

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: P332178-927

Luminaire Tested: **S123DIW-S775D1535U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332178-927
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-S775D1535U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7375.8 lumens
Efficiency: N/A
Efficacy: 108.3 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: Semi-Indirect

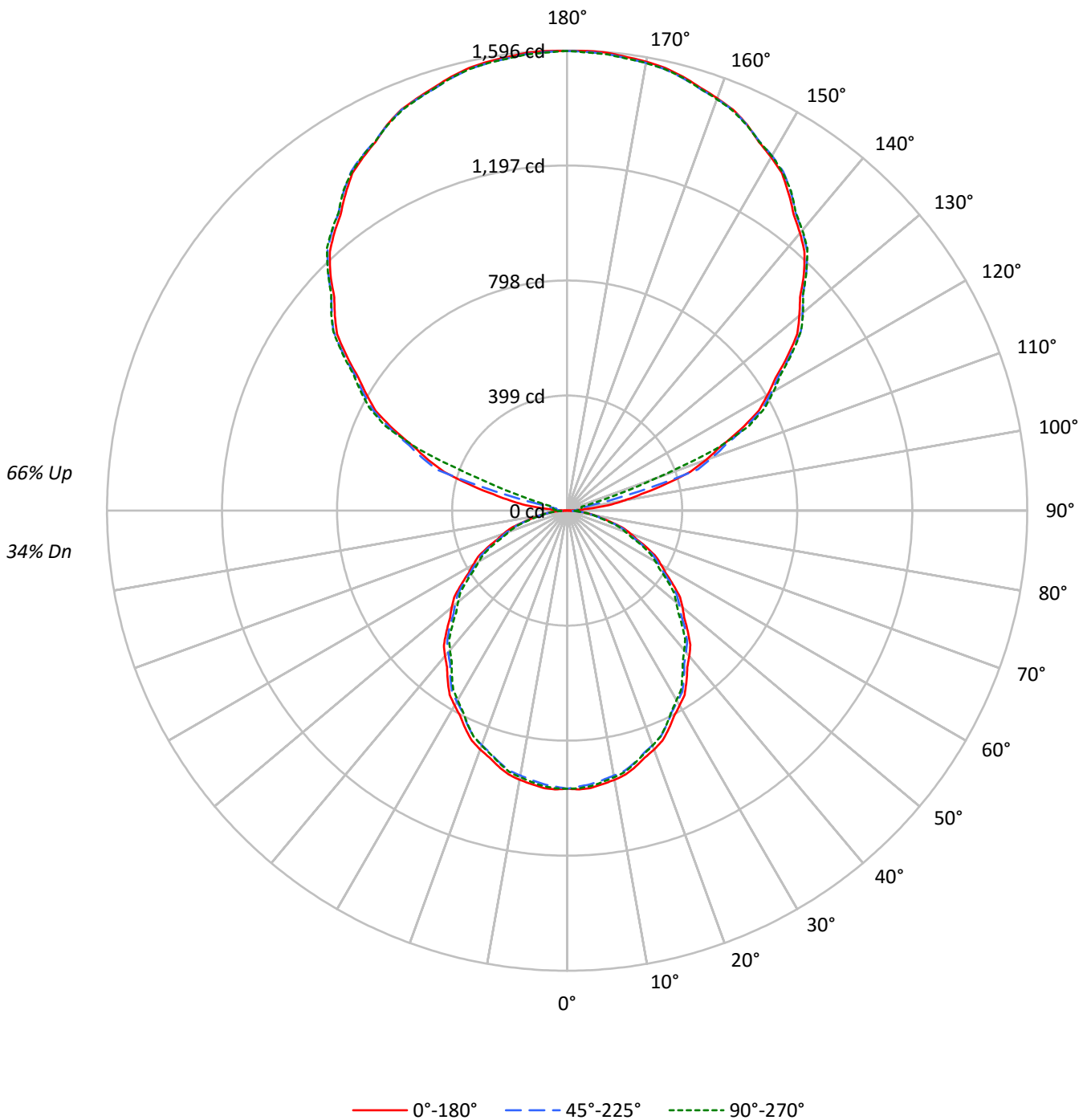
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	42	42	42	34
1	94	90	86	83	85	81	78	75	65	63	61	50	49	48	37	36	35	29
2	86	78	72	67	77	71	66	62	57	53	50	44	42	40	32	31	29	24
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	27	25	20
4	71	61	53	47	64	55	49	43	45	40	36	35	31	29	25	23	21	17
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	21	19	15
6	60	48	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13
7	56	44	36	30	50	40	33	28	32	27	24	25	22	19	19	16	15	12
8	51	39	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12	9
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

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	1.2
10°-20°	256.6	3.5
20°-30°	379.0	5.1
30°-40°	442.7	6.0
40°-50°	445.1	6.0
50°-60°	391.0	5.3
60°-70°	291.3	3.9
70°-80°	166.0	2.3
80°-90°	52.1	0.7
90°-100°	58.0	0.8
100°-110°	276.2	3.7
110°-120°	663.5	9.0
120°-130°	844.9	11.5
130°-140°	902.7	12.2
140°-150°	844.1	11.4
150°-160°	680.9	9.2
160°-170°	439.5	6.0
170°-180°	151.5	2.1
0°-30°	726.5	9.8
0°-40°	1169.2	15.9
0°-60°	2005.3	27.2
0°-90°	2514.7	34.1
90°-120°	997.6	13.5
90°-150°	3589.3	48.7
90°-180°	4861.0	65.9
0°-180°	7375.8	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	13	28	33	36	6
95°	72	27	37	44	45	89
105°	353	359	259	62	52	374
115°	662	669	680	691	696	653
125°	933	942	948	950	952	833
135°	1162	1169	1174	1177	1174	894
145°	1341	1349	1351	1354	1354	839
155°	1477	1475	1476	1481	1474	680
165°	1557	1554	1553	1561	1554	440
175°	1594	1588	1589	1597	1588	152
180°	1594	1594	1594	1594	1594	



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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°	17.5	17.6	17.7	17.7	17.8	18.1	18.7	19.2	19.7	20.3	20.4
90°	1.2	3.8	6.4	9.1	11.7	14.7	18.1	21.5	25.0	28.4	29.5
92.5°	22.0	21.3	20.5	19.8	19.1	20.0	22.6	25.2	27.7	30.3	32.0
95°	72.2	61.5	50.7	39.8	29.1	25.1	28.0	30.9	33.8	36.7	38.6
97.5°	145.2	140.4	135.5	130.6	125.8	113.9	95.0	76.0	57.1	38.1	40.2
100°	200.2	205.4	210.6	215.9	221.2	203.3	162.2	121.2	80.2	39.1	41.2
102.5°	262.7	266.5	270.3	274.0	277.8	257.3	212.5	167.6	122.8	78.0	71.4
105°	352.9	355.8	358.7	361.6	364.5	354.1	330.4	306.7	283.0	259.4	212.8
107.5°	448.1	450.4	452.7	455.1	457.4	460.4	464.1	467.9	471.7	475.4	441.2
110°	511.6	513.7	515.8	517.9	520.1	522.5	525.5	528.3	531.2	534.1	525.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	572.3	574.2	576.1	578.0	579.8	582.3	585.1	588.0	590.9	593.8	594.0
115°	662.0	663.6	665.2	666.8	668.4	670.3	672.7	675.0	677.4	679.8	682.4
117.5°	748.9	750.9	752.8	754.8	756.8	758.4	759.5	760.7	761.9	763.2	765.2
120°	803.0	805.3	807.7	810.1	812.5	814.0	814.8	815.6	816.3	817.1	819.3
122.5°	857.9	859.8	861.8	863.7	865.7	867.2	868.2	869.2	870.1	871.2	872.7
125°	933.2	935.3	937.5	939.5	941.7	943.3	944.3	945.3	946.4	947.5	948.0
127.5°	1006.2	1008.3	1010.4	1012.5	1014.6	1016.3	1017.6	1018.8	1020.1	1021.4	1022.2
130°	1051.6	1053.8	1055.9	1058.0	1060.1	1061.7	1062.7	1063.7	1064.9	1065.9	1066.9
132.5°	1095.3	1097.3	1099.5	1101.5	1103.7	1105.2	1106.0	1106.8	1107.6	1108.5	1109.5
135°	1161.8	1163.4	1165.0	1166.6	1168.2	1169.4	1170.4	1171.6	1172.6	1173.6	1174.4
137.5°	1218.6	1220.7	1222.7	1224.6	1226.6	1228.0	1228.5	1229.1	1229.7	1230.3	1231.5
140°	1256.6	1258.1	1259.7	1261.3	1262.9	1264.0	1264.8	1265.6	1266.4	1267.2	1268.3
142.5°	1291.6	1293.2	1294.7	1296.3	1297.9	1299.1	1299.9	1300.7	1301.5	1302.3	1303.1
145°	1340.6	1342.4	1344.3	1346.2	1348.0	1349.2	1349.7	1350.2	1350.8	1351.3	1351.8
147.5°	1386.8	1388.1	1389.3	1390.4	1391.6	1392.5	1393.1	1393.6	1394.1	1394.6	1395.2
150°	1415.2	1416.0	1416.8	1417.6	1418.4	1419.0	1419.6	1420.1	1420.6	1421.2	1421.7
152.5°	1440.8	1441.2	1441.5	1441.9	1442.3	1442.6	1443.0	1443.3	1443.6	1443.9	1444.9
155°	1476.8	1476.3	1475.8	1475.3	1474.7	1474.6	1474.9	1475.1	1475.4	1475.6	1476.9
157.5°	1504.8	1504.8	1504.7	1504.6	1504.6	1504.4	1504.1	1503.9	1503.6	1503.3	1504.9
160°	1521.9	1521.5	1521.3	1521.1	1520.8	1520.5	1520.3	1520.0	1519.7	1519.5	1521.1
162.5°	1537.9	1537.2	1536.6	1535.9	1535.2	1534.7	1534.5	1534.2	1533.9	1533.7	1535.5
165°	1557.4	1556.6	1555.8	1555.0	1554.2	1553.7	1553.4	1553.2	1552.9	1552.6	1554.7
167.5°	1572.5	1571.5	1570.4	1569.4	1568.3	1567.8	1567.8	1567.8	1567.8	1567.8	1569.9
170°	1581.0	1580.0	1578.9	1577.9	1576.8	1576.3	1576.3	1576.3	1576.3	1576.3	1578.4
172.5°	1586.7	1585.5	1584.2	1582.9	1581.7	1581.1	1581.4	1581.6	1581.8	1582.0	1584.1
175°	1594.0	1592.8	1591.4	1590.1	1588.8	1588.2	1588.6	1588.8	1589.0	1589.4	1591.2
177.5°	1595.9	1594.9	1593.9	1592.8	1591.7	1591.3	1591.6	1591.7	1592.0	1592.2	1593.9
180°	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0



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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°	20.4	20.4	20.5	20.6	20.8	20.8	20.9	21.1
90°	30.5	31.6	32.6	33.4	34.0	34.5	35.0	35.5
92.5°	33.7	35.4	37.1	38.0	38.3	38.7	39.0	39.3
95°	40.4	42.2	44.0	45.0	45.0	45.0	45.0	45.0
97.5°	42.4	44.4	46.6	47.8	48.0	48.2	48.6	48.8
100°	43.3	45.4	47.5	48.7	49.0	49.2	49.5	49.7
102.5°	64.9	58.4	51.8	48.8	49.3	49.7	50.2	50.7
105°	166.2	119.6	73.0	50.0	50.5	51.1	51.6	52.1
107.5°	407.0	372.9	338.7	304.1	269.0	233.9	198.8	163.7
110°	516.7	508.0	499.4	476.2	438.6	400.9	363.3	325.7



TEST NUMBER: P332178-927

CATALOG NUMBER: S123DIW-S775D1535U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	594.1	594.3	594.5	590.6	582.6	574.6	566.7	558.7
115°	685.1	687.7	690.3	692.1	693.2	694.3	695.3	696.4
117.5°	767.4	769.4	771.6	772.8	772.9	773.2	773.4	773.6
120°	821.4	823.5	825.6	826.6	826.6	826.6	826.6	826.6
122.5°	874.1	875.6	877.1	877.9	878.1	878.3	878.5	878.8
125°	948.5	949.0	949.5	950.1	950.6	951.1	951.6	952.2
127.5°	1023.0	1023.9	1024.7	1024.8	1024.4	1023.8	1023.3	1022.8
130°	1067.9	1069.1	1070.1	1070.3	1069.8	1069.3	1068.7	1068.3
132.5°	1110.6	1111.7	1112.7	1112.9	1112.1	1111.4	1110.6	1109.9
135°	1175.2	1176.0	1176.8	1176.8	1176.0	1175.2	1174.4	1173.6
137.5°	1232.8	1234.1	1235.3	1235.6	1235.2	1234.6	1234.1	1233.6
140°	1269.3	1270.3	1271.4	1271.7	1271.1	1270.7	1270.1	1269.6
142.5°	1303.9	1304.8	1305.6	1305.7	1305.0	1304.2	1303.5	1302.7
145°	1352.3	1352.9	1353.4	1353.7	1353.7	1353.7	1353.7	1353.7
147.5°	1395.7	1396.2	1396.8	1396.4	1395.2	1394.0	1392.7	1391.5
150°	1422.2	1422.8	1423.2	1423.2	1422.4	1421.6	1420.8	1420.0
152.5°	1445.8	1446.8	1447.7	1447.6	1446.4	1445.1	1443.9	1442.7
155°	1478.3	1479.6	1480.9	1480.7	1479.2	1477.6	1476.0	1474.5
157.5°	1506.5	1508.1	1509.7	1509.4	1507.4	1505.3	1503.2	1501.2
160°	1522.7	1524.2	1525.7	1525.7	1523.8	1521.9	1520.1	1518.3
162.5°	1537.2	1539.1	1540.8	1540.9	1539.3	1537.6	1536.0	1534.4
165°	1556.8	1558.9	1561.1	1561.2	1559.3	1557.5	1555.6	1553.8
167.5°	1572.0	1574.1	1576.2	1576.2	1574.1	1572.0	1569.9	1567.8
170°	1580.5	1582.6	1584.8	1584.8	1582.6	1580.5	1578.4	1576.3
172.5°	1586.2	1588.3	1590.4	1590.3	1588.0	1585.7	1583.3	1581.0
175°	1593.0	1594.8	1596.7	1596.6	1594.4	1592.4	1590.2	1588.2
177.5°	1595.5	1597.2	1598.9	1598.7	1596.6	1594.5	1592.4	1590.3
180°	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0

(END OF REPORT)