	1104.7	1108.6	1110.6	1110.6	1110.6	1110.6	1110.6
27.5°	1064.8	1068.2	1071.6	1073.4	1073.7	1073.9	1074.2	1074.4
30°	1040.3	1043.9	1047.5	1049.4	1049.4	1049.4	1049.4	1049.4
32.5°	1013.6	1017.4	1021.3	1023.6	1024.3	1025.0	1025.8	1026.5
35°	974.0	978.6	983.1	986.0	987.2	988.4	989.6	990.8
37.5°	933.1	938.2	943.4	946.4	947.4	948.3	949.3	950.3
40°	905.8	911.0	916.1	919.3	920.5	921.7	922.9	924.1
42.5°	877.4	883.0	888.7	892.3	894.0	895.7	897.4	899.1
45°	834.9	840.7	846.4	850.5	852.9	855.3	857.8	860.2
47.5°	792.0	798.5	804.9	809.1	811.0	812.9	814.7	816.6
50°	762.5	769.4	776.4	780.9	783.1	785.2	787.3	789.4
52.5°	732.5	739.7	746.9	751.8	754.4	757.0	759.6	762.2
55°	687.3	695.5	703.7	708.9	711.4	713.8	716.2	718.6
57.5°	641.2	649.4	657.6	663.2	666.0	668.8	671.7	674.5
60°	609.0	617.5	625.9	631.8	635.2	638.5	641.8	645.1
62.5°	578.5	587.0	595.4	601.2	604.3	607.4	610.5	613.6
65°	529.9	539.0	548.0	554.1	557.1	560.1	563.2	566.2
67.5°	481.5	491.4	501.3	507.6	510.1	512.7	515.2	517.7
70°	449.4	459.1	468.8	475.2	478.2	481.2	484.2	487.3
72.5°	417.3	427.2	437.1	443.6	446.6	449.6	452.7	455.7
75°	368.4	378.4	388.3	395.2	398.8	402.4	406.0	409.7
77.5°	322.7	333.2	343.7	350.4	353.1	355.9	358.7	361.5
80°	292.8	303.1	313.3	320.0	323.0	326.0	329.1	332.1
82.5°	265.6	275.8	286.1	292.8	295.8	298.8	301.8	304.9
85°	227.4	237.7	248.0	254.7	257.7	260.7	263.7	266.8
87.5°	197.8	208.2	218.6	225.4	228.5	231.6	234.6	237.7
90°	193.5	204.4	215.4	222.5	225.9	229.2	232.6	236.0
92.5°	194.7	205.3	215.9	222.4	225.0	227.6	230.2	232.8
95°	209.7	219.8	229.8	236.3	239.4	242.4	245.4	248.4
97.5°	230.4	240.2	250.0	256.3	259.3	262.3	265.2	268.2
100°	246.1	255.3	264.6	270.9	274.2	277.6	281.0	284.3
102.5°	265.2	274.2	283.2	289.2	292.2	295.1	298.1	301.0
105°	294.2	302.7	311.1	316.9	319.9	323.0	326.0	329.1
107.5°	326.1	334.7	343.4	348.9	351.4	353.8	356.3	358.8
110°	348.4	356.9	365.4	370.7	372.8	374.9	377.0	379.1



TEST NUMBER: P332189

CATALOG NUMBER: S123DIW-S1000D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.5	377.9	386.3	391.8	394.4	397.0	399.6	402.2
115°	403.2	410.6	418.0	422.9	425.1	427.4	429.6	431.9
117.5°	436.8	443.9	451.1	455.6	457.5	459.4	461.3	463.2
120°	459.7	466.5	473.3	477.6	479.3	481.1	482.9	484.7
122.5°	482.9	489.2	495.5	499.5	501.1	502.8	504.4	506.1
125°	517.4	523.0	528.7	532.3	533.8	535.2	536.7	538.1
127.5°	551.3	556.3	561.4	564.6	565.9	567.2	568.5	569.8
130°	573.8	578.9	584.0	586.8	587.5	588.2	588.8	589.5
132.5°	595.5	600.2	604.9	607.9	609.0	610.2	611.4	612.5
135°	628.6	633.4	638.2	641.2	642.3	643.5	644.7	645.9
137.5°	661.2	665.3	669.4	671.9	672.7	673.6	674.5	675.4
140°	682.9	687.3	691.7	694.1	694.4	694.8	695.1	695.5
142.5°	702.6	706.5	710.3	712.6	713.2	713.8	714.5	715.1
145°	734.9	737.1	739.4	740.8	741.3	741.9	742.4	743.0
147.5°	766.1	766.8	767.6	768.0	768.1	768.2	768.3	768.4
150°	786.0	786.0	786.0	785.8	785.5	785.1	784.7	784.3
152.5°	805.6	805.8	806.1	805.9	805.1	804.4	803.6	802.9
155°	834.1	834.8	835.4	835.2	834.0	832.9	831.7	830.6
157.5°	858.7	859.4	860.1	859.9	859.0	858.1	857.2	856.2
160°	873.8	874.6	875.4	875.5	874.9	874.2	873.5	872.9
162.5°	888.0	888.9	889.7	889.6	888.5	887.5	886.4	885.3
165°	906.0	907.0	908.0	907.9	906.8	905.6	904.5	903.3
167.5°	920.6	921.7	922.7	922.7	921.7	920.6	919.6	918.6
170°	928.6	929.8	930.9	930.9	929.8	928.6	927.5	926.3
172.5°	934.9	935.9	936.9	936.9	935.7	934.6	933.4	932.3
175°	941.7	942.6	943.6	943.6	942.4	941.2	940.1	938.9
177.5°	944.7	945.5	946.3	946.2	945.3	944.3	943.4	942.5
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9

(END OF REPORT)