

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: P331612-940

Luminaire Tested: **S122DIW-S1005D1440U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331612-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D1440U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8058.1 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

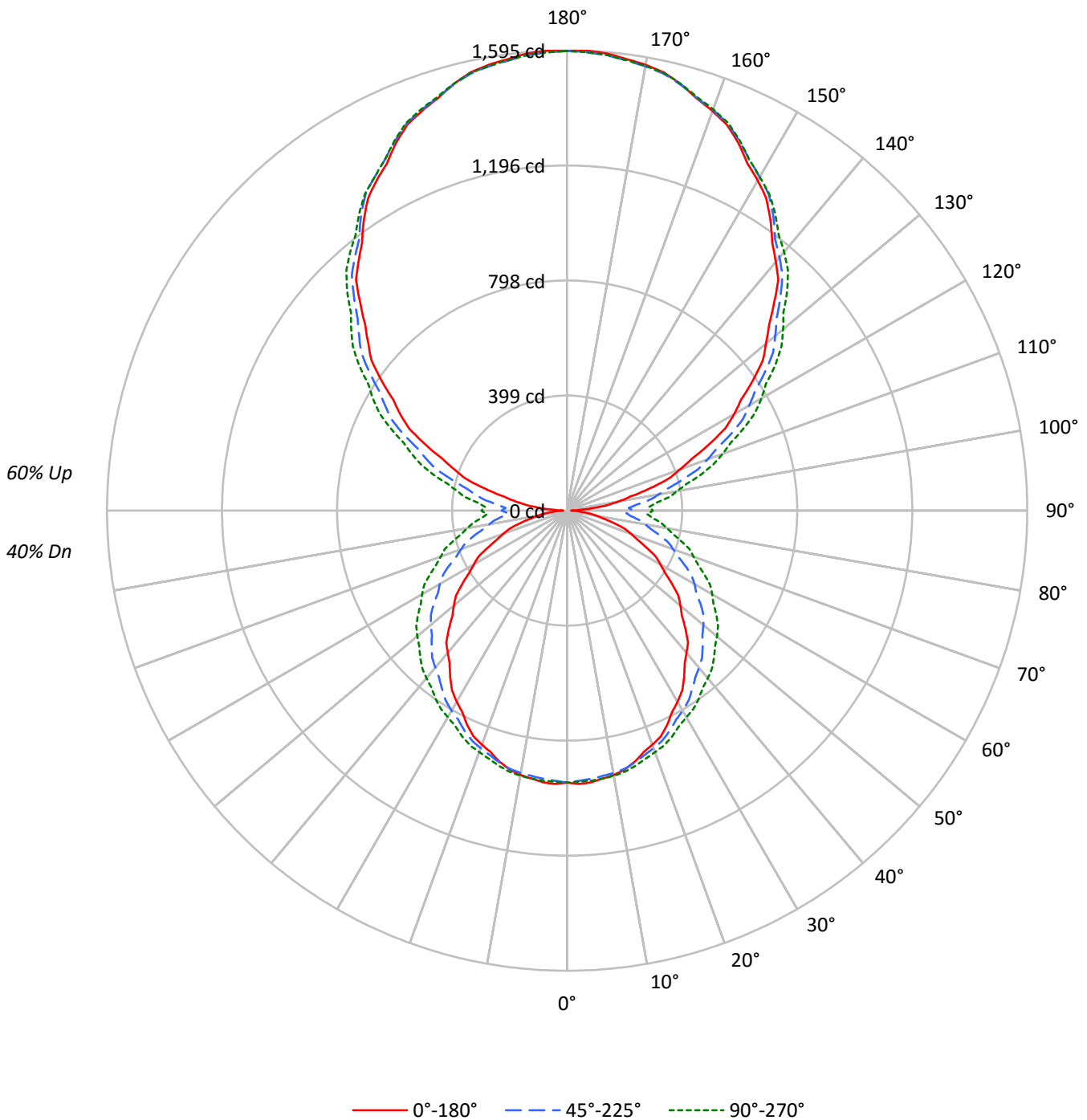
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47
1	94	89	85	81	85	81	78	74	66	64	61	52	50	49	39	38	37
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30
3	78	68	60	54	70	62	55	50	50	45	41	39	36	33	30	27	25
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	24	21
5	65	53	44	38	58	48	41	35	39	34	30	31	27	24	24	21	18
6	59	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13
9	47	35	27	22	43	32	25	21	26	21	18	21	17	14	16	13	11
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	1.1
10°-20°	256.2	3.2
20°-30°	388.3	4.8
30°-40°	472.9	5.9
40°-50°	508.8	6.3
50°-60°	494.1	6.1
60°-70°	431.4	5.4
70°-80°	332.1	4.1
80°-90°	229.2	2.8
90°-100°	254.5	3.2
100°-110°	425.6	5.3
110°-120°	610.0	7.6
120°-130°	746.1	9.3
130°-140°	808.3	10.0
140°-150°	778.6	9.7
150°-160°	650.5	8.1
160°-170°	431.5	5.4
170°-180°	150.8	1.9
0°-30°	733.8	9.1
0°-40°	1206.7	15.0
0°-60°	2209.5	27.4
0°-90°	3202.3	39.7
90°-120°	1290.1	16.0
90°-150°	3623.0	45.0
90°-180°	4856.0	60.3
0°-180°	8058.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	15	112	228	278	297	13
95°	81	159	243	293	309	89
105°	296	341	413	462	479	313
115°	543	568	625	663	676	537
125°	785	799	837	869	881	702
135°	1014	1028	1045	1071	1079	783
145°	1229	1238	1246	1255	1257	768
155°	1405	1409	1413	1419	1416	646
165°	1528	1527	1527	1536	1530	431
175°	1590	1586	1584	1592	1585	151
180°	1593	1593	1593	1593	1593	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	27.0	45.8	64.6	83.5	102.3	122.1	142.9	163.6	184.3	205.1	217.4
90°	15.0	36.2	57.4	78.6	99.8	123.4	149.5	175.4	201.4	227.5	239.0
92.5°	36.5	55.6	74.5	93.5	112.6	132.2	152.5	172.8	193.1	213.3	225.3
95°	80.9	98.1	115.4	132.6	149.9	167.9	186.7	205.5	224.4	243.2	254.8
97.5°	137.2	152.6	167.9	183.2	198.6	215.5	234.2	252.8	271.4	290.1	301.3
100°	180.3	193.9	207.5	221.1	234.8	250.6	268.5	286.3	304.3	322.2	333.4
102.5°	224.4	236.6	248.7	260.9	273.0	288.0	305.7	323.3	341.0	358.6	369.9
105°	295.9	305.6	315.3	324.9	334.7	347.7	364.1	380.5	396.9	413.3	424.5
107.5°	369.3	377.6	385.9	394.3	402.7	414.5	429.5	444.7	459.8	474.9	485.4
110°	415.4	423.4	431.2	439.1	446.9	458.3	473.2	488.1	502.9	517.8	527.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	467.1	474.0	480.9	487.8	494.7	505.1	519.0	532.9	546.8	560.7	569.7
115°	543.2	548.3	553.5	558.6	563.7	572.8	585.9	599.0	612.1	625.1	633.9
117.5°	617.6	622.2	626.8	631.3	636.0	643.7	654.7	665.7	676.6	687.6	695.8
120°	668.2	671.8	675.4	679.0	682.6	689.3	699.0	708.8	718.5	728.3	736.8
122.5°	714.4	717.8	721.1	724.5	727.8	734.4	744.1	753.9	763.7	773.4	781.0
125°	785.2	787.8	790.5	793.2	795.9	801.6	810.5	819.3	828.1	837.0	844.2
127.5°	855.3	858.4	861.5	864.6	867.7	872.6	879.4	886.2	892.9	899.6	906.2
130°	899.4	902.9	906.5	910.2	913.7	918.4	924.2	930.0	935.8	941.5	948.2
132.5°	948.9	951.7	954.6	957.4	960.3	964.3	969.3	974.4	979.4	984.4	990.2
135°	1013.6	1016.9	1020.2	1023.5	1026.8	1030.2	1033.8	1037.5	1041.2	1044.7	1050.9
137.5°	1083.3	1085.9	1088.5	1091.2	1093.8	1096.2	1098.2	1100.4	1102.5	1104.6	1109.9
140°	1125.2	1127.6	1130.0	1132.4	1134.8	1137.0	1139.1	1141.2	1143.3	1145.4	1150.2
142.5°	1168.2	1170.6	1173.0	1175.4	1177.8	1179.6	1180.6	1181.8	1182.9	1184.1	1188.2
145°	1228.7	1230.8	1232.9	1234.9	1237.1	1239.0	1240.8	1242.6	1244.4	1246.2	1248.3
147.5°	1283.8	1286.3	1288.8	1291.4	1293.9	1295.7	1296.9	1298.1	1299.3	1300.5	1301.4
150°	1321.4	1323.2	1325.1	1326.9	1328.6	1330.1	1331.3	1332.5	1333.7	1334.9	1335.8
152.5°	1354.8	1356.6	1358.3	1360.1	1362.0	1363.6	1365.0	1366.5	1367.9	1369.3	1370.5
155°	1404.8	1405.7	1406.6	1407.5	1408.4	1409.3	1410.2	1411.0	1411.9	1412.8	1414.3
157.5°	1447.5	1448.1	1448.8	1449.4	1449.9	1450.5	1451.1	1451.6	1452.2	1452.7	1454.6
160°	1473.4	1474.0	1474.5	1475.2	1475.8	1476.2	1476.5	1476.8	1477.1	1477.4	1479.2
162.5°	1497.0	1497.2	1497.3	1497.4	1497.5	1497.7	1498.0	1498.3	1498.6	1498.9	1500.9
165°	1528.5	1528.2	1527.9	1527.6	1527.3	1527.1	1527.1	1527.1	1527.1	1527.1	1529.2
167.5°	1554.8	1553.9	1553.0	1552.1	1551.2	1550.8	1550.7	1550.7	1550.6	1550.5	1552.6
170°	1568.8	1567.9	1567.0	1566.1	1565.2	1564.6	1564.3	1564.1	1563.7	1563.4	1565.5
172.5°	1578.5	1577.6	1576.7	1575.8	1574.9	1574.3	1574.0	1573.7	1573.4	1573.1	1575.2
175°	1590.3	1589.4	1588.5	1587.6	1586.7	1586.0	1585.4	1584.7	1584.2	1583.6	1585.7
177.5°	1595.2	1594.5	1593.8	1593.0	1592.3	1591.7	1591.2	1590.7	1590.3	1589.7	1591.2
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	229.6	241.9	254.2	262.3	266.3	270.2	274.1	278.1
90°	250.6	262.1	273.7	281.4	285.3	289.3	293.2	297.1
92.5°	237.4	249.4	261.4	269.3	273.0	276.7	280.4	284.1
95°	266.3	277.8	289.4	296.7	299.7	302.7	305.8	308.8
97.5°	312.5	323.8	335.0	342.4	345.9	349.5	352.9	356.5
100°	344.6	355.9	367.1	374.3	377.3	380.3	383.3	386.5
102.5°	381.1	392.4	403.5	410.7	413.8	416.8	419.8	422.8
105°	435.7	446.9	458.2	465.5	468.8	472.2	475.5	478.8
107.5°	495.8	506.2	516.7	522.9	524.9	526.8	528.8	530.7
110°	537.3	547.0	556.7	562.8	565.3	567.7	570.2	572.6



TEST NUMBER: P331612-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	578.7	587.7	596.7	602.6	605.3	608.0	610.6	613.3
115°	642.7	651.6	660.3	665.9	668.4	670.8	673.3	675.7
117.5°	704.1	712.4	720.7	725.9	728.1	730.3	732.5	734.7
120°	745.3	753.9	762.3	767.8	770.3	772.7	775.2	777.6
122.5°	788.5	796.0	803.5	808.4	810.7	812.8	815.0	817.3
125°	851.5	858.8	866.1	871.0	873.4	875.8	878.3	880.7
127.5°	912.6	919.0	925.5	929.6	931.3	933.0	934.7	936.5
130°	954.8	961.6	968.3	972.2	973.5	974.7	976.0	977.1
132.5°	995.9	1001.6	1007.4	1010.9	1012.4	1013.9	1015.4	1016.8
135°	1056.9	1063.0	1069.1	1072.9	1074.4	1075.9	1077.5	1079.1
137.5°	1115.3	1120.6	1126.0	1129.1	1130.0	1130.9	1131.7	1132.6
140°	1155.1	1159.9	1164.8	1167.6	1168.2	1168.9	1169.5	1170.1
142.5°	1192.3	1196.5	1200.6	1202.8	1203.2	1203.6	1204.0	1204.3
145°	1250.4	1252.5	1254.6	1255.9	1256.2	1256.5	1256.9	1257.1
147.5°	1302.3	1303.1	1304.1	1304.3	1303.9	1303.5	1303.1	1302.7
150°	1336.7	1337.6	1338.5	1338.5	1337.6	1336.7	1335.8	1334.9
152.5°	1371.5	1372.7	1373.9	1373.9	1372.7	1371.5	1370.5	1369.3
155°	1415.9	1417.4	1418.8	1419.2	1418.3	1417.4	1416.5	1415.6
157.5°	1456.7	1458.7	1460.8	1461.1	1459.6	1458.2	1456.8	1455.4
160°	1481.0	1482.7	1484.5	1484.9	1483.6	1482.5	1481.3	1480.1
162.5°	1503.0	1505.0	1507.0	1507.3	1505.9	1504.5	1503.1	1501.6
165°	1531.3	1533.4	1535.5	1535.8	1534.3	1532.9	1531.3	1529.8
167.5°	1554.7	1556.8	1558.9	1559.2	1557.6	1556.0	1554.5	1552.9
170°	1567.6	1569.7	1571.8	1571.9	1570.1	1568.3	1566.6	1564.8
172.5°	1577.3	1579.4	1581.4	1581.6	1579.8	1578.1	1576.3	1574.5
175°	1587.8	1589.8	1592.0	1592.1	1590.3	1588.5	1586.7	1584.9
177.5°	1592.7	1594.1	1595.5	1595.5	1594.1	1592.7	1591.2	1589.7
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0

(END OF REPORT)