

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: P332188-940

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332188-940
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-S1000D755U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6439.8 lumens
Efficiency: N/A
Efficacy: 120.1 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

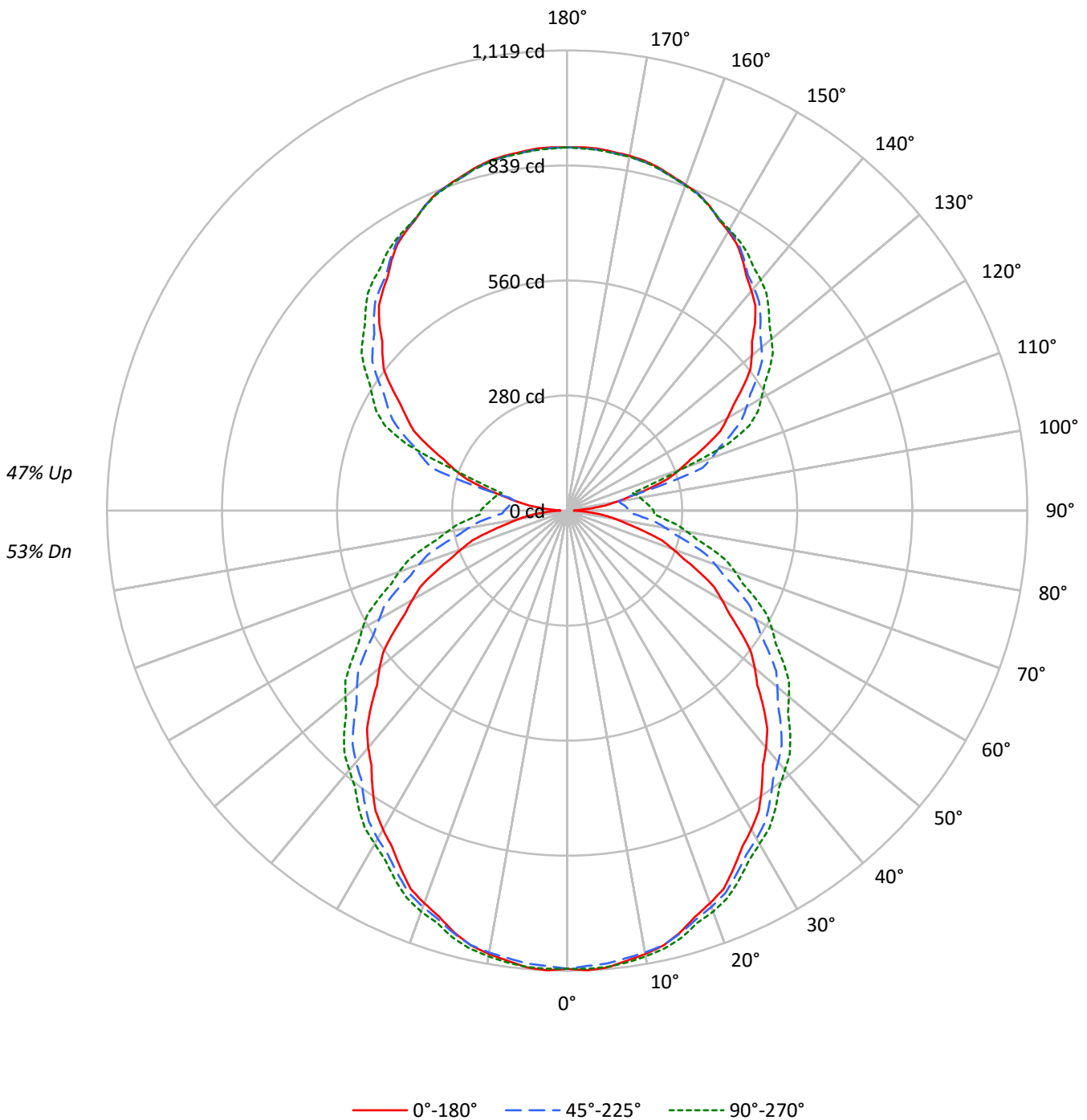
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	38	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	25
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	46	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	32	25	20	27	22	18	24	19	16	20	16	14	12

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	1.6
10°-20°	301.1	4.7
20°-30°	450.3	7.0
30°-40°	537.8	8.4
40°-50°	562.6	8.7
50°-60°	528.0	8.2
60°-70°	441.0	6.8
70°-80°	315.5	4.9
80°-90°	190.6	3.0
90°-100°	150.2	2.3
100°-110°	239.8	3.7
110°-120°	425.5	6.6
120°-130°	501.2	7.8
130°-140°	515.0	8.0
140°-150°	470.9	7.3
150°-160°	377.3	5.9
160°-170°	243.5	3.8
170°-180°	83.9	1.3
0°-30°	857.0	13.3
0°-40°	1394.8	21.7
0°-60°	2485.4	38.6
0°-90°	3432.5	53.3
90°-120°	815.5	12.7
90°-150°	2302.6	35.8
90°-180°	3007.0	46.7
0°-180°	6439.8	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°	53	76	140	181	195	60
105°	205	239	235	158	165	217
115°	373	393	441	475	489	368
125°	521	528	564	590	600	465
135°	646	650	665	688	693	497
145°	744	747	749	759	765	465
155°	818	817	818	821	817	377
165°	863	861	860	865	861	244
175°	883	880	881	885	880	84
180°	883	883	883	883	883	



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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	129.5	143.7	157.7	167.0
90°	16.4	31.1	45.7	60.5	75.2	90.3	105.9	121.6	137.2	152.9	162.6
92.5°	27.0	38.5	50.0	61.5	73.0	86.3	101.3	116.3	131.2	146.2	156.0
95°	53.4	58.0	62.4	67.0	71.5	81.2	96.0	110.8	125.6	140.5	149.9
97.5°	92.4	99.2	105.9	112.8	119.6	124.0	126.2	128.3	130.5	132.5	141.8
100°	121.8	133.4	144.9	156.5	168.0	168.6	158.3	147.9	137.6	127.2	136.3
102.5°	155.5	165.3	175.2	185.1	194.9	193.6	180.9	168.3	155.6	142.9	147.0
105°	205.3	213.3	221.4	229.4	237.6	240.9	239.3	237.8	236.2	234.7	216.5
107.5°	256.5	263.3	270.1	276.9	283.7	293.6	306.7	319.8	332.9	345.9	334.2
110°	290.8	296.8	302.8	308.8	314.9	324.0	336.4	348.8	361.2	373.6	375.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	324.3	329.4	334.4	339.5	344.5	353.0	365.0	376.9	388.9	400.8	407.8
115°	372.9	377.0	381.1	385.2	389.3	396.9	407.9	418.9	430.0	441.0	448.9
117.5°	420.8	423.8	427.0	430.0	433.1	439.5	449.3	459.1	468.9	478.7	486.2
120°	449.8	452.4	455.0	457.7	460.4	466.4	475.7	485.1	494.4	503.7	511.1
122.5°	480.2	482.0	483.8	485.5	487.3	492.7	501.8	510.8	519.8	528.8	535.6
125°	520.7	521.8	523.1	524.2	525.4	530.1	538.6	547.0	555.4	563.7	569.7
127.5°	561.2	562.0	562.9	563.8	564.7	568.7	576.0	583.1	590.2	597.4	603.2
130°	586.3	587.2	588.1	589.0	589.9	593.3	599.3	605.3	611.3	617.2	622.9
132.5°	609.5	610.6	611.7	612.9	613.9	616.9	621.7	626.4	631.2	636.1	641.5
135°	646.1	646.8	647.4	647.9	648.5	650.6	654.2	657.7	661.3	664.9	670.1
137.5°	677.3	678.3	679.2	680.1	681.0	682.4	684.4	686.3	688.4	690.4	695.4
140°	697.4	698.3	699.2	700.1	700.9	702.0	703.2	704.5	705.7	706.9	711.6
142.5°	716.8	717.5	718.2	718.8	719.4	720.1	720.7	721.3	721.9	722.5	726.6
145°	744.0	744.8	745.5	746.3	747.0	747.5	747.8	748.1	748.4	748.7	751.2
147.5°	768.4	769.0	769.7	770.3	771.1	771.5	771.9	772.1	772.4	772.7	773.6
150°	784.2	784.5	785.0	785.4	785.9	786.2	786.6	786.8	787.1	787.4	787.7
152.5°	798.3	798.5	798.7	798.9	799.2	799.3	799.5	799.7	799.9	800.0	800.5
155°	818.2	818.0	817.7	817.3	817.1	817.0	817.2	817.3	817.4	817.6	818.3
157.5°	833.7	833.7	833.7	833.7	833.7	833.6	833.4	833.2	833.1	832.9	833.8
160°	843.2	843.0	842.9	842.8	842.6	842.5	842.3	842.1	842.0	841.9	842.8
162.5°	852.1	851.8	851.3	851.0	850.6	850.3	850.2	850.1	849.9	849.7	850.8
165°	862.9	862.5	862.0	861.6	861.1	860.9	860.7	860.5	860.4	860.2	861.4
167.5°	871.3	870.7	870.1	869.5	869.0	868.6	868.6	868.6	868.6	868.6	869.8
170°	876.0	875.4	874.9	874.2	873.7	873.3	873.3	873.3	873.3	873.3	874.5
172.5°	879.1	878.4	877.7	877.1	876.4	876.0	876.2	876.3	876.4	876.6	877.7
175°	883.2	882.4	881.7	881.0	880.3	880.0	880.1	880.3	880.5	880.6	881.6
177.5°	884.2	883.7	883.1	882.5	881.9	881.7	881.8	881.9	882.1	882.2	883.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2



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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	200.9	203.7	206.4	209.2	212.0
90°	172.4	182.2	191.9	198.3	201.3	204.3	207.2	210.3
92.5°	165.9	175.8	185.7	192.0	194.7	197.3	199.9	202.6
95°	159.3	168.6	178.0	184.0	186.7	189.5	192.2	194.8
97.5°	151.0	160.2	169.3	175.4	178.3	181.1	183.9	186.7
100°	145.3	154.2	163.2	169.1	171.9	174.8	177.6	180.5
102.5°	150.9	154.9	158.9	162.4	165.3	168.3	171.2	174.2
105°	198.2	179.9	161.7	153.9	156.7	159.3	162.1	164.8
107.5°	322.5	310.9	299.1	284.7	267.7	250.6	233.5	216.4
110°	378.0	380.2	382.4	374.2	355.4	336.8	318.1	299.3



TEST NUMBER: P332188-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	414.6	421.5	428.4	430.8	428.8	426.8	424.7	422.7
115°	456.8	464.8	472.7	478.0	480.8	483.5	486.2	489.0
117.5°	493.8	501.4	509.0	513.9	516.1	518.4	520.6	522.8
120°	518.4	525.8	533.2	537.9	539.8	541.6	543.5	545.4
122.5°	542.4	549.2	556.0	560.4	562.4	564.5	566.4	568.5
125°	575.7	581.7	587.6	591.7	593.9	596.0	598.2	600.4
127.5°	609.0	614.8	620.6	624.4	625.9	627.4	628.9	630.5
130°	628.7	634.4	640.1	643.6	645.0	646.2	647.6	648.9
132.5°	647.0	652.5	658.0	661.5	662.9	664.3	665.8	667.2
135°	675.4	680.7	686.0	689.1	690.0	690.9	691.9	692.8
137.5°	700.3	705.3	710.2	713.2	714.3	715.3	716.4	717.5
140°	716.2	720.9	725.5	728.3	729.4	730.4	731.5	732.5
142.5°	730.7	734.8	738.8	741.4	742.3	743.2	744.1	745.1
145°	753.6	756.1	758.5	760.3	761.3	762.4	763.5	764.6
147.5°	774.6	775.5	776.5	777.1	777.4	777.7	778.0	778.3
150°	788.0	788.3	788.5	788.8	788.9	789.0	789.1	789.2
152.5°	801.0	801.6	802.1	802.1	801.6	800.9	800.4	799.9
155°	819.0	819.7	820.6	820.5	819.6	818.7	817.8	816.9
157.5°	834.7	835.5	836.4	836.3	835.2	834.0	832.9	831.8
160°	843.6	844.5	845.3	845.3	844.3	843.3	842.2	841.2
162.5°	851.8	852.7	853.7	853.7	852.8	851.9	851.0	850.2
165°	862.6	863.7	864.9	865.0	864.0	862.9	861.9	860.9
167.5°	870.9	872.2	873.3	873.3	872.2	870.9	869.8	868.6
170°	875.7	876.9	878.1	878.1	876.9	875.7	874.5	873.3
172.5°	878.9	880.0	881.2	881.1	879.9	878.6	877.3	876.0
175°	882.6	883.7	884.7	884.6	883.4	882.3	881.1	879.9
177.5°	884.0	884.9	885.9	885.7	884.6	883.4	882.3	881.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2

(END OF REPORT)