

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: P332183

Luminaire Tested: **S123DIW-S1000D460U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332183
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-S1000D460U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 460 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5798.7 lumens
Efficiency: N/A
Efficacy: 125.5 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: Semi-Direct

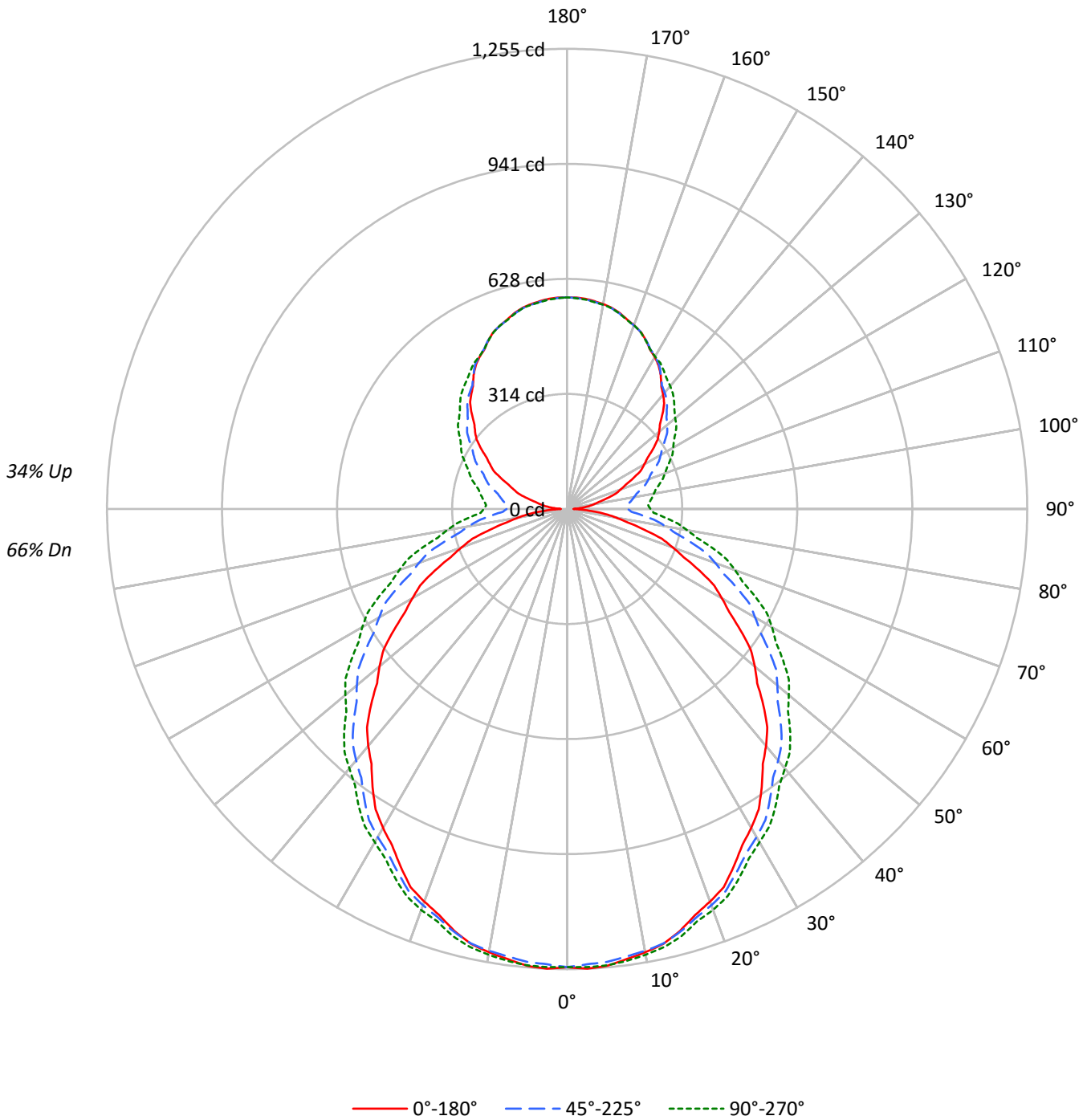
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

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	50	30	10	0		
RCR																										
0	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66								
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	61	59	57	53								
2	91	82	75	69	85	77	71	66	68	64	60	60	57	53	53	50	47	43								
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	43	40	36								
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	31								
5	69	56	48	41	64	53	45	39	47	41	36	42	37	33	37	33	29	26								
6	63	51	42	36	59	48	40	34	43	36	31	38	33	28	33	29	26	23								
7	59	46	37	31	55	43	35	30	39	32	28	34	29	25	30	26	23	20								
8	55	41	33	28	51	39	32	27	35	29	24	32	26	22	28	24	20	18								
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16								
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15								

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



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.4	2.0
10°-20°	337.6	5.8
20°-30°	505.0	8.7
30°-40°	603.1	10.4
40°-50°	631.0	10.9
50°-60°	592.1	10.2
60°-70°	494.5	8.5
70°-80°	353.8	6.1
80°-90°	212.7	3.7
90°-100°	170.0	2.9
100°-110°	209.8	3.6
110°-120°	256.3	4.4
120°-130°	288.8	5.0
130°-140°	299.5	5.2
140°-150°	281.6	4.9
150°-160°	234.1	4.0
160°-170°	155.8	2.7
170°-180°	54.6	0.9
0°-30°	961.1	16.6
0°-40°	1564.1	27.0
0°-60°	2787.2	48.1
0°-90°	3848.3	66.4
90°-120°	636.0	11.0
90°-150°	1505.9	26.0
90°-180°	1950.0	33.6
0°-180°	5798.7	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	90	165	211	227	14
95°	42	99	168	211	226	42
105°	113	148	209	246	260	120
115°	199	219	265	297	309	198
125°	286	289	326	352	360	255
135°	368	370	384	406	413	284
145°	445	445	446	456	460	278
155°	508	508	508	510	507	234
165°	553	552	552	554	552	156
175°	576	574	574	576	573	55
180°	577	577	577	577	577	



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

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°	36.3	51.6	66.8	82.1	97.3	112.8	128.5	144.2	159.9	175.6	185.9
90°	18.1	34.0	49.8	65.6	81.5	97.7	114.5	131.2	147.9	164.7	175.4
92.5°	27.6	41.6	55.7	69.7	83.8	98.8	114.7	130.6	146.6	162.5	172.9
95°	41.7	54.2	66.7	79.2	91.7	105.8	121.4	137.0	152.7	168.3	178.1
97.5°	60.8	72.0	83.2	94.3	105.5	118.5	133.2	147.9	162.7	177.4	186.9
100°	73.9	84.2	94.4	104.7	115.0	127.4	141.8	156.2	170.6	185.0	194.1
102.5°	89.1	98.2	107.3	116.3	125.4	137.1	151.4	165.8	180.1	194.4	203.3
105°	112.9	120.3	127.8	135.2	142.7	153.4	167.3	181.2	195.1	209.0	217.5
107.5°	139.1	145.4	151.7	158.0	164.3	173.8	186.5	199.2	211.9	224.6	233.0
110°	155.4	161.1	166.7	172.4	178.0	187.0	199.3	211.6	223.9	236.2	244.5



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.6	178.2	182.8	187.4	192.0	200.1	211.7	223.4	235.1	246.7	254.8
115°	199.4	203.3	207.3	211.2	215.1	222.4	233.1	243.8	254.5	265.2	272.5
117.5°	226.5	228.9	231.4	233.8	236.3	242.5	252.4	262.4	272.3	282.3	289.5
120°	242.5	244.6	246.7	248.8	250.9	256.7	266.2	275.7	285.1	294.6	301.5
122.5°	260.2	261.4	262.7	263.9	265.1	270.4	279.6	288.8	298.1	307.3	313.8
125°	286.0	286.3	286.6	286.9	287.2	291.6	300.2	308.7	317.3	325.9	331.8
127.5°	311.0	311.3	311.7	312.0	312.3	316.0	323.1	330.1	337.1	344.2	349.6
130°	327.6	328.2	328.7	329.2	329.7	332.8	338.5	344.3	350.0	355.8	361.1
132.5°	343.2	344.0	344.7	345.5	346.2	348.9	353.5	358.1	362.8	367.4	372.4
135°	368.4	368.7	369.0	369.3	369.6	371.4	374.6	377.9	381.1	384.3	389.4
137.5°	391.7	392.0	392.2	392.5	392.8	394.0	396.1	398.2	400.4	402.5	406.9
140°	407.0	407.5	408.0	408.5	409.0	409.7	410.7	411.7	412.7	413.8	418.2
142.5°	421.8	422.1	422.3	422.6	422.9	423.2	423.5	423.9	424.3	424.6	428.6
145°	445.0	444.9	444.8	444.7	444.6	444.7	445.0	445.3	445.6	445.9	448.2
147.5°	464.0	464.3	464.7	465.0	465.4	465.7	466.0	466.3	466.6	466.9	467.6
150°	478.1	478.3	478.5	478.7	478.9	479.1	479.3	479.5	479.7	479.9	479.9
152.5°	489.7	490.0	490.3	490.5	490.8	491.0	491.1	491.3	491.4	491.5	491.7
155°	508.0	508.0	508.0	508.0	508.0	508.1	508.2	508.3	508.4	508.5	508.9
157.5°	523.6	523.5	523.4	523.2	523.1	523.1	523.2	523.3	523.3	523.4	523.8
160°	533.4	533.2	533.0	532.8	532.6	532.5	532.5	532.5	532.5	532.5	533.0
162.5°	542.1	541.8	541.5	541.2	541.0	540.9	540.9	541.0	541.1	541.2	541.7
165°	553.3	553.0	552.7	552.4	552.1	552.0	552.0	552.0	552.0	552.0	552.6
167.5°	562.3	561.9	561.5	561.1	560.7	560.5	560.6	560.7	560.8	560.8	561.5
170°	567.4	567.0	566.6	566.2	565.8	565.6	565.6	565.6	565.6	565.6	566.3
172.5°	571.4	571.0	570.6	570.2	569.7	569.5	569.5	569.5	569.5	569.5	570.2
175°	575.5	575.1	574.7	574.3	573.9	573.7	573.7	573.7	573.7	573.7	574.3
177.5°	577.3	576.9	576.6	576.3	576.0	575.8	575.8	575.8	575.8	575.8	576.3
180°	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

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°	196.3	206.7	217.0	223.7	226.8	229.9	232.9	236.0
90°	186.0	196.7	207.4	214.4	217.6	220.8	224.1	227.3
92.5°	183.2	193.6	203.9	210.5	213.1	215.8	218.4	221.1
95°	187.8	197.6	207.4	213.8	216.8	219.8	222.9	225.9
97.5°	196.4	205.8	215.3	221.6	224.5	227.5	230.5	233.5
100°	203.2	212.2	221.3	227.5	230.7	233.9	237.1	240.4
102.5°	212.1	220.9	229.8	235.7	238.7	241.6	244.6	247.6
105°	226.0	234.4	242.9	248.6	251.5	254.4	257.4	260.3
107.5°	241.5	249.9	258.3	263.8	266.3	268.9	271.4	274.0
110°	252.7	261.0	269.3	274.5	276.7	278.9	281.2	283.4



TEST NUMBER: P332183

CATALOG NUMBER: S123DIW-S1000D460U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	262.9	271.0	279.1	284.5	287.1	289.7	292.4	295.0
115°	279.9	287.3	294.6	299.5	301.8	304.1	306.4	308.7
117.5°	296.7	303.8	311.0	315.6	317.7	319.8	321.9	324.0
120°	308.3	315.2	322.0	326.4	328.4	330.3	332.2	334.1
122.5°	320.2	326.7	333.1	337.3	339.1	340.9	342.8	344.6
125°	337.8	343.7	349.7	353.5	355.2	356.9	358.6	360.4
127.5°	355.0	360.5	365.9	369.4	371.0	372.6	374.2	375.8
130°	366.5	371.8	377.1	380.4	381.5	382.6	383.7	384.8
132.5°	377.4	382.4	387.5	390.7	392.2	393.7	395.3	396.8
135°	394.4	399.4	404.5	407.7	409.0	410.3	411.6	412.9
137.5°	411.2	415.6	419.9	422.7	423.8	424.9	426.1	427.2
140°	422.6	427.1	431.5	434.1	434.9	435.7	436.5	437.3
142.5°	432.5	436.5	440.4	442.9	443.9	444.8	445.8	446.8
145°	450.6	452.9	455.2	456.8	457.6	458.4	459.2	460.0
147.5°	468.3	469.0	469.8	470.4	470.9	471.3	471.8	472.3
150°	479.9	479.9	479.9	479.9	479.9	479.9	479.9	479.9
152.5°	491.8	492.0	492.2	492.0	491.6	491.2	490.8	490.4
155°	509.3	509.7	510.1	509.9	509.2	508.5	507.8	507.1
157.5°	524.3	524.7	525.1	525.0	524.5	523.9	523.3	522.8
160°	533.5	534.0	534.5	534.5	534.1	533.7	533.3	532.9
162.5°	542.2	542.7	543.2	543.1	542.5	541.8	541.2	540.5
165°	553.2	553.8	554.4	554.3	553.6	552.9	552.2	551.5
167.5°	562.1	562.7	563.3	563.3	562.7	562.1	561.5	560.8
170°	567.0	567.7	568.4	568.4	567.7	567.0	566.3	565.6
172.5°	570.8	571.4	572.0	572.0	571.3	570.6	569.9	569.2
175°	574.9	575.5	576.1	576.1	575.4	574.7	574.0	573.3
177.5°	576.8	577.3	577.7	577.7	577.1	576.6	576.0	575.4
180°	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9

(END OF REPORT)