

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: P332164-940

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332164-940
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-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: 6560.0 lumens
Efficiency: N/A
Efficacy: 124.7 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

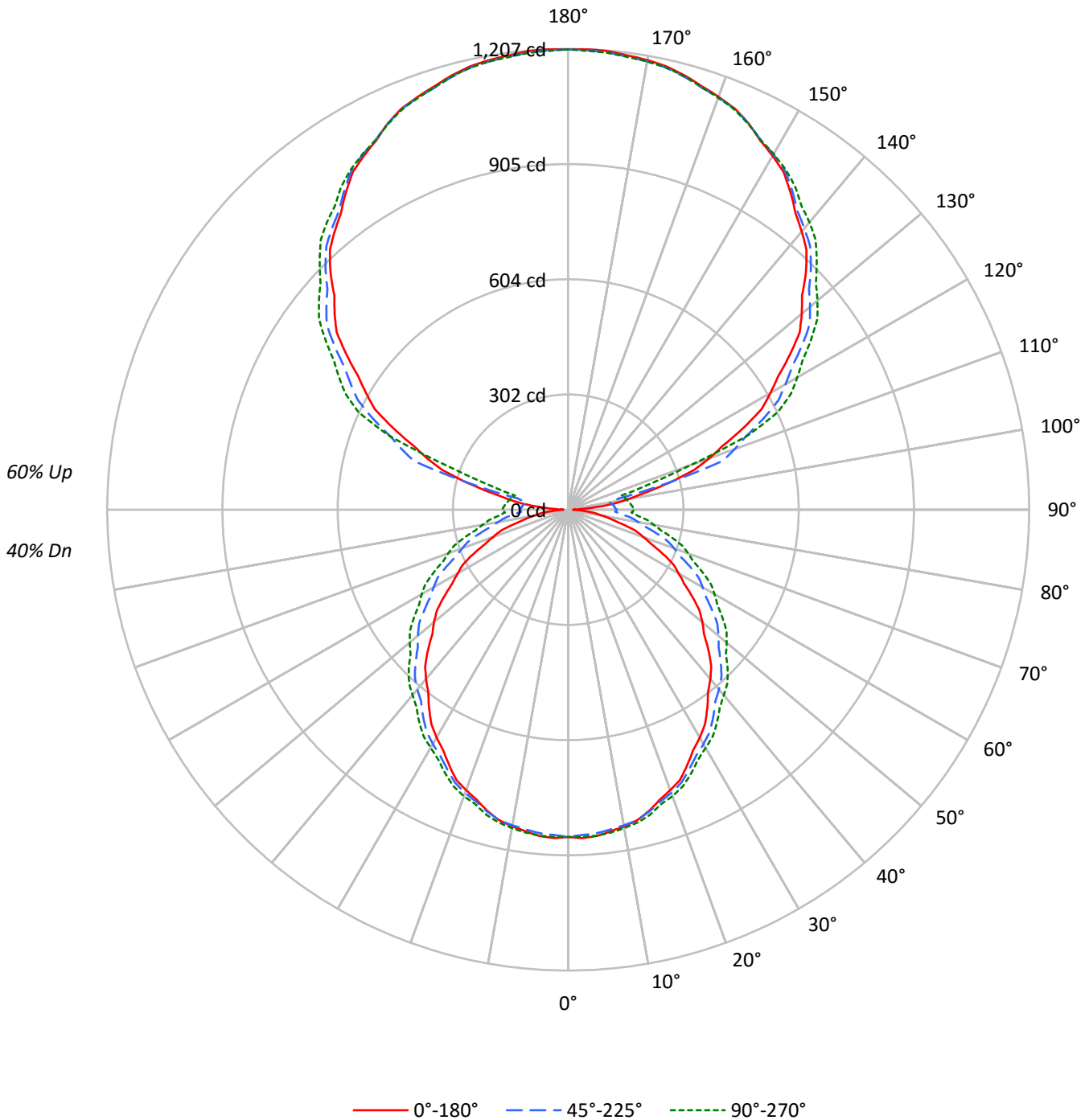
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332164-940

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

Luminous Intensity Polar Plot





TEST NUMBER: P332164-940

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

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°	9226	9226	9226
5°	9255	8994	8999
10°	9172	8787	8743
15°	9054	8552	8462
20°	8884	8283	8155
25°	8676	7974	7832
30°	8462	7695	7504
35°	8223	7401	7242
40°	7995	7134	6961
45°	7742	6877	6737
50°	7490	6622	6490
55°	7215	6363	6268
60°	6946	6099	6041
65°	6670	5818	5769
70°	6254	5502	5492
75°	5730	5140	5210
80°	5128	4782	4885
85°	4559	4540	4699



TEST NUMBER: P332164-940

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	1.2
10°-20°	231.6	3.5
20°-30°	346.4	5.3
30°-40°	413.7	6.3
40°-50°	432.9	6.6
50°-60°	406.2	6.2
60°-70°	339.3	5.2
70°-80°	242.7	3.7
80°-90°	148.1	2.3
90°-100°	134.6	2.1
100°-110°	275.6	4.2
110°-120°	546.3	8.3
120°-130°	664.4	10.1
130°-140°	694.1	10.6
140°-150°	640.8	9.8
150°-160°	515.0	7.9
160°-170°	332.3	5.1
170°-180°	114.5	1.7
0°-30°	659.3	10.1
0°-40°	1073.0	16.4
0°-60°	1912.1	29.1
0°-90°	2642.2	40.3
90°-120°	956.6	14.6
90°-150°	2956.0	45.1
90°-180°	3918.0	59.7
0°-180°	6560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	858	856	851	858	857	81
15°	817	820	819	828	827	230
25°	738	747	750	761	762	340
35°	635	650	662	675	680	397
45°	519	542	565	582	590	400
55°	396	427	460	484	493	354
65°	274	310	351	378	388	270
75°	148	192	239	269	281	159
85°	46	93	142	172	183	48
90°	13	68	127	161	173	11
95°	65	68	120	154	165	76
105°	274	303	266	142	144	291
115°	505	523	564	594	606	499
125°	709	717	746	767	776	633
135°	880	885	899	917	920	678
145°	1015	1020	1022	1031	1035	635
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	



TEST NUMBER: P332164-940

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	860.9	860.3	859.9	859.3	858.9	857.9	856.7	855.3	854.0	852.7	854.0
5°	858.1	857.6	857.2	856.8	856.4	855.6	854.3	853.1	851.9	850.6	852.3
7.5°	849.6	849.7	849.8	849.9	850.0	849.4	848.2	847.0	845.8	844.6	846.7
10°	842.2	842.6	843.0	843.5	843.8	843.6	842.5	841.5	840.4	839.4	841.5
12.5°	833.2	833.8	834.4	835.0	835.5	835.5	834.8	834.1	833.4	832.7	834.6
15°	817.0	817.6	818.2	818.9	819.5	819.7	819.5	819.3	819.0	818.9	820.9
17.5°	796.5	797.7	799.0	800.1	801.4	802.0	801.9	801.8	801.7	801.6	803.5
20°	781.5	782.7	784.0	785.2	786.5	787.3	787.7	788.2	788.5	789.0	790.9
22.5°	765.8	767.0	768.3	769.5	770.8	771.7	772.3	772.8	773.5	774.0	776.4
25°	737.6	739.7	741.7	743.9	745.9	747.3	747.9	748.5	749.1	749.8	752.4
27.5°	709.3	711.6	714.0	716.3	718.7	720.5	721.8	723.2	724.5	725.9	728.2
30°	689.0	691.8	694.5	697.1	699.8	702.0	703.6	705.3	707.0	708.6	711.1
32.5°	666.6	669.7	672.7	675.7	678.8	681.4	683.5	685.7	687.9	690.0	692.7
35°	634.9	638.2	641.6	644.9	648.2	651.2	653.9	656.6	659.3	662.0	665.1
37.5°	601.3	605.0	608.8	612.5	616.3	619.7	623.1	626.4	629.7	633.0	636.6
40°	578.9	582.6	586.4	590.1	593.8	597.8	601.9	606.1	610.2	614.4	617.9
42.5°	554.2	558.8	563.4	567.9	572.5	576.9	581.2	585.6	589.9	594.2	598.1
45°	519.2	524.1	529.1	534.0	539.0	544.1	549.3	554.5	559.7	564.9	568.8
47.5°	482.3	488.0	493.7	499.3	504.9	510.7	516.7	522.5	528.5	534.4	538.9
50°	458.4	464.2	470.0	475.9	481.7	487.8	494.3	500.7	507.1	513.5	518.3
52.5°	433.0	439.2	445.3	451.5	457.6	464.2	471.4	478.4	485.5	492.6	497.6
55°	395.9	402.7	409.6	416.4	423.3	430.4	437.9	445.4	452.8	460.3	465.9
57.5°	359.6	366.8	373.9	381.0	388.3	395.8	404.0	412.2	420.4	428.6	434.2
60°	334.3	341.7	349.2	356.7	364.2	372.1	380.7	389.1	397.6	406.2	412.0
62.5°	310.3	318.0	325.7	333.2	340.9	349.2	358.2	367.2	376.2	385.2	391.0
65°	273.6	281.7	289.7	297.8	305.9	314.5	323.7	332.8	342.0	351.1	357.3
67.5°	236.2	244.8	253.4	262.0	270.5	279.6	288.8	298.1	307.4	316.7	323.5
70°	210.1	219.0	227.9	236.8	245.8	255.2	265.2	275.1	285.1	295.1	301.7
72.5°	186.2	195.1	204.0	212.9	221.9	231.5	241.7	252.1	262.3	272.6	279.5
75°	148.5	158.2	168.0	177.7	187.4	197.5	207.9	218.3	228.6	239.1	245.8
77.5°	115.6	125.5	135.3	145.1	154.9	165.1	175.6	186.0	196.4	206.9	214.1
80°	92.5	102.6	112.8	123.0	133.1	143.6	154.4	165.1	175.9	186.7	193.8
82.5°	72.2	82.6	92.9	103.3	113.6	124.2	135.2	146.2	157.1	168.1	175.1
85°	45.7	56.1	66.5	76.9	87.2	97.9	109.0	119.9	130.9	142.0	149.0
87.5°	25.1	35.8	46.5	57.2	67.9	78.8	90.0	101.0	112.2	123.2	130.5
90°	13.0	25.1	37.4	49.5	61.7	74.4	87.5	100.7	113.9	127.0	134.8
92.5°	28.1	36.6	45.3	53.9	62.5	73.0	85.3	97.7	110.1	122.4	130.6
95°	64.9	64.8	64.7	64.7	64.6	70.8	83.1	95.5	107.8	120.2	128.0
97.5°	119.0	122.6	126.3	129.9	133.5	133.0	128.4	123.8	119.1	114.6	122.3
100°	159.8	170.4	181.0	191.6	202.2	196.8	175.3	153.8	132.3	110.8	118.4
102.5°	206.3	215.2	224.0	232.8	241.7	233.8	209.3	184.8	160.2	135.7	136.6
105°	274.4	281.5	288.7	295.9	303.0	302.1	293.1	284.2	275.2	266.2	236.7
107.5°	345.3	351.2	357.2	363.2	369.2	377.8	389.1	400.4	411.7	423.0	402.7
110°	392.5	397.9	403.1	408.5	413.8	421.7	432.2	442.7	453.2	463.7	462.5



TEST NUMBER: P332164-940

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	438.4	442.9	447.4	451.9	456.4	463.7	473.9	484.0	494.2	504.4	509.7
115°	505.3	509.0	512.7	516.4	520.0	526.6	535.8	545.1	554.3	563.6	570.5
117.5°	570.9	573.9	576.9	579.9	582.9	588.4	596.3	604.2	612.2	620.1	626.6
120°	611.0	613.8	616.6	619.5	622.3	627.4	634.9	642.3	649.8	657.2	663.6
122.5°	652.6	654.5	656.6	658.5	660.6	665.2	672.5	679.8	687.1	694.3	700.0
125°	708.6	710.2	711.8	713.4	715.0	719.2	725.9	732.7	739.6	746.4	751.2
127.5°	763.8	765.1	766.5	767.9	769.3	772.9	778.9	784.8	790.8	796.7	801.4
130°	798.2	799.5	800.9	802.3	803.7	806.8	811.8	816.7	821.7	826.6	831.3
132.5°	830.4	831.9	833.5	835.0	836.5	839.3	843.3	847.2	851.1	855.2	859.7
135°	880.5	881.5	882.4	883.4	884.4	886.4	889.6	892.6	895.7	898.8	903.1
137.5°	923.3	924.6	926.0	927.3	928.7	930.2	931.9	933.6	935.4	937.1	941.4
140°	951.2	952.4	953.6	954.8	956.0	957.2	958.4	959.7	960.8	962.1	966.0
142.5°	977.8	978.7	979.8	980.8	981.9	982.7	983.5	984.2	984.9	985.6	989.0
145°	1014.8	1016.0	1017.2	1018.3	1019.6	1020.3	1020.7	1021.1	1021.5	1021.9	1024.0
147.5°	1048.8	1049.7	1050.6	1051.5	1052.5	1053.1	1053.5	1053.9	1054.3	1054.7	1055.6
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



TEST NUMBER: P332164-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.3	856.7	857.9	858.5	858.4	858.2	858.0	857.9
5°	853.9	855.6	857.2	857.9	857.7	857.6	857.4	857.1
7.5°	848.7	850.9	852.9	853.8	853.5	853.4	853.1	852.8
10°	843.6	845.6	847.7	848.6	848.1	847.7	847.3	846.9
12.5°	836.5	838.4	840.3	841.1	840.6	840.3	839.8	839.4
15°	823.0	825.1	827.2	828.0	827.9	827.7	827.4	827.2
17.5°	805.4	807.3	809.1	809.9	809.7	809.3	809.0	808.8
20°	792.7	794.6	796.5	797.5	797.7	797.9	798.1	798.3
22.5°	778.7	781.1	783.5	784.6	784.5	784.3	784.3	784.1
25°	755.2	757.9	760.5	761.9	761.9	761.9	761.9	761.9
27.5°	730.5	732.8	735.1	736.4	736.6	736.7	736.9	737.1
30°	713.6	716.1	718.6	719.9	719.9	719.9	719.9	719.9
32.5°	695.3	697.9	700.6	702.2	702.7	703.2	703.6	704.2
35°	668.2	671.4	674.4	676.5	677.3	678.1	678.9	679.8
37.5°	640.1	643.6	647.1	649.3	649.9	650.6	651.2	651.9
40°	621.4	624.9	628.5	630.6	631.5	632.3	633.1	634.0
42.5°	601.9	605.7	609.7	612.2	613.3	614.5	615.6	616.8
45°	572.7	576.7	580.7	583.4	585.1	586.7	588.4	590.1
47.5°	543.3	547.8	552.2	555.1	556.3	557.7	558.9	560.2
50°	523.1	527.8	532.6	535.7	537.2	538.6	540.1	541.5
52.5°	502.5	507.5	512.4	515.8	517.5	519.3	521.1	522.9
55°	471.5	477.2	482.7	486.3	488.0	489.6	491.3	493.0
57.5°	439.9	445.5	451.1	455.0	456.9	458.9	460.7	462.7
60°	417.8	423.6	429.4	433.5	435.7	438.0	440.3	442.6
62.5°	396.9	402.7	408.5	412.4	414.6	416.7	418.8	420.9
65°	363.6	369.7	375.9	380.1	382.2	384.2	386.4	388.4
67.5°	330.3	337.2	343.9	348.2	349.9	351.7	353.5	355.2
70°	308.4	315.0	321.6	325.9	328.1	330.1	332.2	334.3
72.5°	286.2	293.0	299.9	304.3	306.4	308.4	310.5	312.6
75°	252.7	259.6	266.4	271.1	273.6	276.1	278.6	281.1
77.5°	221.3	228.5	235.8	240.3	242.3	244.2	246.1	248.0
80°	200.8	207.9	215.0	219.5	221.6	223.6	225.8	227.8
82.5°	182.2	189.2	196.3	200.8	203.0	205.0	207.1	209.1
85°	156.0	163.1	170.1	174.7	176.7	178.9	180.9	183.0
87.5°	137.7	144.9	152.1	156.8	158.9	161.1	163.3	165.4
90°	142.7	150.5	158.4	163.5	166.0	168.5	171.0	173.4
92.5°	138.8	147.0	155.1	160.2	162.4	164.5	166.7	168.9
95°	135.8	143.7	151.5	156.5	158.5	160.6	162.6	164.8
97.5°	130.1	137.9	145.6	150.7	152.9	155.2	157.5	159.8
100°	126.0	133.6	141.2	146.2	148.5	150.7	153.0	155.2
102.5°	137.5	138.4	139.4	141.0	143.5	145.9	148.3	150.8
105°	207.3	177.9	148.5	134.9	137.1	139.5	141.7	144.0
107.5°	382.5	362.2	341.9	319.4	294.7	269.9	245.2	220.5
110°	461.4	460.2	459.0	445.1	418.2	391.4	364.6	337.8



TEST NUMBER: P332164-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	515.1	520.4	525.8	526.3	522.1	518.0	513.8	509.6
115°	577.6	584.5	591.5	596.2	598.6	601.1	603.5	606.0
117.5°	633.2	639.7	646.2	650.4	652.2	653.9	655.7	657.5
120°	669.9	676.3	682.7	686.5	688.0	689.5	690.9	692.4
122.5°	705.8	711.5	717.2	720.9	722.5	724.1	725.7	727.3
125°	755.9	760.6	765.4	768.7	770.5	772.4	774.3	776.1
127.5°	806.2	810.9	815.6	818.5	819.6	820.6	821.5	822.6
130°	836.1	840.8	845.6	848.4	849.2	850.1	850.9	851.8
132.5°	864.2	868.9	873.4	876.1	877.0	877.8	878.7	879.6
135°	907.4	911.8	916.1	918.5	918.9	919.4	919.8	920.2
137.5°	945.6	949.9	954.0	956.4	957.2	957.8	958.4	959.0
140°	969.9	973.8	977.7	980.0	980.6	981.2	981.9	982.6
142.5°	992.4	995.9	999.3	1001.2	1001.7	1002.2	1002.6	1003.2
145°	1026.0	1028.1	1030.2	1031.6	1032.4	1033.2	1034.1	1034.9
147.5°	1056.5	1057.4	1058.3	1058.6	1058.5	1058.3	1058.1	1058.0
150°	1075.6	1075.9	1076.4	1076.5	1076.3	1076.1	1075.9	1075.8
152.5°	1093.4	1094.1	1094.8	1094.8	1094.0	1093.1	1092.3	1091.5
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)