

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: P332164-935

Luminaire Tested: **S123DIW-S775D1030U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332164-935
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-S775D1030U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6334.1 lumens
Efficiency: N/A
Efficacy: 120.4 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

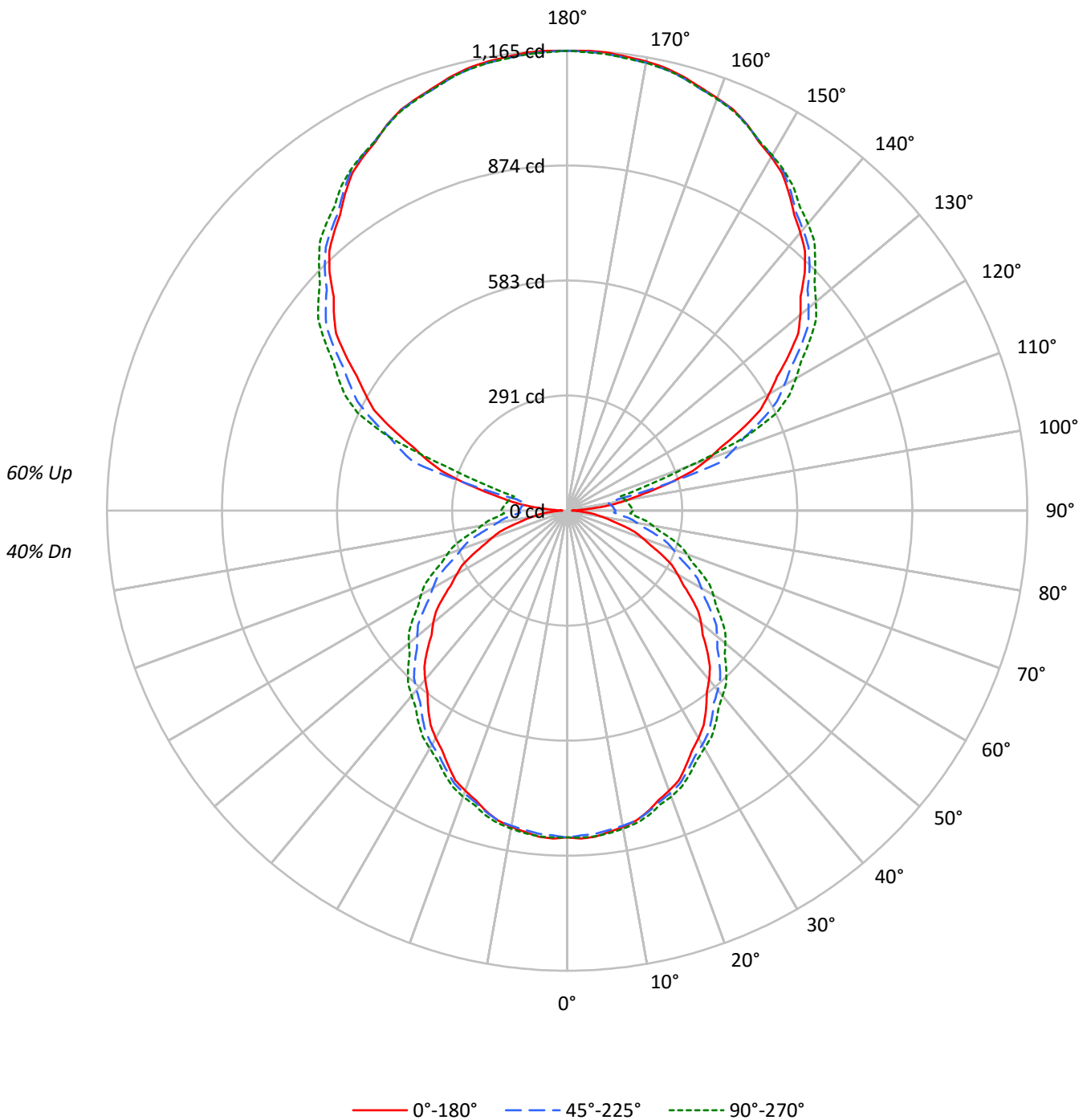
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	78	75	67	64	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	30	50	40	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.2
10°-20°	223.7	3.5
20°-30°	334.5	5.3
30°-40°	399.5	6.3
40°-50°	418.0	6.6
50°-60°	392.2	6.2
60°-70°	327.6	5.2
70°-80°	234.4	3.7
80°-90°	143.0	2.3
90°-100°	130.0	2.1
100°-110°	266.1	4.2
110°-120°	527.5	8.3
120°-130°	641.5	10.1
130°-140°	670.2	10.6
140°-150°	618.8	9.8
150°-160°	497.2	7.9
160°-170°	320.9	5.1
170°-180°	110.6	1.7
0°-30°	636.6	10.1
0°-40°	1036.1	16.4
0°-60°	1846.2	29.1
0°-90°	2551.2	40.3
90°-120°	923.7	14.6
90°-150°	2854.2	45.1
90°-180°	3783.0	59.7
0°-180°	6334.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	13	66	123	155	168	10
95°	63	65	116	149	159	73
105°	265	292	257	137	139	281
115°	488	505	544	573	585	482
125°	684	692	721	741	749	611
135°	850	855	868	886	889	654
145°	980	985	987	995	999	613
155°	1078	1077	1078	1081	1077	497
165°	1137	1135	1134	1140	1135	321
175°	1164	1160	1160	1166	1160	111
180°	1164	1164	1164	1164	1164	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.2	34.5	44.9	55.3	65.6	76.1	86.9	97.6	108.3	119.0	126.0
90°	12.6	24.3	36.1	47.8	59.6	71.8	84.5	97.2	109.9	122.6	130.2
92.5°	27.1	35.4	43.7	52.0	60.4	70.5	82.4	94.4	106.3	118.2	126.1
95°	62.7	62.6	62.5	62.5	62.4	68.4	80.2	92.2	104.1	116.1	123.6
97.5°	114.9	118.4	121.9	125.4	128.9	128.5	124.0	119.5	115.0	110.6	118.1
100°	154.3	164.5	174.8	185.0	195.3	190.0	169.3	148.5	127.8	106.9	114.3
102.5°	199.2	207.8	216.3	224.8	233.3	225.8	202.1	178.4	154.7	131.0	131.9
105°	264.9	271.8	278.8	285.7	292.6	291.7	283.0	274.4	265.7	257.0	228.6
107.5°	333.4	339.1	344.9	350.7	356.5	364.8	375.7	386.6	397.5	408.5	388.8
110°	379.0	384.2	389.3	394.4	399.6	407.2	417.3	427.5	437.6	447.7	446.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	423.3	427.7	432.0	436.4	440.7	447.7	457.5	467.4	477.2	487.0	492.1
115°	487.9	491.5	495.1	498.6	502.1	508.4	517.4	526.3	535.2	544.2	550.9
117.5°	551.2	554.1	557.1	559.9	562.8	568.1	575.8	583.4	591.1	598.7	605.0
120°	590.0	592.6	595.4	598.1	600.9	605.8	613.0	620.2	627.4	634.6	640.8
122.5°	630.1	632.0	634.0	635.8	637.8	642.3	649.4	656.3	663.4	670.4	675.9
125°	684.2	685.7	687.3	688.8	690.3	694.4	700.9	707.5	714.1	720.7	725.3
127.5°	737.4	738.7	740.1	741.4	742.8	746.3	752.1	757.8	763.5	769.2	773.8
130°	770.7	772.0	773.4	774.6	776.0	779.0	783.9	788.6	793.4	798.1	802.7
132.5°	801.8	803.2	804.8	806.2	807.7	810.4	814.2	818.0	821.8	825.7	830.1
135°	850.2	851.1	852.0	853.0	853.9	855.9	858.9	861.9	864.9	867.8	872.0
137.5°	891.5	892.8	894.1	895.4	896.7	898.2	899.8	901.5	903.2	904.8	909.0
140°	918.4	919.6	920.8	921.9	923.1	924.2	925.4	926.6	927.7	928.9	932.7
142.5°	944.1	945.0	946.1	947.0	948.0	948.8	949.6	950.3	951.0	951.7	954.9
145°	979.8	981.0	982.1	983.3	984.5	985.2	985.6	985.9	986.4	986.7	988.7
147.5°	1012.7	1013.6	1014.4	1015.3	1016.2	1016.8	1017.2	1017.6	1018.0	1018.4	1019.3
150°	1033.5	1034.0	1034.6	1035.2	1035.7	1036.2	1036.6	1037.0	1037.3	1037.8	1038.1
152.5°	1052.1	1052.4	1052.7	1052.9	1053.2	1053.4	1053.7	1053.9	1054.1	1054.4	1055.1
155°	1078.4	1078.0	1077.6	1077.3	1076.9	1076.8	1076.9	1077.1	1077.4	1077.5	1078.5
157.5°	1098.8	1098.8	1098.7	1098.7	1098.6	1098.5	1098.4	1098.1	1097.9	1097.8	1098.9
160°	1111.3	1111.0	1110.9	1110.7	1110.5	1110.3	1110.1	1109.9	1109.7	1109.6	1110.7
162.5°	1123.0	1122.5	1122.1	1121.5	1121.0	1120.7	1120.5	1120.3	1120.1	1119.9	1121.2
165°	1137.2	1136.6	1136.1	1135.5	1134.9	1134.5	1134.3	1134.1	1133.9	1133.8	1135.3
167.5°	1148.2	1147.5	1146.8	1146.0	1145.2	1144.8	1144.8	1144.8	1144.8	1144.8	1146.3
170°	1154.5	1153.7	1153.0	1152.2	1151.4	1151.1	1151.1	1151.1	1151.1	1151.1	1152.5
172.5°	1158.6	1157.7	1156.8	1155.9	1154.9	1154.6	1154.7	1154.9	1155.0	1155.2	1156.8
175°	1164.0	1163.0	1162.1	1161.1	1160.2	1159.8	1159.9	1160.2	1160.4	1160.5	1161.9
177.5°	1165.4	1164.6	1163.9	1163.1	1162.4	1162.0	1162.2	1162.4	1162.4	1162.6	1163.9
180°	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	132.9	139.9	146.9	151.4	153.4	155.6	157.6	159.7
90°	137.8	145.3	152.9	157.9	160.3	162.7	165.1	167.5
92.5°	134.0	141.9	149.7	154.7	156.8	158.9	161.0	163.1
95°	131.1	138.7	146.3	151.1	153.1	155.1	157.0	159.1
97.5°	125.6	133.1	140.6	145.5	147.7	149.9	152.1	154.3
100°	121.7	129.0	136.4	141.1	143.4	145.5	147.7	149.9
102.5°	132.8	133.6	134.6	136.1	138.5	140.9	143.2	145.6
105°	200.2	171.8	143.4	130.3	132.4	134.7	136.8	139.1
107.5°	369.3	349.7	330.1	308.4	284.6	260.6	236.8	212.9
110°	445.5	444.4	443.2	429.7	403.8	377.9	352.1	326.1



TEST NUMBER: P332164-935

CATALOG NUMBER: S123DIW-S775D1030U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	497.3	502.5	507.6	508.2	504.1	500.2	496.1	492.1
115°	557.7	564.4	571.1	575.7	578.0	580.4	582.7	585.1
117.5°	611.4	617.7	624.0	628.0	629.7	631.4	633.1	634.8
120°	646.9	653.0	659.2	662.9	664.3	665.7	667.1	668.6
122.5°	681.5	687.0	692.5	696.0	697.6	699.1	700.7	702.2
125°	729.9	734.4	739.1	742.3	744.0	745.8	747.6	749.4
127.5°	778.4	783.0	787.6	790.3	791.3	792.3	793.2	794.3
130°	807.3	811.8	816.5	819.2	819.9	820.8	821.6	822.4
132.5°	834.5	839.0	843.3	845.9	846.8	847.6	848.4	849.3
135°	876.2	880.4	884.6	886.8	887.3	887.7	888.1	888.6
137.5°	913.0	917.1	921.2	923.5	924.2	924.8	925.4	926.0
140°	936.5	940.3	944.0	946.2	946.8	947.4	948.0	948.7
142.5°	958.2	961.6	964.8	966.7	967.2	967.7	968.1	968.6
145°	990.7	992.7	994.7	996.1	996.9	997.6	998.5	999.3
147.5°	1020.1	1021.0	1021.8	1022.2	1022.0	1021.8	1021.7	1021.6
150°	1038.5	1038.9	1039.3	1039.4	1039.2	1039.1	1038.9	1038.7
152.5°	1055.8	1056.4	1057.1	1057.0	1056.3	1055.5	1054.6	1053.9
155°	1079.4	1080.4	1081.4	1081.2	1080.1	1079.0	1077.8	1076.7
157.5°	1100.1	1101.2	1102.3	1102.2	1100.7	1099.2	1097.7	1096.2
160°	1111.8	1113.0	1114.1	1114.0	1112.7	1111.4	1110.0	1108.6
162.5°	1122.5	1123.9	1125.2	1125.2	1124.0	1122.8	1121.6	1120.4
165°	1136.8	1138.3	1139.9	1140.0	1138.7	1137.3	1135.9	1134.6
167.5°	1147.9	1149.4	1151.0	1151.0	1149.4	1147.9	1146.3	1144.8
170°	1154.1	1155.6	1157.2	1157.2	1155.6	1154.1	1152.5	1151.1
172.5°	1158.3	1159.8	1161.3	1161.2	1159.6	1157.9	1156.2	1154.5
175°	1163.2	1164.6	1166.0	1165.9	1164.3	1162.8	1161.2	1159.7
177.5°	1165.1	1166.3	1167.5	1167.4	1165.9	1164.3	1162.8	1161.2
180°	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0

(END OF REPORT)