

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: P332166-940

Luminaire Tested: **S123DIW-S775D1030U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332166-940
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-S775D1030U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6505.2 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

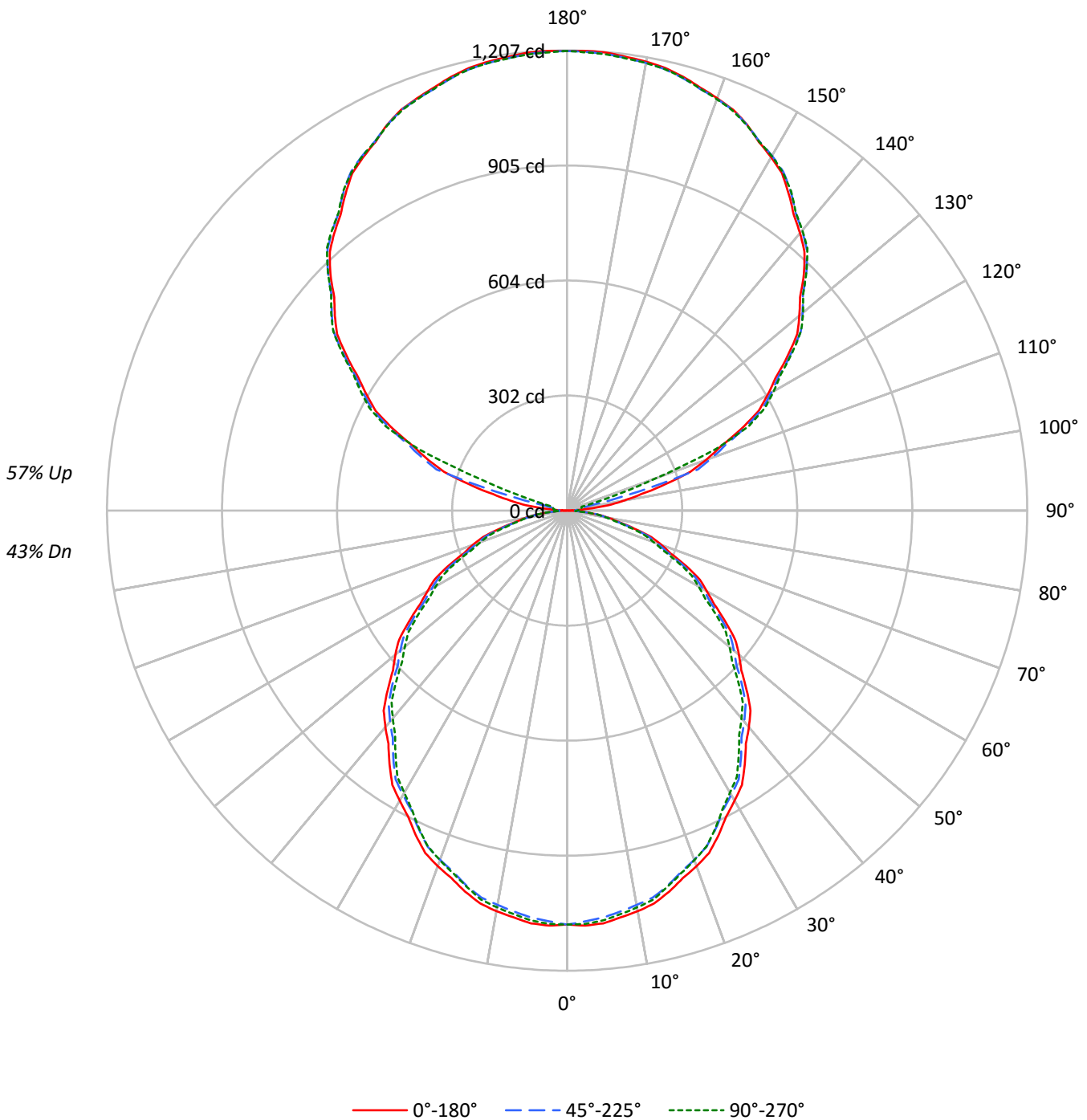
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	43
1	96	92	88	85	88	84	81	78	70	67	65	56	55	53	44	43	42	36
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	35	31
3	80	70	63	57	73	65	58	53	54	49	45	44	40	38	34	32	30	26
4	73	62	54	48	67	57	50	45	48	43	39	39	35	32	31	28	26	22
5	67	55	47	41	61	51	44	39	43	37	33	35	31	28	28	25	23	19
6	62	50	42	36	56	46	39	34	38	33	29	32	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	1.6
10°-20°	288.8	4.4
20°-30°	426.6	6.6
30°-40°	498.4	7.7
40°-50°	501.0	7.7
50°-60°	440.1	6.8
60°-70°	327.9	5.0
70°-80°	186.8	2.9
80°-90°	57.0	0.9
90°-100°	43.8	0.7
100°-110°	208.9	3.2
110°-120°	501.7	7.7
120°-130°	638.9	9.8
130°-140°	682.7	10.5
140°-150°	638.4	9.8
150°-160°	514.9	7.9
160°-170°	332.3	5.1
170°-180°	114.5	1.8
0°-30°	817.7	12.6
0°-40°	1316.1	20.2
0°-60°	2257.3	34.7
0°-90°	2829.0	43.5
90°-120°	754.5	11.6
90°-150°	2714.5	41.7
90°-180°	3676.0	56.5
0°-180°	6505.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
90°	1	10	22	25	27	5
95°	55	20	28	34	34	68
105°	267	272	196	46	39	283
115°	501	506	514	523	527	494
125°	706	713	716	718	720	630
135°	879	884	888	890	888	676
145°	1014	1020	1022	1024	1024	634
155°	1117	1115	1116	1120	1115	514
165°	1178	1175	1174	1181	1175	333
175°	1206	1201	1202	1208	1201	115
180°	1206	1206	1206	1206	1206	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.6	19.5	19.4	19.3	19.2	19.4	19.7	20.1	20.4	20.7	20.7
90°	0.9	2.9	4.9	6.9	8.8	11.1	13.7	16.3	18.9	21.5	22.3
92.5°	16.7	16.1	15.5	15.0	14.4	15.2	17.1	19.0	21.0	22.9	24.2
95°	54.7	46.5	38.3	30.1	22.0	19.0	21.2	23.4	25.6	27.7	29.2
97.5°	109.8	106.1	102.5	98.8	95.1	86.1	71.9	57.5	43.2	28.8	30.4
100°	151.3	155.3	159.3	163.3	167.3	153.7	122.7	91.7	60.6	29.5	31.1
102.5°	198.7	201.5	204.4	207.2	210.1	194.6	160.7	126.8	92.8	58.9	54.0
105°	266.9	269.1	271.3	273.5	275.6	267.8	249.9	231.9	214.1	196.2	161.0
107.5°	338.9	340.6	342.4	344.2	345.9	348.2	351.1	353.8	356.7	359.5	333.7
110°	386.9	388.5	390.1	391.7	393.2	395.2	397.3	399.6	401.7	403.9	397.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	432.7	434.2	435.6	437.1	438.5	440.3	442.5	444.7	446.9	449.1	449.2
115°	500.7	501.9	503.0	504.3	505.4	506.9	508.7	510.5	512.3	514.1	516.1
117.5°	566.4	567.8	569.4	570.8	572.3	573.5	574.4	575.3	576.2	577.1	578.7
120°	607.3	609.0	610.8	612.6	614.4	615.6	616.2	616.8	617.4	618.0	619.6
122.5°	648.8	650.2	651.8	653.2	654.7	655.8	656.6	657.3	658.1	658.8	660.0
125°	705.8	707.4	708.9	710.5	712.1	713.4	714.1	714.9	715.7	716.5	716.9
127.5°	760.9	762.5	764.1	765.7	767.3	768.6	769.5	770.5	771.4	772.4	773.0
130°	795.3	796.9	798.5	800.1	801.7	802.9	803.7	804.5	805.3	806.1	806.9
132.5°	828.3	829.9	831.4	833.0	834.6	835.8	836.4	837.0	837.7	838.3	839.1
135°	878.6	879.9	881.0	882.2	883.4	884.4	885.2	886.0	886.8	887.6	888.1
137.5°	921.6	923.1	924.6	926.1	927.6	928.6	929.1	929.5	930.0	930.4	931.3
140°	950.3	951.5	952.7	953.9	955.0	955.9	956.5	957.2	957.7	958.3	959.1
142.5°	976.8	977.9	979.2	980.3	981.6	982.5	983.0	983.6	984.3	984.8	985.5
145°	1013.9	1015.2	1016.6	1018.1	1019.4	1020.3	1020.7	1021.1	1021.5	1021.9	1022.3
147.5°	1048.8	1049.7	1050.6	1051.5	1052.5	1053.1	1053.5	1053.9	1054.3	1054.7	1055.1
150°	1070.3	1070.9	1071.5	1072.1	1072.6	1073.2	1073.5	1074.0	1074.3	1074.8	1075.1
152.5°	1089.7	1089.9	1090.2	1090.5	1090.7	1091.0	1091.3	1091.5	1091.7	1092.0	1092.7
155°	1116.9	1116.4	1116.1	1115.7	1115.3	1115.2	1115.4	1115.5	1115.8	1116.0	1117.0
157.5°	1138.0	1138.0	1137.9	1137.9	1137.8	1137.7	1137.6	1137.3	1137.1	1136.9	1138.1
160°	1150.9	1150.7	1150.5	1150.3	1150.1	1149.9	1149.7	1149.5	1149.3	1149.1	1150.3
162.5°	1163.1	1162.5	1162.1	1161.5	1161.0	1160.7	1160.5	1160.3	1160.0	1159.8	1161.2
165°	1177.8	1177.1	1176.6	1176.0	1175.4	1175.0	1174.7	1174.6	1174.4	1174.2	1175.8
167.5°	1189.2	1188.5	1187.7	1186.9	1186.1	1185.6	1185.6	1185.6	1185.6	1185.6	1187.2
170°	1195.7	1194.9	1194.1	1193.3	1192.5	1192.1	1192.1	1192.1	1192.1	1192.1	1193.6
172.5°	1200.0	1199.0	1198.1	1197.1	1196.1	1195.8	1195.9	1196.1	1196.2	1196.4	1198.0
175°	1205.5	1204.5	1203.5	1202.6	1201.6	1201.1	1201.3	1201.6	1201.8	1201.9	1203.4
177.5°	1206.9	1206.1	1205.4	1204.6	1203.8	1203.5	1203.6	1203.8	1203.9	1204.1	1205.4
180°	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	20.7	20.7	20.7	20.8	20.8	20.9	21.0	21.0
90°	23.1	23.9	24.7	25.2	25.7	26.0	26.5	26.8
92.5°	25.5	26.8	28.0	28.8	29.0	29.2	29.5	29.7
95°	30.6	31.9	33.3	34.1	34.1	34.1	34.1	34.1
97.5°	32.0	33.6	35.2	36.1	36.3	36.5	36.7	36.9
100°	32.7	34.3	35.9	36.8	37.0	37.2	37.5	37.6
102.5°	49.0	44.1	39.1	36.9	37.3	37.6	38.0	38.3
105°	125.7	90.4	55.2	37.8	38.3	38.6	39.0	39.4
107.5°	307.8	282.0	256.2	230.0	203.4	176.9	150.3	123.8
110°	390.8	384.2	377.6	360.2	331.7	303.2	274.7	246.3



TEST NUMBER: P332166-940

CATALOG NUMBER: S123DIW-S775D1030U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	449.3	449.4	449.5	446.6	440.6	434.6	428.6	422.6
115°	518.1	520.0	522.1	523.4	524.2	525.0	525.8	526.6
117.5°	580.3	581.9	583.5	584.4	584.5	584.7	584.9	585.1
120°	621.2	622.8	624.4	625.2	625.2	625.2	625.2	625.2
122.5°	661.0	662.2	663.3	664.0	664.1	664.2	664.4	664.6
125°	717.3	717.7	718.1	718.5	718.9	719.3	719.7	720.1
127.5°	773.6	774.3	775.0	775.1	774.6	774.3	773.9	773.5
130°	807.7	808.4	809.2	809.5	809.0	808.7	808.2	807.9
132.5°	839.9	840.7	841.5	841.6	841.1	840.5	840.0	839.4
135°	888.8	889.4	889.9	889.9	889.4	888.8	888.1	887.6
137.5°	932.3	933.3	934.2	934.5	934.1	933.7	933.3	932.9
140°	959.9	960.7	961.5	961.7	961.4	960.9	960.6	960.1
142.5°	986.1	986.8	987.4	987.4	986.9	986.3	985.8	985.2
145°	1022.7	1023.1	1023.5	1023.7	1023.7	1023.7	1023.7	1023.7
147.5°	1055.5	1055.9	1056.3	1056.1	1055.2	1054.2	1053.3	1052.4
150°	1075.6	1075.9	1076.4	1076.3	1075.7	1075.0	1074.5	1073.9
152.5°	1093.4	1094.1	1094.8	1094.8	1093.8	1092.9	1092.0	1091.1
155°	1117.9	1118.9	1120.0	1119.8	1118.7	1117.5	1116.2	1115.1
157.5°	1139.3	1140.5	1141.7	1141.5	1140.0	1138.4	1136.8	1135.3
160°	1151.5	1152.7	1153.9	1153.8	1152.4	1151.0	1149.6	1148.2
162.5°	1162.5	1164.0	1165.3	1165.3	1164.1	1162.9	1161.6	1160.4
165°	1177.3	1178.9	1180.5	1180.6	1179.3	1177.9	1176.4	1175.1
167.5°	1188.8	1190.4	1192.0	1192.0	1190.4	1188.8	1187.2	1185.6
170°	1195.2	1196.9	1198.5	1198.5	1196.9	1195.2	1193.6	1192.1
172.5°	1199.6	1201.1	1202.7	1202.7	1201.0	1199.2	1197.4	1195.7
175°	1204.7	1206.1	1207.6	1207.5	1205.9	1204.3	1202.7	1201.0
177.5°	1206.7	1207.9	1209.2	1209.1	1207.5	1205.9	1204.3	1202.7
180°	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5	1205.5

(END OF REPORT)