

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: P332189-940

Luminaire Tested: **S123DIW-S1000D755U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332189-940
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-S1000D755U940-4F0-1E-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: 6080.9 lumens
Efficiency: N/A
Efficacy: 113.4 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

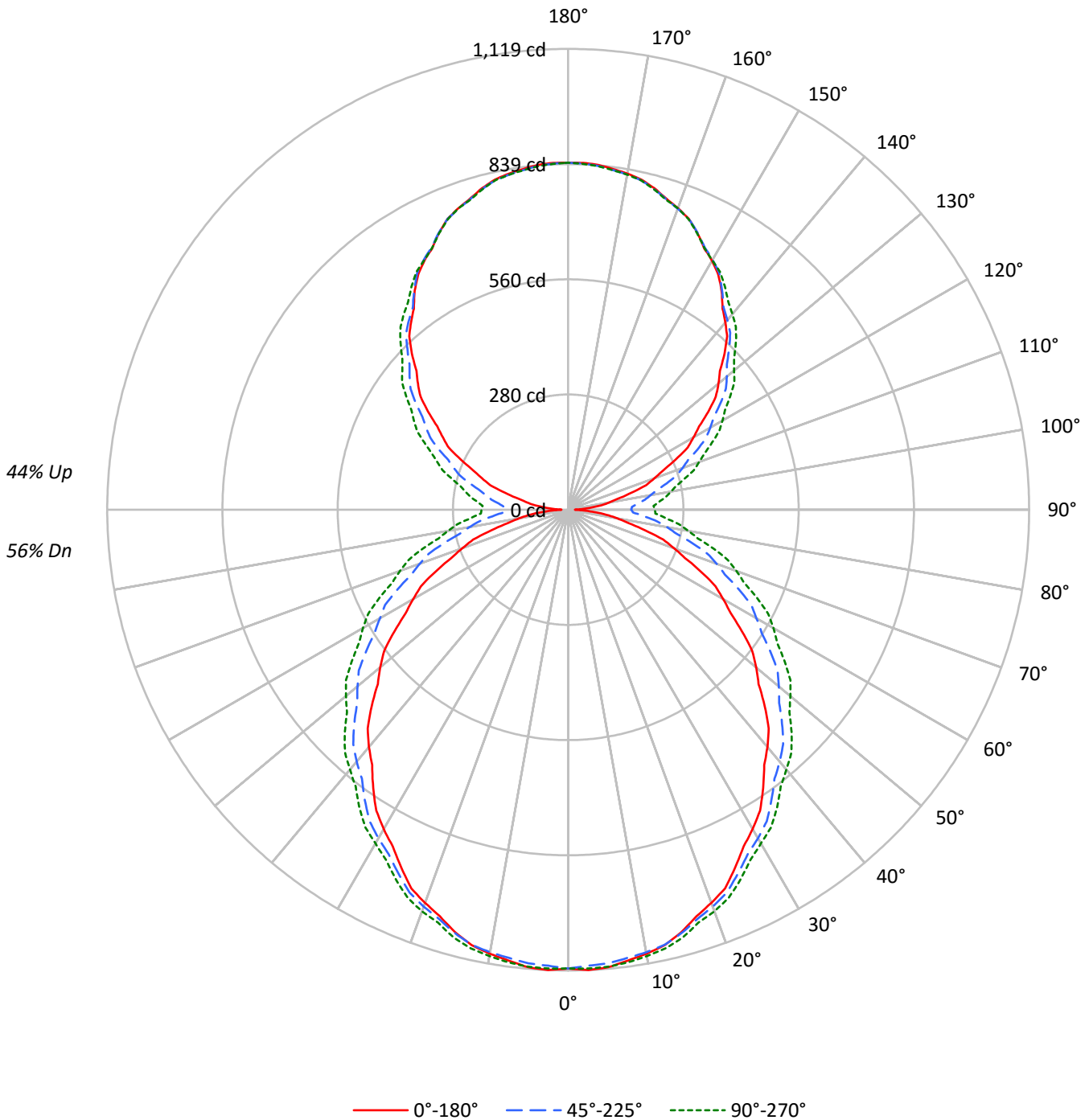
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50
2	89	81	74	68	82	75	69	64	65	60	56	55	51	49	46	43	41
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	29
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26
6	62	50	41	35	57	46	39	33	40	34	29	34	30	26	29	25	22
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	1.7
10°-20°	301.1	5.0
20°-30°	450.3	7.4
30°-40°	537.8	8.8
40°-50°	562.6	9.3
50°-60°	528.0	8.7
60°-70°	441.0	7.3
70°-80°	315.5	5.2
80°-90°	190.6	3.1
90°-100°	173.0	2.8
100°-110°	251.0	4.1
110°-120°	337.4	5.5
120°-130°	400.6	6.6
130°-140°	428.0	7.0
140°-150°	409.3	6.7
150°-160°	341.9	5.6
160°-170°	227.6	3.7
170°-180°	79.7	1.3
0°-30°	857.0	14.1
0°-40°	1394.8	22.9
0°-60°	2485.4	40.9
0°-90°	3432.5	56.4
90°-120°	761.4	12.5
90°-150°	1999.2	32.9
90°-180°	2648.0	43.5
0°-180°	6080.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	62
90°	16	83	153	195	210	13
95°	52	105	169	208	222	54
105°	159	191	247	280	294	169
115°	287	305	346	375	385	285
125°	415	419	451	473	480	371
135°	536	540	552	570	576	413
145°	649	649	651	660	662	405
155°	742	742	743	745	741	341
165°	808	806	806	810	806	228
175°	840	838	838	841	837	80
180°	843	843	843	843	843	



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.5	46.1	59.8	73.6	87.3	101.2	115.4	129.6	143.7	157.8	167.1
90°	16.4	31.1	45.8	60.5	75.2	90.3	106.0	121.7	137.3	153.0	162.8
92.5°	30.9	43.8	56.6	69.6	82.5	96.3	110.9	125.6	140.2	154.8	164.3
95°	52.4	63.9	75.5	87.0	98.6	111.6	125.9	140.4	154.7	169.2	178.1
97.5°	81.2	91.5	101.7	112.0	122.3	134.1	147.7	161.1	174.6	188.1	196.8
100°	100.9	110.5	119.9	129.5	139.0	150.3	163.5	176.6	189.8	202.9	211.2
102.5°	123.8	132.1	140.4	148.6	156.9	167.7	180.8	194.0	207.2	220.3	228.4
105°	158.6	165.4	172.2	179.0	185.7	195.6	208.5	221.4	234.3	247.2	254.8
107.5°	198.0	203.6	209.3	215.0	220.7	229.3	240.8	252.4	263.9	275.4	283.1
110°	222.4	227.6	232.6	237.8	243.0	251.1	262.2	273.2	284.4	295.4	303.0



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	248.9	253.1	257.2	261.4	265.6	272.9	283.2	293.6	304.1	314.5	322.0
115°	287.4	291.1	294.7	298.4	302.1	308.6	318.1	327.4	336.9	346.3	352.9
117.5°	327.1	329.4	331.7	333.9	336.3	341.8	350.5	359.3	368.0	376.7	383.1
120°	351.0	353.2	355.4	357.7	359.9	365.2	373.3	381.5	389.6	397.8	403.9
122.5°	376.9	378.3	379.7	381.0	382.4	387.1	395.1	403.2	411.3	419.4	425.0
125°	415.4	415.8	416.2	416.6	417.1	421.1	428.6	436.1	443.6	451.2	456.3
127.5°	451.8	452.5	453.2	453.9	454.5	458.0	464.1	470.3	476.4	482.5	487.1
130°	476.2	477.2	478.0	478.9	479.8	482.8	487.8	492.7	497.7	502.6	507.1
132.5°	499.6	500.7	501.9	502.9	504.1	506.7	510.6	514.6	518.6	522.6	526.8
135°	536.5	537.2	537.8	538.4	539.0	540.7	543.5	546.4	549.2	552.0	556.2
137.5°	570.7	571.2	571.8	572.3	572.8	574.1	576.1	578.2	580.2	582.3	585.9
140°	593.6	594.3	595.0	595.8	596.6	597.4	598.3	599.3	600.2	601.2	605.1
142.5°	615.3	615.8	616.4	616.9	617.3	617.9	618.3	618.7	619.1	619.6	623.0
145°	649.2	649.2	649.3	649.3	649.3	649.5	650.0	650.4	650.9	651.3	653.3
147.5°	677.6	678.1	678.7	679.2	679.8	680.2	680.6	681.0	681.4	681.9	682.5
150°	698.3	698.6	698.8	699.2	699.5	699.7	700.0	700.3	700.6	700.9	700.9
152.5°	715.2	715.6	716.0	716.5	716.8	717.1	717.3	717.5	717.6	717.8	718.1
155°	742.0	742.0	742.0	742.0	742.0	742.0	742.2	742.3	742.4	742.6	743.2
157.5°	764.7	764.6	764.4	764.2	764.0	764.0	764.1	764.2	764.4	764.5	765.1
160°	779.0	778.7	778.5	778.1	777.8	777.7	777.7	777.7	777.7	777.7	778.5
162.5°	791.8	791.3	790.9	790.5	790.1	790.0	790.1	790.1	790.3	790.4	791.1
165°	808.2	807.7	807.3	806.8	806.4	806.1	806.1	806.1	806.1	806.1	807.0
167.5°	821.3	820.6	820.1	819.5	818.9	818.7	818.8	818.9	819.0	819.1	820.0
170°	828.7	828.0	827.5	826.9	826.3	826.0	826.0	826.0	826.0	826.0	827.1
172.5°	834.5	833.9	833.3	832.7	832.1	831.8	831.8	831.8	831.8	831.8	832.8
175°	840.5	840.0	839.4	838.8	838.2	837.9	837.9	837.9	837.9	837.9	838.8
177.5°	843.1	842.6	842.1	841.7	841.2	841.0	841.0	841.0	841.0	841.0	841.7
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	176.4	185.7	194.9	201.0	203.8	206.5	209.2	212.0
90°	172.5	182.3	192.1	198.4	201.4	204.4	207.4	210.4
92.5°	173.6	183.1	192.5	198.3	200.6	203.0	205.3	207.6
95°	187.0	196.0	204.9	210.7	213.5	216.2	218.8	221.5
97.5°	205.5	214.2	222.9	228.5	231.2	233.9	236.5	239.2
100°	219.5	227.7	235.9	241.6	244.5	247.5	250.6	253.5
102.5°	236.5	244.5	252.5	257.9	260.6	263.1	265.8	268.4
105°	262.3	269.9	277.4	282.6	285.3	288.0	290.7	293.5
107.5°	290.8	298.5	306.2	311.1	313.3	315.5	317.7	319.9
110°	310.7	318.3	325.8	330.6	332.4	334.3	336.2	338.0



TEST NUMBER: P332189-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	329.5	337.0	344.5	349.4	351.7	354.0	356.3	358.6
115°	359.5	366.1	372.7	377.1	379.1	381.1	383.1	385.1
117.5°	389.5	395.8	402.3	406.3	408.0	409.7	411.3	413.0
120°	409.9	416.0	422.0	425.9	427.4	429.0	430.6	432.2
122.5°	430.6	436.2	441.8	445.4	446.8	448.4	449.8	451.3
125°	461.4	466.4	471.4	474.7	476.0	477.2	478.6	479.8
127.5°	491.6	496.1	500.6	503.5	504.6	505.8	506.9	508.1
130°	511.7	516.2	520.8	523.3	523.9	524.5	525.0	525.7
132.5°	531.0	535.2	539.4	542.1	543.1	544.1	545.2	546.2
135°	560.5	564.8	569.1	571.8	572.7	573.8	574.9	576.0
137.5°	589.6	593.3	596.9	599.1	599.9	600.7	601.5	602.3
140°	608.9	612.9	616.8	618.9	619.2	619.6	619.8	620.2
142.5°	626.5	630.0	633.4	635.4	636.0	636.5	637.1	637.7
145°	655.3	657.3	659.3	660.6	661.0	661.6	662.0	662.5
147.5°	683.1	683.8	684.5	684.8	684.9	685.0	685.1	685.2
150°	700.9	700.9	700.9	700.7	700.4	700.1	699.7	699.4
152.5°	718.4	718.5	718.8	718.6	717.9	717.3	716.6	716.0
155°	743.8	744.4	744.9	744.8	743.7	742.7	741.6	740.7
157.5°	765.7	766.3	767.0	766.8	766.0	765.2	764.4	763.5
160°	779.2	779.9	780.6	780.7	780.2	779.5	778.9	778.4
162.5°	791.8	792.6	793.4	793.3	792.3	791.4	790.4	789.4
165°	807.9	808.8	809.7	809.6	808.6	807.5	806.6	805.5
167.5°	820.9	821.9	822.8	822.8	821.9	820.9	820.0	819.1
170°	828.0	829.1	830.1	830.1	829.1	828.0	827.1	826.0
172.5°	833.7	834.6	835.4	835.4	834.4	833.4	832.3	831.3
175°	839.7	840.5	841.4	841.4	840.3	839.3	838.3	837.2
177.5°	842.4	843.1	843.8	843.7	842.9	842.0	841.2	840.4
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6

(END OF REPORT)