

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: P332166-927

Luminaire Tested: **S123DIW-S775D1030U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332166-927
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-S775D1030U927-4F0-1E-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: 5779.2 lumens
Efficiency: N/A
Efficacy: 109.9 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

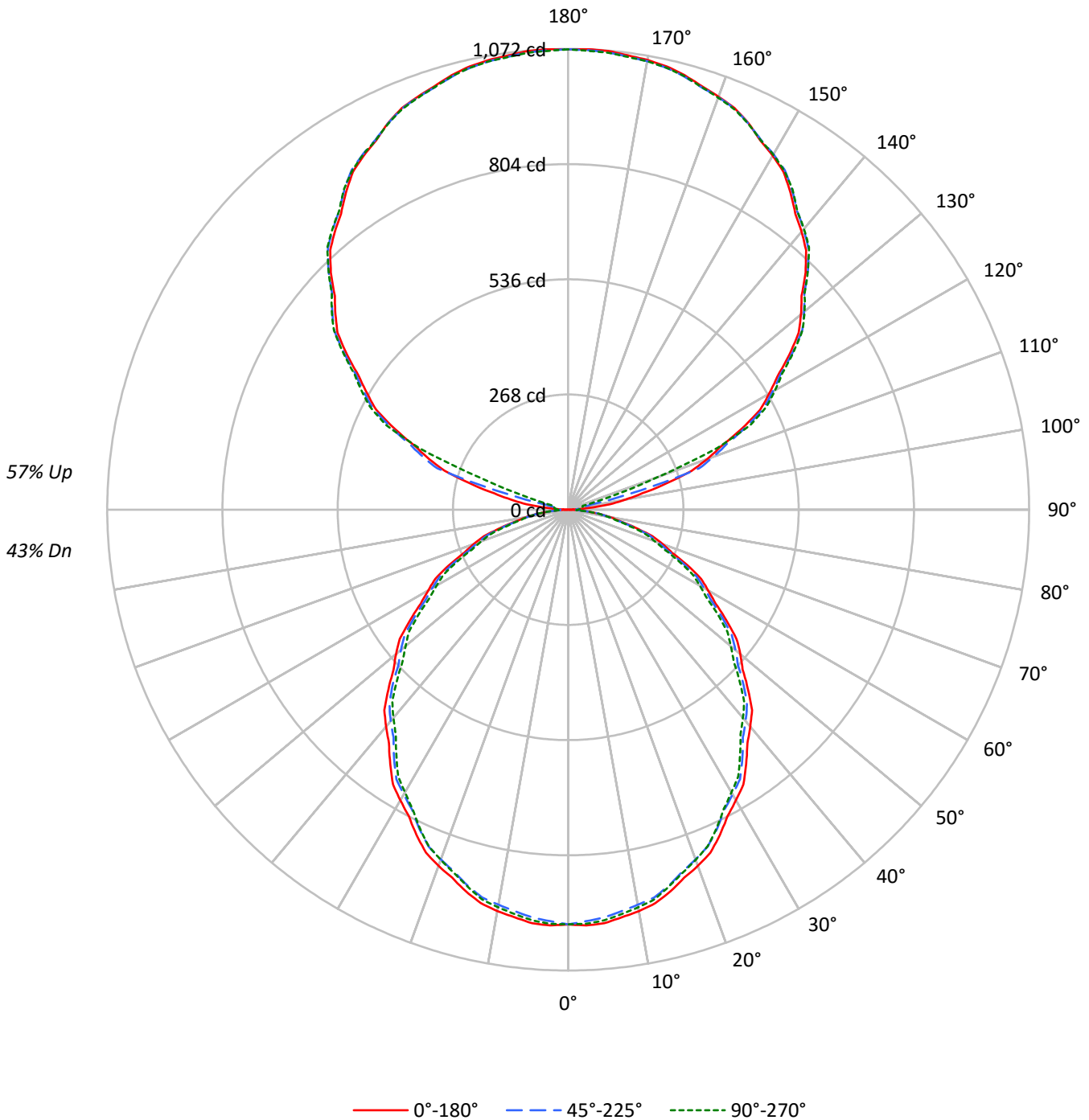
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.6
10°-20°	256.6	4.4
20°-30°	379.0	6.6
30°-40°	442.7	7.7
40°-50°	445.1	7.7
50°-60°	391.0	6.8
60°-70°	291.3	5.0
70°-80°	166.0	2.9
80°-90°	50.6	0.9
90°-100°	38.9	0.7
100°-110°	185.6	3.2
110°-120°	445.8	7.7
120°-130°	567.6	9.8
130°-140°	606.5	10.5
140°-150°	567.1	9.8
150°-160°	457.5	7.9
160°-170°	295.2	5.1
170°-180°	101.8	1.8
0°-30°	726.5	12.6
0°-40°	1169.2	20.2
0°-60°	2005.3	34.7
0°-90°	2513.2	43.5
90°-120°	670.3	11.6
90°-150°	2411.5	41.7
90°-180°	3266.0	56.5
0°-180°	5779.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	1	9	19	22	24	5
95°	49	18	25	30	30	60
105°	237	241	174	41	35	251
115°	445	450	457	464	468	439
125°	627	633	636	638	640	560
135°	780	785	788	791	788	601
145°	901	906	908	909	909	564
155°	992	991	991	995	991	457
165°	1046	1044	1043	1049	1044	295
175°	1071	1067	1068	1073	1067	102
180°	1071	1071	1071	1071	1071	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.4	17.3	17.3	17.1	17.0	17.2	17.5	17.8	18.1	18.4	18.4
90°	0.8	2.5	4.4	6.1	7.8	9.9	12.2	14.5	16.8	19.1	19.8
92.5°	14.8	14.3	13.8	13.3	12.8	13.5	15.2	16.9	18.6	20.4	21.5
95°	48.6	41.3	34.1	26.8	19.6	16.9	18.9	20.8	22.7	24.6	25.9
97.5°	97.5	94.3	91.0	87.8	84.5	76.5	63.8	51.1	38.3	25.6	27.0
100°	134.4	138.0	141.6	145.0	148.6	136.6	109.0	81.4	53.9	26.2	27.6
102.5°	176.5	179.0	181.6	184.1	186.6	172.9	142.8	112.6	82.5	52.4	48.0
105°	237.1	239.1	241.0	243.0	244.9	237.9	222.0	206.0	190.2	174.3	143.0
107.5°	301.1	302.6	304.2	305.8	307.3	309.3	311.9	314.3	316.9	319.4	296.4
110°	343.7	345.2	346.6	348.0	349.4	351.1	353.0	355.0	356.9	358.9	353.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	384.4	385.7	387.0	388.3	389.6	391.2	393.1	395.1	397.0	398.9	399.0
115°	444.8	445.8	446.9	448.0	449.0	450.4	451.9	453.5	455.1	456.7	458.5
117.5°	503.2	504.5	505.8	507.1	508.4	509.5	510.3	511.1	511.9	512.7	514.1
120°	539.5	541.1	542.6	544.2	545.8	546.9	547.4	548.0	548.5	549.0	550.4
122.5°	576.4	577.7	579.0	580.3	581.6	582.6	583.3	583.9	584.6	585.3	586.3
125°	627.0	628.4	629.8	631.2	632.6	633.7	634.4	635.1	635.8	636.5	636.9
127.5°	676.0	677.4	678.8	680.2	681.7	682.8	683.7	684.5	685.3	686.2	686.7
130°	706.5	708.0	709.4	710.8	712.3	713.3	714.0	714.7	715.4	716.1	716.8
132.5°	735.9	737.3	738.6	740.1	741.5	742.5	743.1	743.6	744.2	744.7	745.4
135°	780.5	781.6	782.7	783.7	784.8	785.7	786.4	787.1	787.8	788.5	789.0
137.5°	818.7	820.1	821.4	822.8	824.1	825.0	825.4	825.8	826.2	826.6	827.4
140°	844.2	845.3	846.4	847.4	848.4	849.2	849.8	850.3	850.8	851.4	852.1
142.5°	867.8	868.8	869.9	870.9	872.0	872.8	873.3	873.9	874.4	874.9	875.5
145°	900.7	901.9	903.2	904.4	905.6	906.4	906.8	907.1	907.5	907.8	908.2
147.5°	931.8	932.6	933.3	934.1	935.0	935.6	935.9	936.3	936.6	937.0	937.3
150°	950.9	951.3	951.9	952.4	952.9	953.4	953.7	954.1	954.4	954.8	955.1
152.5°	968.0	968.3	968.5	968.8	969.0	969.2	969.5	969.6	969.9	970.1	970.7
155°	992.2	991.8	991.5	991.2	990.8	990.7	990.9	991.0	991.3	991.4	992.3
157.5°	1011.0	1011.0	1010.9	1010.9	1010.8	1010.7	1010.6	1010.3	1010.2	1010.0	1011.1
160°	1022.5	1022.2	1022.1	1021.9	1021.8	1021.5	1021.4	1021.2	1021.0	1020.9	1021.9
162.5°	1033.2	1032.8	1032.4	1031.9	1031.4	1031.1	1030.9	1030.8	1030.5	1030.4	1031.6
165°	1046.3	1045.8	1045.3	1044.7	1044.2	1043.9	1043.6	1043.5	1043.3	1043.1	1044.6
167.5°	1056.5	1055.8	1055.1	1054.4	1053.7	1053.3	1053.3	1053.3	1053.3	1053.3	1054.7
170°	1062.2	1061.5	1060.8	1060.1	1059.4	1059.1	1059.1	1059.1	1059.1	1059.1	1060.4
172.5°	1066.0	1065.2	1064.4	1063.5	1062.6	1062.3	1062.4	1062.6	1062.7	1062.9	1064.3
175°	1071.0	1070.1	1069.2	1068.3	1067.5	1067.1	1067.2	1067.5	1067.6	1067.8	1069.1
177.5°	1072.2	1071.5	1070.9	1070.2	1069.4	1069.1	1069.3	1069.4	1069.5	1069.7	1070.9
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	18.4	18.4	18.4	18.5	18.5	18.5	18.6	18.7
90°	20.5	21.2	21.9	22.4	22.8	23.1	23.5	23.8
92.5°	22.7	23.8	24.9	25.6	25.7	26.0	26.2	26.4
95°	27.2	28.4	29.6	30.3	30.3	30.3	30.3	30.3
97.5°	28.4	29.9	31.3	32.1	32.2	32.4	32.6	32.8
100°	29.1	30.5	31.9	32.7	32.9	33.0	33.3	33.4
102.5°	43.6	39.2	34.8	32.8	33.1	33.4	33.7	34.1
105°	111.7	80.3	49.0	33.6	34.0	34.3	34.6	35.0
107.5°	273.5	250.6	227.6	204.3	180.7	157.2	133.6	110.0
110°	347.2	341.4	335.5	320.0	294.7	269.3	244.1	218.8



TEST NUMBER: P332166-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	399.2	399.3	399.3	396.7	391.4	386.1	380.7	375.4
115°	460.3	462.0	463.8	465.0	465.7	466.4	467.1	467.9
117.5°	515.6	517.0	518.4	519.2	519.3	519.4	519.6	519.8
120°	551.8	553.3	554.7	555.4	555.4	555.4	555.4	555.4
122.5°	587.2	588.3	589.2	589.9	589.9	590.1	590.3	590.4
125°	637.2	637.6	637.9	638.3	638.7	639.0	639.4	639.7
127.5°	687.3	687.9	688.5	688.6	688.2	687.9	687.5	687.1
130°	717.6	718.2	718.9	719.1	718.7	718.4	718.0	717.7
132.5°	746.2	746.9	747.6	747.7	747.2	746.7	746.2	745.7
135°	789.6	790.1	790.6	790.6	790.1	789.6	789.0	788.5
137.5°	828.2	829.1	830.0	830.2	829.8	829.5	829.1	828.8
140°	852.8	853.5	854.2	854.4	854.1	853.7	853.3	852.9
142.5°	876.1	876.6	877.2	877.2	876.7	876.2	875.8	875.2
145°	908.6	908.9	909.3	909.4	909.4	909.4	909.4	909.4
147.5°	937.7	938.0	938.4	938.2	937.4	936.5	935.7	934.9
150°	955.5	955.8	956.2	956.2	955.6	955.1	954.6	954.0
152.5°	971.4	972.0	972.6	972.6	971.7	970.9	970.1	969.3
155°	993.2	994.0	995.0	994.8	993.8	992.8	991.7	990.6
157.5°	1012.2	1013.2	1014.2	1014.1	1012.7	1011.4	1010.0	1008.6
160°	1022.9	1024.1	1025.1	1025.0	1023.7	1022.5	1021.3	1020.0
162.5°	1032.8	1034.0	1035.2	1035.2	1034.2	1033.1	1032.0	1030.9
165°	1045.9	1047.3	1048.8	1048.8	1047.7	1046.4	1045.1	1043.9
167.5°	1056.1	1057.6	1059.0	1059.0	1057.6	1056.1	1054.7	1053.3
170°	1061.8	1063.3	1064.7	1064.7	1063.3	1061.8	1060.4	1059.1
172.5°	1065.7	1067.1	1068.5	1068.4	1066.9	1065.3	1063.7	1062.2
175°	1070.2	1071.5	1072.8	1072.7	1071.3	1069.8	1068.4	1067.0
177.5°	1072.0	1073.1	1074.2	1074.1	1072.7	1071.3	1069.8	1068.4
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0

(END OF REPORT)