

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: P332165

Luminaire Tested: **S123DIW-S775D1030U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332165
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-S775D1030U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6807.2 lumens
Efficiency: N/A
Efficacy: 129.4 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

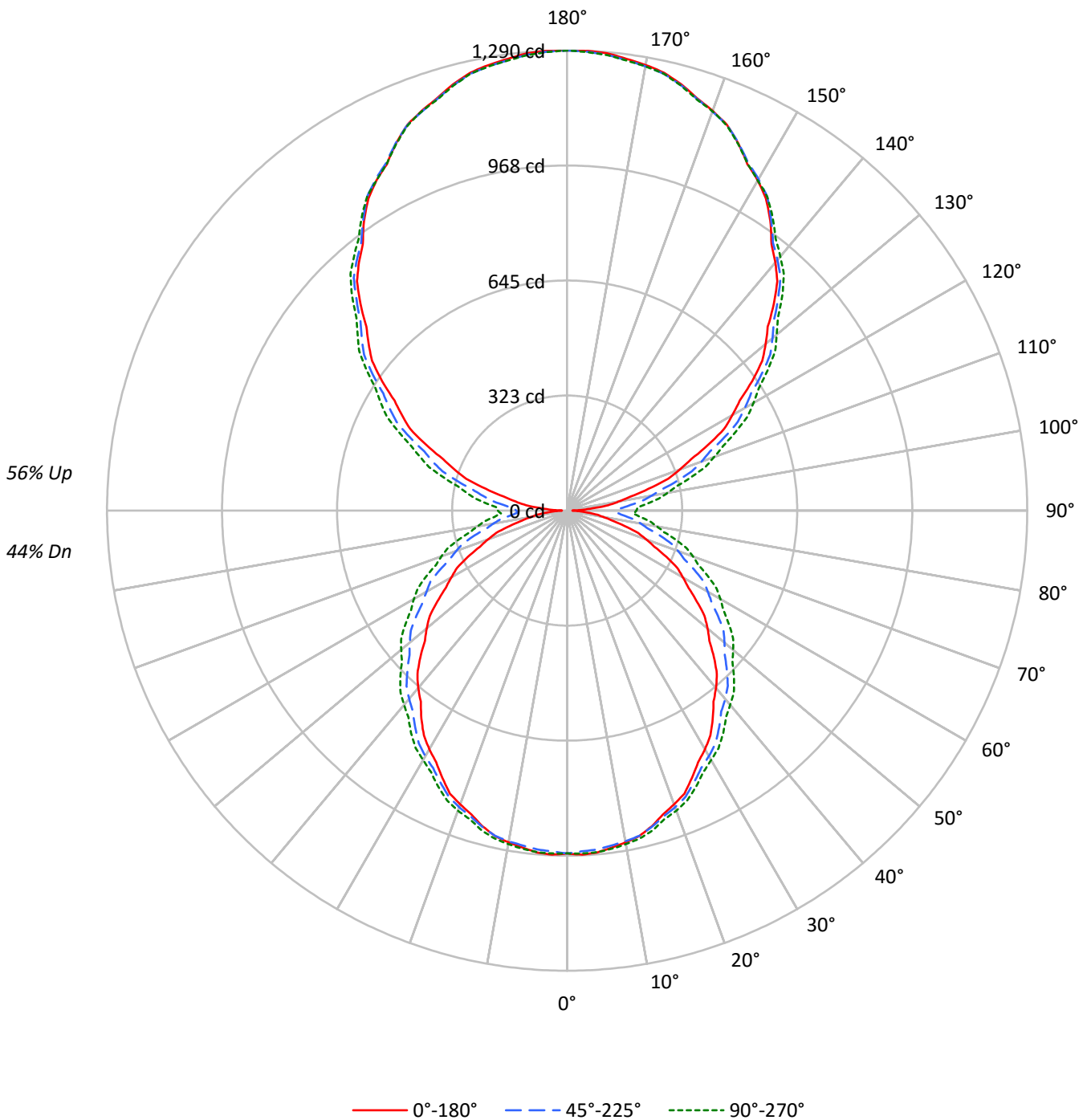
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.3
10°-20°	259.8	3.8
20°-30°	388.5	5.7
30°-40°	464.0	6.8
40°-50°	485.4	7.1
50°-60°	455.5	6.7
60°-70°	380.5	5.6
70°-80°	272.2	4.0
80°-90°	166.1	2.4
90°-100°	185.9	2.7
100°-110°	326.3	4.8
110°-120°	477.7	7.0
120°-130°	591.2	8.7
130°-140°	645.2	9.5
140°-150°	624.3	9.2
150°-160°	523.3	7.7
160°-170°	348.3	5.1
170°-180°	122.0	1.8
0°-30°	739.4	10.9
0°-40°	1203.3	17.7
0°-60°	2144.3	31.5
0°-90°	2963.1	43.5
90°-120°	989.9	14.5
90°-150°	2850.5	41.9
90°-180°	3844.0	56.5
0°-180°	6807.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	15	76	143	181	195	13
95°	71	120	179	214	226	76
105°	236	265	318	346	358	253
115°	436	453	487	512	521	431
125°	633	638	665	682	686	565
135°	820	825	835	849	853	631
145°	993	994	997	1004	1004	620
155°	1136	1136	1137	1140	1134	523
165°	1237	1234	1234	1239	1233	349
175°	1287	1283	1283	1288	1282	122
180°	1290	1290	1290	1290	1290	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.1	40.1	52.1	64.2	76.2	88.5	100.9	113.4	125.8	138.3	146.4
90°	14.6	28.3	41.9	55.6	69.2	83.5	98.3	113.0	127.8	142.6	151.4
92.5°	37.3	49.1	60.9	72.7	84.6	97.1	110.5	123.8	137.2	150.5	159.0
95°	71.3	81.9	92.6	103.2	113.9	125.8	139.0	152.2	165.4	178.6	186.7
97.5°	116.4	125.8	135.2	144.5	153.9	164.7	176.9	189.0	201.2	213.4	221.4
100°	147.2	156.0	164.8	173.6	182.4	192.7	204.5	216.4	228.2	240.0	247.4
102.5°	182.8	190.4	197.9	205.4	212.9	222.6	234.6	246.7	258.7	270.7	277.9
105°	236.3	242.4	248.4	254.4	260.5	269.5	281.5	293.6	305.6	317.6	324.1
107.5°	297.5	302.5	307.5	312.5	317.5	325.2	335.5	345.8	356.1	366.4	373.4
110°	335.5	340.2	344.8	349.5	354.1	361.3	371.1	380.8	390.6	400.3	407.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	376.1	379.8	383.5	387.2	390.9	397.3	406.3	415.3	424.4	433.4	440.3
115°	435.8	439.3	442.7	446.2	449.7	455.4	463.3	471.2	479.2	487.1	492.9
117.5°	496.8	499.0	501.1	503.3	505.5	510.2	517.5	524.8	532.0	539.3	544.8
120°	534.0	536.6	539.1	541.6	544.1	548.6	555.2	561.7	568.3	574.8	580.0
122.5°	573.8	575.4	577.0	578.5	580.1	584.3	591.0	597.7	604.5	611.2	615.8
125°	633.3	634.0	634.6	635.3	636.0	639.5	645.8	652.1	658.4	664.7	668.7
127.5°	689.2	690.4	691.6	692.8	694.1	697.2	702.3	707.4	712.5	717.6	720.9
130°	726.5	728.1	729.6	731.2	732.8	735.6	739.5	743.5	747.5	751.5	755.0
132.5°	763.0	764.7	766.5	768.2	770.0	772.5	775.7	778.9	782.1	785.4	788.5
135°	819.7	820.8	821.9	823.0	824.2	825.9	828.2	830.5	832.9	835.2	838.5
137.5°	872.2	873.1	874.0	875.0	875.9	877.4	879.4	881.4	883.5	885.5	888.2
140°	907.8	908.9	910.0	911.2	912.3	913.3	914.2	915.2	916.1	917.0	920.3
142.5°	941.0	942.0	942.9	943.8	944.8	945.5	946.1	946.6	947.2	947.7	950.6
145°	992.9	993.1	993.3	993.5	993.8	994.2	994.9	995.6	996.2	996.9	998.5
147.5°	1037.2	1038.0	1038.8	1039.7	1040.5	1041.2	1041.8	1042.5	1043.1	1043.7	1044.3
150°	1068.8	1069.3	1069.7	1070.2	1070.6	1071.1	1071.5	1072.0	1072.4	1072.9	1072.9
152.5°	1094.8	1095.4	1096.0	1096.7	1097.3	1097.7	1098.0	1098.3	1098.6	1098.8	1099.2
155°	1135.7	1135.7	1135.7	1135.7	1135.7	1135.8	1136.0	1136.3	1136.5	1136.7	1137.6
157.5°	1170.6	1170.3	1170.0	1169.7	1169.5	1169.4	1169.6	1169.8	1170.0	1170.1	1171.1
160°	1192.4	1192.0	1191.5	1191.1	1190.6	1190.4	1190.4	1190.4	1190.4	1190.4	1191.5
162.5°	1211.9	1211.3	1210.6	1210.0	1209.4	1209.1	1209.3	1209.5	1209.7	1209.9	1211.0
165°	1237.0	1236.3	1235.7	1235.0	1234.3	1234.0	1234.0	1234.0	1234.0	1234.0	1235.3
167.5°	1257.1	1256.2	1255.3	1254.4	1253.5	1253.1	1253.3	1253.5	1253.7	1253.8	1255.2
170°	1268.4	1267.5	1266.6	1265.7	1264.8	1264.4	1264.4	1264.4	1264.4	1264.4	1265.9
172.5°	1277.3	1276.4	1275.5	1274.6	1273.7	1273.3	1273.3	1273.3	1273.3	1273.3	1274.7
175°	1286.7	1285.8	1284.9	1284.0	1283.1	1282.6	1282.6	1282.6	1282.6	1282.6	1284.0
177.5°	1290.5	1289.8	1289.1	1288.3	1287.6	1287.3	1287.3	1287.3	1287.3	1287.3	1288.3
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	154.4	162.5	170.6	175.9	178.3	180.7	183.1	185.5
90°	160.3	169.1	177.9	183.7	186.5	189.2	192.0	194.8
92.5°	167.4	175.9	184.3	189.5	191.3	193.2	195.1	196.9
95°	194.9	203.0	211.1	216.3	218.6	221.0	223.3	225.6
97.5°	229.4	237.3	245.3	250.4	252.7	254.9	257.1	259.4
100°	254.9	262.3	269.7	274.8	277.6	280.4	283.1	285.9
102.5°	285.1	292.4	299.6	304.3	306.6	308.8	311.1	313.3
105°	330.7	337.2	343.7	348.2	350.8	353.3	355.8	358.4
107.5°	380.3	387.3	394.2	398.6	400.4	402.2	403.9	405.7
110°	414.2	421.2	428.1	432.3	433.7	435.1	436.5	438.0



TEST NUMBER: P332165

CATALOG NUMBER: S123DIW-S775D1030U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	447.3	454.2	461.2	465.6	467.6	469.5	471.5	473.5
115°	498.7	504.5	510.3	514.0	515.7	517.3	519.0	520.6
117.5°	550.3	555.8	561.3	564.6	565.8	567.0	568.2	569.4
120°	585.1	590.2	595.4	598.5	599.7	600.9	602.0	603.2
122.5°	620.3	624.9	629.5	632.3	633.3	634.3	635.3	636.3
125°	672.6	676.6	680.6	683.0	683.7	684.4	685.2	685.9
127.5°	724.3	727.6	730.9	732.9	733.4	734.0	734.5	735.1
130°	758.5	762.0	765.5	767.2	767.0	766.9	766.7	766.5
132.5°	791.7	794.8	798.0	799.7	800.1	800.5	800.8	801.2
135°	841.8	845.1	848.4	850.4	851.1	851.8	852.5	853.2
137.5°	891.0	893.7	896.4	897.9	898.3	898.6	898.9	899.2
140°	923.5	926.8	930.1	931.5	931.1	930.7	930.3	929.8
142.5°	953.5	956.4	959.3	960.7	960.6	960.6	960.5	960.5
145°	1000.2	1001.8	1003.5	1004.3	1004.3	1004.3	1004.4	1004.4
147.5°	1044.8	1045.4	1045.9	1046.0	1045.5	1044.9	1044.4	1043.9
150°	1072.9	1072.9	1072.9	1072.4	1071.6	1070.7	1069.8	1068.9
152.5°	1099.5	1099.9	1100.3	1099.9	1098.8	1097.8	1096.7	1095.6
155°	1138.5	1139.4	1140.3	1140.0	1138.4	1136.8	1135.3	1133.7
157.5°	1172.0	1173.0	1173.9	1173.8	1172.5	1171.3	1170.0	1168.7
160°	1192.7	1193.8	1194.9	1195.0	1194.1	1193.2	1192.3	1191.4
162.5°	1212.1	1213.2	1214.4	1214.2	1212.8	1211.3	1209.9	1208.4
165°	1236.7	1238.0	1239.4	1239.3	1237.7	1236.1	1234.5	1233.0
167.5°	1256.6	1258.0	1259.4	1259.4	1258.0	1256.6	1255.2	1253.8
170°	1267.5	1269.1	1270.7	1270.7	1269.1	1267.5	1265.9	1264.4
172.5°	1276.1	1277.5	1278.9	1278.8	1277.2	1275.6	1274.0	1272.5
175°	1285.3	1286.7	1288.0	1287.9	1286.3	1284.7	1283.2	1281.6
177.5°	1289.4	1290.5	1291.6	1291.5	1290.2	1289.0	1287.7	1286.5
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7

(END OF REPORT)