

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: P332167-930

Luminaire Tested: **S123DIW-S775D1030U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332167-930
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-S775D1030U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH 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: 5499.9 lumens
Efficiency: N/A
Efficacy: 104.6 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

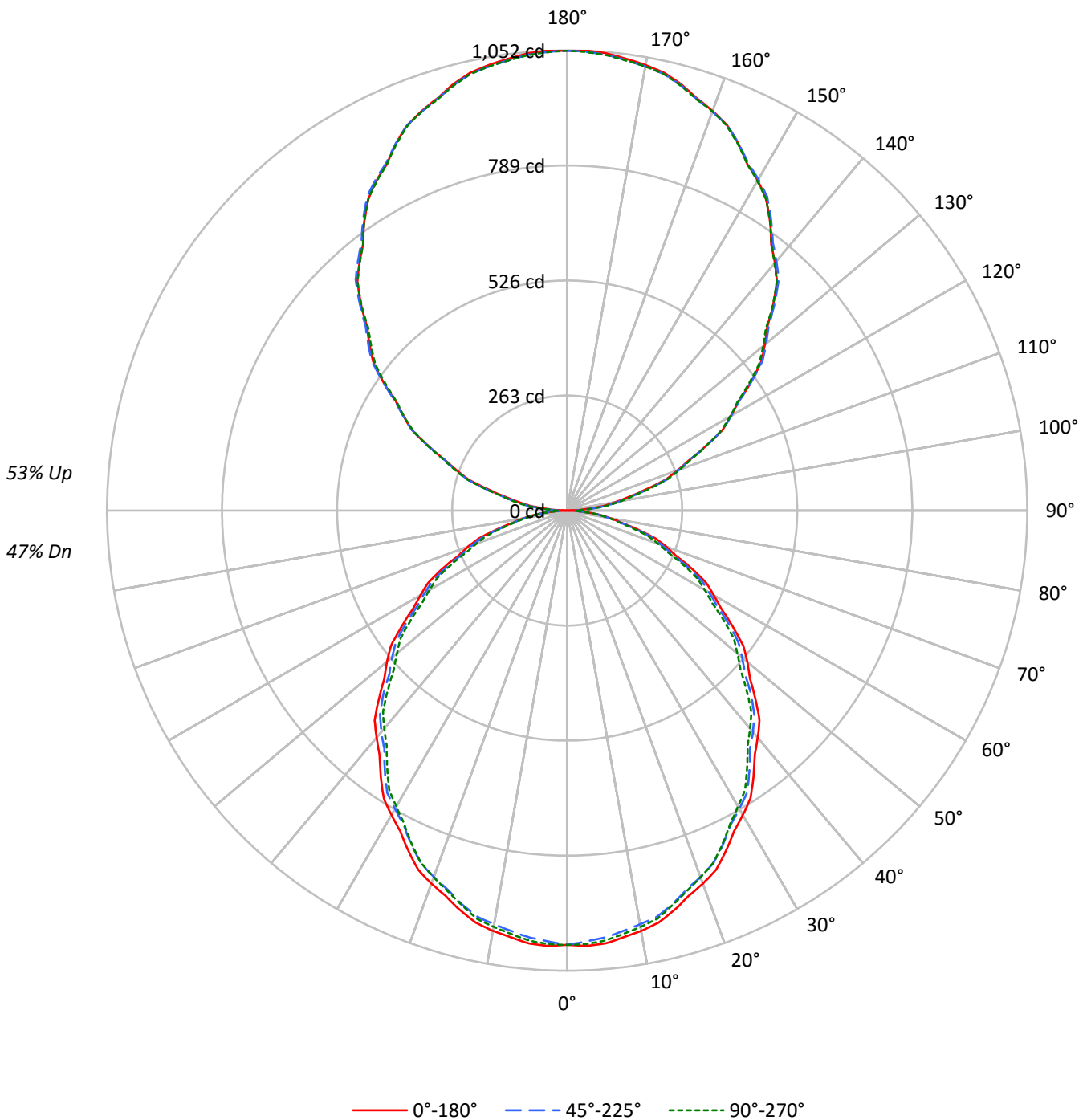
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

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	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	97	93	89	85	89	85	82	79	71	69	67	59	57	56	47	46	45	39
2	88	81	75	70	81	75	69	65	63	59	55	52	49	46	41	39	38	33
3	81	71	64	58	74	66	59	54	55	50	46	46	42	39	37	34	32	28
4	74	63	55	49	67	58	51	46	49	44	40	41	37	34	33	30	28	24
5	68	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24	21
6	62	50	42	36	57	46	39	34	39	34	30	33	29	25	27	24	21	18
7	58	45	37	32	53	42	35	30	36	30	26	30	26	22	24	21	19	16
8	53	41	33	28	49	38	31	26	33	27	23	27	23	20	22	19	17	14
9	50	37	30	25	46	35	28	24	30	24	21	25	21	18	21	18	15	13
10	46	34	27	22	43	32	26	21	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10687	10687	10687
5°	10737	10589	10662
10°	10665	10497	10563
15°	10541	10379	10398
20°	10394	10208	10219
25°	10200	10007	9987
30°	9984	9783	9708
35°	9759	9546	9423
40°	9524	9284	9140
45°	9266	9045	8824
50°	9008	8748	8505
55°	8668	8443	8188
60°	8325	8086	7830
65°	8023	7697	7457
70°	7578	7254	6930
75°	6924	6675	6392
80°	6248	5976	5926
85°	5483	5274	5064



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	1.7
10°-20°	264.1	4.8
20°-30°	390.1	7.1
30°-40°	455.7	8.3
40°-50°	458.1	8.3
50°-60°	402.4	7.3
60°-70°	299.8	5.5
70°-80°	170.8	3.1
80°-90°	52.1	0.9
90°-100°	68.5	1.2
100°-110°	205.0	3.7
110°-120°	348.7	6.3
120°-130°	458.7	8.3
130°-140°	515.5	9.4
140°-150°	506.8	9.2
150°-160°	426.6	7.8
160°-170°	284.0	5.2
170°-180°	99.4	1.8
0°-30°	747.7	13.6
0°-40°	1203.3	21.9
0°-60°	2063.8	37.5
0°-90°	2586.6	47.0
90°-120°	622.2	11.3
90°-150°	2103.2	38.2
90°-180°	2913.0	53.0
0°-180°	5499.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	994	989	980	988	987	94
15°	946	942	931	938	933	267
25°	859	853	843	843	841	395
35°	743	737	726	721	717	464
45°	609	605	594	584	580	470
55°	462	460	450	441	436	414
65°	315	310	302	296	293	311
75°	166	163	160	156	154	178
85°	44	43	43	41	41	49
90°	1	9	20	23	25	5
95°	49	55	61	64	64	55
105°	186	188	195	195	197	199
115°	351	353	352	353	352	347
125°	514	516	515	511	508	458
135°	667	671	671	667	666	513
145°	809	810	813	812	809	505
155°	926	926	927	930	924	426
165°	1008	1006	1006	1010	1005	284
175°	1049	1046	1046	1050	1045	100
180°	1052	1052	1052	1052	1052	



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	996.2	995.6	995.1	994.4	993.8	992.7	991.0	989.4	987.7	986.0	987.5
5°	993.7	992.7	991.8	990.8	989.9	988.4	986.3	984.2	982.1	980.0	981.9
7.5°	984.0	983.0	982.0	981.1	980.2	978.6	976.4	974.3	972.1	970.0	971.7
10°	975.8	974.8	973.9	972.9	972.0	970.3	967.8	965.3	962.9	960.4	962.1
12.5°	964.8	964.0	963.3	962.5	961.6	960.1	957.8	955.4	953.2	950.8	952.1
15°	945.9	945.1	944.4	943.6	942.8	941.3	938.7	936.3	933.8	931.4	932.9
17.5°	923.8	922.8	921.9	920.9	919.9	918.2	915.7	913.2	910.8	908.3	909.4
20°	907.4	906.3	905.2	904.1	902.9	901.1	898.6	896.2	893.7	891.2	892.0
22.5°	889.0	887.9	886.7	885.6	884.4	882.6	880.2	877.8	875.3	872.8	873.4
25°	858.8	857.7	856.6	855.4	854.3	852.5	849.9	847.5	845.1	842.6	842.8
27.5°	826.6	825.4	824.3	823.2	822.1	820.3	817.6	815.0	812.3	809.6	809.8
30°	803.3	802.3	801.4	800.5	799.5	797.7	795.1	792.4	789.8	787.1	787.1
32.5°	780.1	778.9	777.6	776.3	775.1	773.5	771.4	769.3	767.3	765.2	764.2
35°	742.7	741.6	740.5	739.3	738.2	736.4	733.9	731.4	729.0	726.5	725.4
37.5°	704.4	703.0	701.6	700.1	698.7	696.8	694.2	691.7	689.2	686.7	685.3
40°	677.8	676.7	675.6	674.4	673.3	671.4	668.7	666.1	663.4	660.7	659.3
42.5°	651.2	649.9	648.6	647.3	646.0	644.1	641.4	638.7	636.1	633.4	631.9
45°	608.7	607.9	607.2	606.4	605.6	604.1	601.5	599.1	596.6	594.2	591.9
47.5°	566.5	565.4	564.3	563.2	562.1	560.4	558.1	555.8	553.4	551.1	548.9
50°	537.9	536.9	535.9	535.0	534.0	532.3	529.9	527.4	524.9	522.4	520.4
52.5°	507.8	507.1	506.5	505.8	505.2	503.5	500.9	498.3	495.7	493.1	491.3
55°	461.9	461.6	461.5	461.3	461.1	459.7	457.3	454.9	452.3	449.9	447.8
57.5°	418.2	417.5	416.9	416.2	415.6	414.3	412.3	410.3	408.3	406.3	404.5
60°	386.7	386.5	386.4	386.1	386.0	384.7	382.5	380.2	377.9	375.6	373.9
62.5°	358.7	358.2	357.8	357.3	356.8	355.4	353.1	350.8	348.5	346.3	344.5
65°	315.0	314.1	313.1	312.2	311.2	309.8	307.9	306.0	304.1	302.2	300.7
67.5°	268.7	267.9	267.1	266.2	265.4	264.2	262.9	261.4	259.9	258.5	257.1
70°	240.8	239.6	238.5	237.3	236.2	235.1	233.9	232.8	231.6	230.5	229.2
72.5°	211.4	210.5	209.7	208.9	208.1	207.0	205.7	204.4	203.1	201.8	200.6
75°	166.5	165.7	164.9	164.2	163.5	162.7	162.2	161.6	161.0	160.5	159.6
77.5°	126.7	126.3	125.9	125.5	125.0	124.5	123.8	123.1	122.5	121.7	121.1
80°	100.8	100.2	99.6	99.1	98.5	98.0	97.6	97.3	96.9	96.4	96.3
82.5°	75.5	75.3	75.3	75.1	75.0	74.9	74.8	74.8	74.7	74.6	74.3
85°	44.4	44.0	43.6	43.3	42.9	42.7	42.7	42.7	42.7	42.7	42.3
87.5°	17.9	17.9	17.8	17.7	17.5	17.7	18.0	18.3	18.7	19.0	19.0
90°	0.8	2.7	4.5	6.4	8.2	10.3	12.6	15.1	17.4	19.8	20.5
92.5°	20.0	21.2	22.5	23.7	24.9	26.3	27.6	29.0	30.3	31.7	32.3
95°	48.8	50.0	51.3	52.6	53.9	55.3	56.7	58.2	59.7	61.1	61.9
97.5°	86.6	87.5	88.5	89.4	90.4	91.4	92.5	93.5	94.6	95.6	96.5
100°	112.3	113.4	114.5	115.6	116.8	117.7	118.7	119.6	120.5	121.4	122.0
102.5°	142.1	142.8	143.4	144.1	144.7	145.6	146.8	148.1	149.3	150.5	151.1
105°	185.9	186.2	186.6	186.9	187.4	188.3	190.0	191.6	193.3	194.9	194.9
107.5°	236.8	236.9	237.2	237.4	237.6	238.1	238.7	239.4	240.0	240.7	241.2
110°	268.5	268.8	269.2	269.5	269.9	270.3	270.7	271.0	271.4	271.7	272.5



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	301.5	301.7	301.9	302.1	302.4	302.5	302.6	302.6	302.7	302.8	303.7
115°	351.1	351.6	352.1	352.7	353.3	353.4	352.9	352.6	352.2	351.9	352.0
117.5°	401.0	401.3	401.7	402.0	402.4	402.4	401.9	401.4	400.9	400.5	400.4
120°	432.0	433.1	434.2	435.3	436.4	436.5	435.5	434.6	433.7	432.8	432.6
122.5°	464.4	465.2	466.0	466.8	467.6	467.7	467.3	466.8	466.4	465.9	465.4
125°	513.8	514.3	514.9	515.4	516.0	516.1	515.7	515.4	514.9	514.6	513.9
127.5°	559.4	560.5	561.7	562.9	564.0	564.4	564.0	563.6	563.2	562.8	561.8
130°	589.8	591.3	592.7	594.2	595.7	596.1	595.6	595.0	594.4	593.9	593.1
132.5°	620.1	621.6	623.1	624.6	626.1	626.6	626.1	625.7	625.3	624.9	624.0
135°	666.6	667.6	668.8	669.8	671.0	671.4	671.2	671.1	670.9	670.7	669.9
137.5°	709.6	710.5	711.3	712.2	713.2	713.9	714.4	714.9	715.3	715.8	715.0
140°	739.2	740.2	741.1	742.0	742.9	743.5	743.6	743.9	744.0	744.2	744.0
142.5°	766.4	767.3	768.2	769.1	770.1	770.6	770.9	771.3	771.7	772.0	771.8
145°	808.6	809.0	809.3	809.8	810.1	810.6	811.1	811.7	812.2	812.8	812.6
147.5°	845.6	846.3	846.9	847.7	848.3	848.9	849.4	849.9	850.4	850.9	850.9
150°	871.4	871.8	872.1	872.5	872.9	873.3	873.6	874.0	874.3	874.7	874.7
152.5°	892.6	893.1	893.6	894.1	894.6	895.0	895.2	895.4	895.7	895.9	896.2
155°	925.9	925.9	925.9	925.9	925.9	926.0	926.2	926.4	926.6	926.8	927.5
157.5°	954.4	954.1	953.9	953.7	953.5	953.4	953.6	953.7	953.9	954.0	954.8
160°	972.2	971.8	971.4	971.1	970.7	970.5	970.5	970.5	970.5	970.5	971.4
162.5°	988.1	987.6	987.0	986.5	986.0	985.8	985.9	986.1	986.3	986.4	987.3
165°	1008.5	1008.0	1007.5	1006.9	1006.3	1006.1	1006.1	1006.1	1006.1	1006.1	1007.1
167.5°	1024.9	1024.2	1023.4	1022.7	1022.0	1021.7	1021.8	1022.0	1022.1	1022.2	1023.4
170°	1034.1	1033.4	1032.7	1031.9	1031.2	1030.9	1030.9	1030.9	1030.9	1030.9	1032.1
172.5°	1041.4	1040.6	1039.9	1039.2	1038.4	1038.1	1038.1	1038.1	1038.1	1038.1	1039.3
175°	1049.0	1048.3	1047.6	1046.8	1046.1	1045.7	1045.7	1045.7	1045.7	1045.7	1046.8
177.5°	1052.1	1051.6	1051.0	1050.4	1049.8	1049.5	1049.5	1049.5	1049.5	1049.5	1050.4
180°	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	989.0	990.6	992.1	992.8	992.6	992.5	992.3	992.1
5°	983.8	985.7	987.7	988.4	988.0	987.7	987.2	986.8
7.5°	973.4	975.1	976.8	977.5	977.3	977.1	976.8	976.6
10°	963.8	965.5	967.2	967.9	967.5	967.1	966.8	966.4
12.5°	953.3	954.6	955.9	956.3	956.1	955.9	955.7	955.4
15°	934.4	935.9	937.4	937.6	936.5	935.3	934.3	933.1
17.5°	910.4	911.5	912.6	912.9	912.5	912.1	911.7	911.3
20°	892.8	893.5	894.3	894.4	893.8	893.2	892.7	892.1
22.5°	874.0	874.7	875.2	875.1	874.5	873.8	873.0	872.3
25°	842.9	843.2	843.3	843.2	842.6	842.0	841.5	840.9
27.5°	809.9	810.1	810.2	809.9	809.3	808.5	807.8	807.1
30°	787.1	787.1	787.1	786.4	785.1	783.7	782.4	781.1
32.5°	763.1	762.1	761.0	760.1	759.4	758.6	757.9	757.2
35°	724.2	723.1	721.9	720.9	719.9	719.0	718.0	717.1
37.5°	684.0	682.6	681.3	680.3	679.6	679.1	678.4	677.8
40°	657.7	656.2	654.7	653.5	652.8	652.0	651.3	650.5
42.5°	630.4	628.8	627.4	626.2	625.5	624.7	623.9	623.2
45°	589.6	587.3	585.1	583.4	582.5	581.6	580.6	579.7
47.5°	546.7	544.5	542.2	540.6	539.8	539.0	538.2	537.3
50°	518.3	516.2	514.1	512.5	511.4	510.2	509.1	507.9
52.5°	489.5	487.7	485.9	484.5	483.4	482.2	481.1	480.0
55°	445.7	443.6	441.6	440.0	439.0	438.1	437.2	436.3
57.5°	402.6	400.8	398.9	397.5	396.3	395.3	394.1	393.1
60°	372.2	370.5	368.8	367.5	366.5	365.6	364.6	363.7
62.5°	342.8	341.1	339.4	338.3	337.6	337.0	336.3	335.7
65°	299.1	297.7	296.1	295.1	294.5	293.9	293.3	292.8
67.5°	255.8	254.5	253.2	252.1	251.4	250.5	249.7	248.9
70°	227.9	226.5	225.2	224.0	223.1	222.2	221.2	220.2
72.5°	199.4	198.3	197.1	196.2	195.8	195.3	194.8	194.3
75°	158.6	157.7	156.7	156.0	155.4	154.8	154.3	153.7
77.5°	120.4	119.8	119.1	118.9	118.9	118.9	118.9	118.9
80°	96.1	95.9	95.7	95.6	95.6	95.6	95.6	95.6
82.5°	73.9	73.6	73.2	73.0	72.9	72.7	72.6	72.4
85°	41.9	41.6	41.2	41.0	41.0	41.0	41.0	41.0
87.5°	19.0	19.0	19.0	19.0	19.1	19.2	19.2	19.3
90°	21.3	22.0	22.7	23.3	23.6	24.1	24.4	24.8
92.5°	32.9	33.5	34.1	34.2	34.0	33.8	33.6	33.3
95°	62.6	63.3	64.1	64.4	64.4	64.4	64.4	64.4
97.5°	97.3	98.2	99.1	99.4	99.3	99.3	99.2	99.1
100°	122.5	123.1	123.6	124.1	124.4	124.8	125.1	125.6
102.5°	151.6	152.1	152.7	153.0	152.9	152.8	152.7	152.6
105°	194.9	194.9	194.9	195.1	195.5	195.8	196.2	196.6
107.5°	241.9	242.5	243.0	243.2	243.0	242.8	242.6	242.3
110°	273.2	273.9	274.7	274.8	274.5	274.1	273.8	273.4



TEST NUMBER: P332167-930

CATALOG NUMBER: S123DIW-S775D1030U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.6	305.4	306.3	306.7	306.6	306.6	306.6	306.5
115°	352.2	352.5	352.6	352.6	352.5	352.2	352.0	351.9
117.5°	400.4	400.3	400.3	400.0	399.5	399.0	398.4	397.9
120°	432.4	432.3	432.1	431.8	431.5	431.0	430.7	430.3
122.5°	464.9	464.4	464.0	463.4	462.9	462.4	461.9	461.4
125°	513.1	512.4	511.7	510.9	510.2	509.5	508.7	508.0
127.5°	560.8	559.8	558.7	557.7	556.9	556.1	555.2	554.4
130°	592.4	591.7	590.9	590.0	588.6	587.3	586.1	584.8
132.5°	623.2	622.3	621.4	620.5	619.5	618.5	617.5	616.5
135°	669.2	668.5	667.7	667.2	666.8	666.5	666.1	665.8
137.5°	714.3	713.5	712.7	712.0	711.3	710.6	709.9	709.2
140°	743.9	743.6	743.5	742.7	741.4	740.2	738.9	737.6
142.5°	771.6	771.4	771.3	770.6	769.6	768.7	767.7	766.7
145°	812.4	812.2	812.0	811.5	810.8	810.1	809.3	808.6
147.5°	850.9	850.9	850.9	850.4	849.3	848.2	847.1	846.0
150°	874.7	874.7	874.7	874.2	873.1	872.0	870.9	869.8
152.5°	896.4	896.7	897.1	896.7	895.8	894.8	893.8	892.9
155°	928.2	929.0	929.7	929.4	928.1	926.8	925.6	924.3
157.5°	955.5	956.3	957.1	957.0	955.9	955.0	953.9	952.8
160°	972.4	973.3	974.2	974.3	973.5	972.8	972.1	971.3
162.5°	988.2	989.1	990.1	989.9	988.8	987.6	986.4	985.2
165°	1008.3	1009.3	1010.5	1010.4	1009.1	1007.8	1006.5	1005.3
167.5°	1024.5	1025.6	1026.8	1026.8	1025.6	1024.5	1023.4	1022.2
170°	1033.4	1034.7	1036.0	1036.0	1034.7	1033.4	1032.1	1030.9
172.5°	1040.4	1041.5	1042.7	1042.6	1041.3	1040.0	1038.7	1037.5
175°	1047.9	1049.0	1050.1	1050.0	1048.7	1047.4	1046.2	1044.9
177.5°	1051.2	1052.1	1053.0	1053.0	1051.9	1050.9	1049.9	1048.9
180°	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5

(END OF REPORT)