

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: P332188-930

Luminaire Tested: **S123DIW-S1000D755U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332188-930
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-S1000D755U930-4F0-1E-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: 5888.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

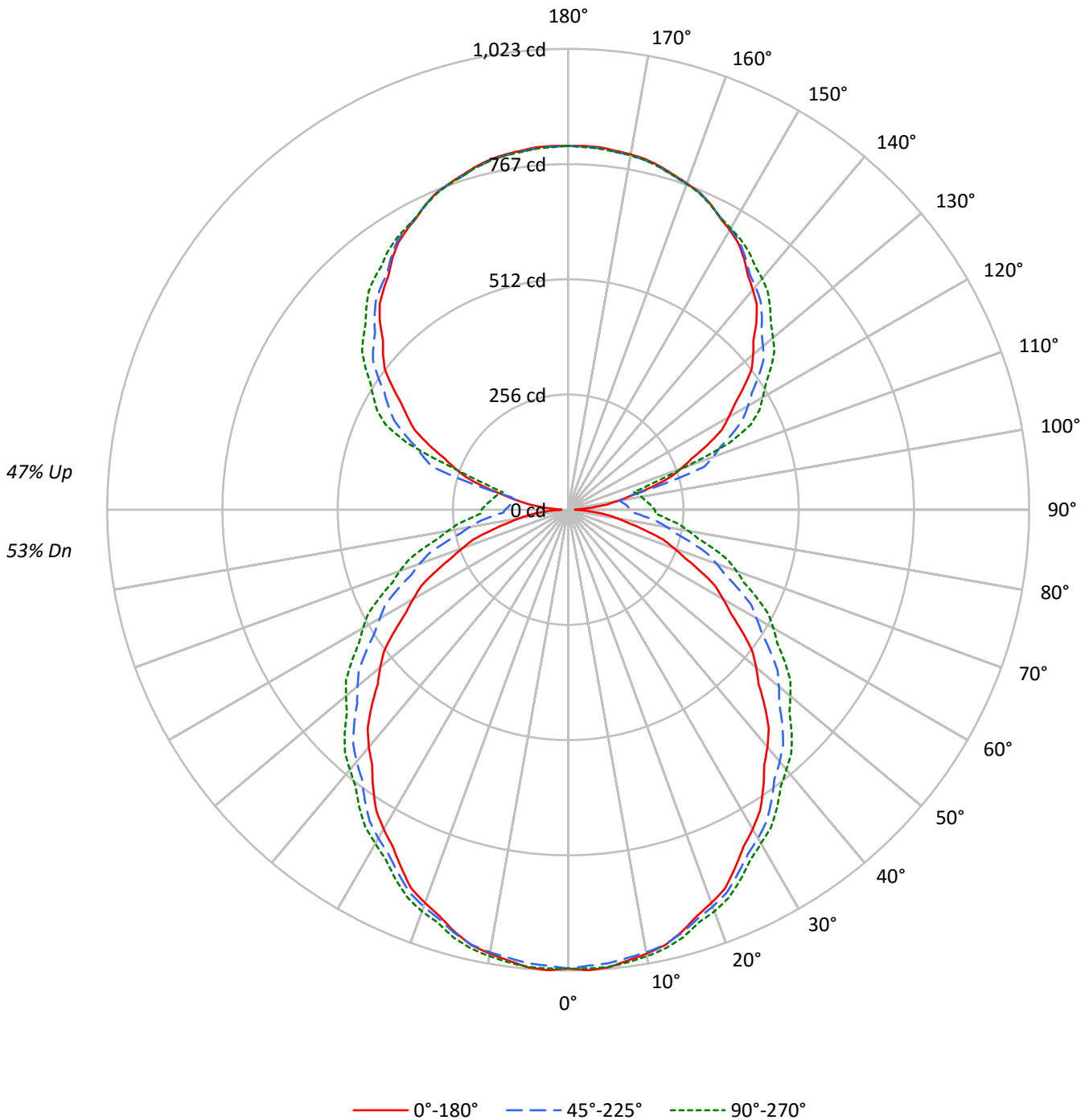
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332188-930

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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°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	1.6
10°-20°	275.3	4.7
20°-30°	411.7	7.0
30°-40°	491.7	8.4
40°-50°	514.4	8.7
50°-60°	482.8	8.2
60°-70°	403.2	6.8
70°-80°	288.5	4.9
80°-90°	174.3	3.0
90°-100°	137.3	2.3
100°-110°	219.3	3.7
110°-120°	389.1	6.6
120°-130°	458.3	7.8
130°-140°	470.9	8.0
140°-150°	430.5	7.3
150°-160°	345.0	5.9
160°-170°	222.6	3.8
170°-180°	76.7	1.3
0°-30°	783.6	13.3
0°-40°	1275.2	21.7
0°-60°	2272.4	38.6
0°-90°	3138.4	53.3
90°-120°	745.6	12.7
90°-150°	2105.3	35.8
90°-180°	2750.0	46.7
0°-180°	5888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	15	76	140	178	192	12
95°	49	70	128	166	178	55
105°	188	219	215	144	151	199
115°	341	359	403	435	447	337
125°	476	483	515	539	549	425
135°	591	594	608	629	633	455
145°	680	683	684	694	699	425
155°	748	747	748	750	747	345
165°	789	787	786	791	787	223
175°	808	805	805	809	804	77
180°	808	808	808	808	808	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.7	42.2	54.7	67.3	79.8	92.5	105.5	118.4	131.3	144.2	152.7
90°	15.0	28.5	41.8	55.3	68.7	82.6	96.9	111.2	125.5	139.8	148.7
92.5°	24.7	35.2	45.7	56.3	66.8	78.9	92.6	106.3	119.9	133.6	142.7
95°	48.8	53.0	57.1	61.2	65.4	74.3	87.8	101.3	114.9	128.5	137.1
97.5°	84.5	90.7	96.9	103.1	109.3	113.4	115.4	117.3	119.3	121.2	129.6
100°	111.4	122.0	132.5	143.1	153.6	154.2	144.7	135.3	125.8	116.3	124.6
102.5°	142.2	151.2	160.2	169.3	178.2	177.0	165.4	153.8	142.3	130.7	134.4
105°	187.7	195.0	202.4	209.8	217.2	220.2	218.8	217.4	216.0	214.6	198.0
107.5°	234.6	240.8	247.0	253.2	259.3	268.5	280.4	292.4	304.4	316.3	305.6
110°	265.9	271.3	276.9	282.3	287.9	296.3	307.6	318.9	330.3	341.6	343.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	296.5	301.2	305.7	310.4	315.0	322.8	333.7	344.6	355.6	366.5	372.8
115°	341.0	344.7	348.5	352.2	356.0	362.9	372.9	383.0	393.1	403.2	410.4
117.5°	384.7	387.5	390.4	393.1	396.0	401.9	410.8	419.7	428.7	437.7	444.6
120°	411.2	413.6	416.0	418.5	420.9	426.4	435.0	443.5	452.0	460.6	467.3
122.5°	439.0	440.7	442.3	443.9	445.6	450.5	458.8	467.0	475.2	483.5	489.7
125°	476.1	477.1	478.3	479.3	480.4	484.7	492.4	500.1	507.8	515.4	520.9
127.5°	513.1	513.9	514.7	515.5	516.3	520.0	526.6	533.1	539.6	546.3	551.5
130°	536.1	536.9	537.7	538.5	539.3	542.5	548.0	553.4	558.9	564.4	569.6
132.5°	557.3	558.3	559.3	560.4	561.3	564.0	568.4	572.7	577.2	581.6	586.5
135°	590.8	591.3	591.9	592.4	593.0	594.8	598.1	601.4	604.6	607.9	612.7
137.5°	619.3	620.2	621.0	621.8	622.6	623.9	625.7	627.5	629.4	631.2	635.8
140°	637.6	638.5	639.3	640.1	640.8	641.8	642.9	644.1	645.2	646.4	650.6
142.5°	655.4	656.0	656.6	657.2	657.8	658.4	658.9	659.5	660.1	660.6	664.3
145°	680.3	680.9	681.6	682.3	683.0	683.5	683.7	684.0	684.3	684.5	686.8
147.5°	702.5	703.1	703.8	704.3	705.0	705.4	705.7	706.0	706.2	706.5	707.4
150°	717.0	717.3	717.7	718.1	718.5	718.8	719.2	719.4	719.7	719.9	720.2
152.5°	729.9	730.1	730.3	730.4	730.7	730.8	731.0	731.2	731.3	731.5	731.9
155°	748.1	747.9	747.6	747.3	747.1	747.0	747.1	747.3	747.4	747.5	748.2
157.5°	762.3	762.3	762.2	762.2	762.2	762.1	762.0	761.8	761.7	761.6	762.4
160°	770.9	770.8	770.7	770.5	770.4	770.3	770.1	770.0	769.9	769.7	770.5
162.5°	779.1	778.8	778.4	778.0	777.7	777.5	777.3	777.2	777.1	776.9	777.9
165°	789.0	788.6	788.1	787.7	787.3	787.1	786.9	786.8	786.7	786.5	787.6
167.5°	796.6	796.1	795.6	795.0	794.5	794.2	794.2	794.2	794.2	794.2	795.2
170°	801.0	800.4	799.9	799.3	798.8	798.5	798.5	798.5	798.5	798.5	799.6
172.5°	803.8	803.2	802.5	801.9	801.3	801.0	801.1	801.2	801.3	801.4	802.5
175°	807.6	806.8	806.2	805.5	804.9	804.6	804.7	804.9	805.0	805.1	806.1
177.5°	808.5	808.0	807.4	806.9	806.3	806.2	806.2	806.3	806.5	806.6	807.4
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	161.3	169.7	178.2	183.7	186.2	188.7	191.3	193.8
90°	157.6	166.6	175.5	181.3	184.0	186.8	189.5	192.2
92.5°	151.7	160.8	169.8	175.5	178.0	180.4	182.8	185.2
95°	145.6	154.2	162.7	168.3	170.7	173.3	175.7	178.1
97.5°	138.0	146.4	154.8	160.4	163.0	165.6	168.1	170.7
100°	132.8	141.0	149.2	154.6	157.2	159.8	162.4	165.0
102.5°	137.9	141.6	145.3	148.5	151.2	153.8	156.5	159.3
105°	181.2	164.5	147.8	140.7	143.2	145.7	148.2	150.7
107.5°	294.9	284.2	273.5	260.3	244.8	229.1	213.5	197.9
110°	345.6	347.6	349.6	342.1	325.0	307.9	290.8	273.7



TEST NUMBER: P332188-930

CATALOG NUMBER: S123DIW-S1000D755U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	379.1	385.4	391.7	393.9	392.1	390.2	388.3	386.5
115°	417.7	424.9	432.2	437.1	439.6	442.1	444.6	447.1
117.5°	451.5	458.4	465.4	469.9	471.9	473.9	476.0	478.0
120°	474.0	480.8	487.5	491.8	493.5	495.2	496.9	498.6
122.5°	495.9	502.1	508.3	512.4	514.2	516.1	517.9	519.8
125°	526.4	531.8	537.3	541.0	543.0	544.9	546.9	548.9
127.5°	556.8	562.1	567.4	570.9	572.3	573.6	575.0	576.5
130°	574.8	580.0	585.2	588.5	589.7	590.8	592.1	593.3
132.5°	591.6	596.6	601.6	604.8	606.1	607.4	608.7	610.0
135°	617.5	622.4	627.2	630.1	630.9	631.7	632.6	633.4
137.5°	640.3	644.8	649.4	652.1	653.1	654.0	655.0	656.0
140°	654.8	659.1	663.3	665.9	666.9	667.8	668.8	669.8
142.5°	668.1	671.8	675.5	677.8	678.7	679.6	680.4	681.3
145°	689.0	691.3	693.5	695.1	696.1	697.1	698.1	699.0
147.5°	708.3	709.1	710.0	710.5	710.8	711.0	711.3	711.6
150°	720.5	720.7	721.0	721.2	721.3	721.4	721.5	721.5
152.5°	732.4	732.9	733.4	733.4	732.9	732.3	731.8	731.3
155°	748.9	749.5	750.2	750.2	749.3	748.5	747.7	746.9
157.5°	763.2	763.9	764.8	764.7	763.6	762.5	761.6	760.5
160°	771.4	772.2	772.9	772.9	771.9	771.0	770.1	769.2
162.5°	778.8	779.7	780.6	780.6	779.8	778.9	778.1	777.3
165°	788.6	789.7	790.8	790.8	789.9	789.0	788.1	787.1
167.5°	796.3	797.4	798.5	798.5	797.4	796.3	795.2	794.2
170°	800.6	801.8	802.8	802.8	801.8	800.6	799.6	798.5
172.5°	803.6	804.6	805.7	805.6	804.5	803.3	802.1	801.0
175°	807.0	808.0	808.9	808.8	807.7	806.7	805.6	804.5
177.5°	808.3	809.1	810.0	809.8	808.8	807.7	806.7	805.6
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6

(END OF REPORT)