

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: P331583-927

Luminaire Tested: **S122DIW-S865D1440U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331583-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D1440U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7348.2 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

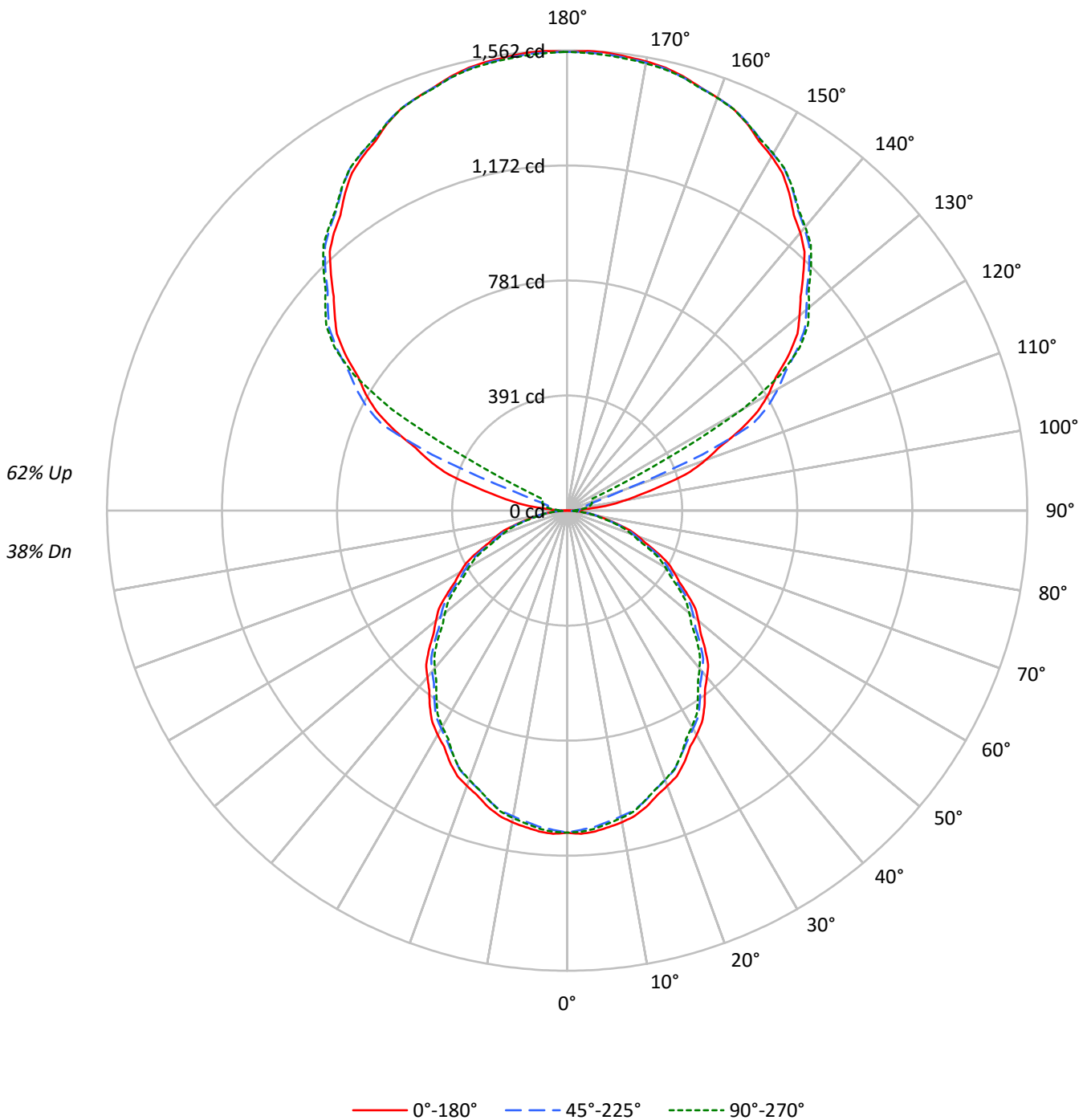
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	84	86	83	79	76	67	65	63	53	51	50	40	39	38	32
2	87	79	73	68	78	72	67	63	59	55	52	46	44	42	35	33	32	27
3	79	70	62	57	71	63	57	52	52	47	44	41	38	35	31	29	27	23
4	72	62	54	48	65	56	49	44	46	41	37	36	33	30	28	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	36	31	51	40	34	29	33	28	24	27	23	20	21	18	16	13
8	52	40	32	27	47	37	30	25	30	25	22	25	21	18	19	16	14	12
9	48	37	29	24	44	34	27	23	28	23	19	23	19	16	17	15	13	11
10	45	33	26	22	41	31	24	20	26	21	17	21	17	14	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	1.4
10°-20°	289.3	3.9
20°-30°	425.2	5.8
30°-40°	493.9	6.7
40°-50°	493.3	6.7
50°-60°	430.2	5.9
60°-70°	318.1	4.3
70°-80°	180.2	2.5
80°-90°	52.3	0.7
90°-100°	51.9	0.7
100°-110°	190.5	2.6
110°-120°	509.1	6.9
120°-130°	840.4	11.4
130°-140°	893.8	12.2
140°-150°	830.7	11.3
150°-160°	667.9	9.1
160°-170°	430.4	5.9
170°-180°	148.2	2.0
0°-30°	817.2	11.1
0°-40°	1311.1	17.8
0°-60°	2234.6	30.4
0°-90°	2785.2	37.9
90°-120°	751.5	10.2
90°-150°	3316.5	45.1
90°-180°	4563.0	62.1
0°-180°	7348.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	13	22	28	30	6
95°	73	39	44	49	48	90
105°	342	357	69	81	86	366
115°	648	668	695	198	92	638
125°	916	931	952	960	963	816
135°	1134	1151	1162	1172	1171	875
145°	1315	1315	1333	1340	1335	822
155°	1448	1439	1451	1457	1449	667
165°	1526	1519	1522	1529	1522	431
175°	1560	1553	1555	1562	1551	148
180°	1557	1557	1557	1557	1557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.4	15.5	15.7	15.9	16.1	16.2	16.2	16.2	16.2	16.3	16.0
90°	1.1	3.9	6.7	9.4	12.1	14.5	16.6	18.5	20.5	22.5	23.8
92.5°	22.7	22.5	22.3	22.0	21.8	22.1	23.1	24.2	25.1	26.1	26.8
95°	73.2	65.0	56.7	48.5	40.2	36.9	38.7	40.4	42.2	44.0	45.2
97.5°	145.4	122.1	98.8	75.5	52.2	42.6	46.7	50.7	54.7	58.8	59.8
100°	199.4	165.1	130.8	96.5	62.2	47.2	51.4	55.7	60.0	64.2	66.2
102.5°	258.9	251.7	244.4	237.1	229.9	208.4	172.9	137.2	101.6	66.0	68.6
105°	342.5	350.0	357.5	365.0	372.6	342.1	273.8	205.4	137.0	68.8	71.5
107.5°	437.8	443.9	450.0	456.0	462.1	424.1	342.1	260.2	178.2	96.3	93.4
110°	499.2	504.4	509.6	514.9	520.1	486.6	414.2	341.9	269.5	197.2	172.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	556.8	561.4	566.1	570.8	575.4	568.8	551.0	533.1	515.2	497.3	406.0
115°	647.8	652.1	656.3	660.6	664.9	670.1	676.4	682.6	688.9	695.1	579.2
117.5°	729.2	734.0	738.7	743.5	748.2	752.7	757.0	761.4	765.6	770.0	742.0
120°	788.7	792.4	796.1	799.9	803.7	807.8	812.3	816.8	821.3	825.9	828.9
122.5°	839.2	843.1	847.1	851.0	855.0	859.4	864.3	869.2	874.1	879.0	880.8
125°	916.0	919.2	922.5	925.7	929.0	933.0	937.8	942.5	947.3	952.0	953.8
127.5°	985.6	989.2	992.8	996.4	1000.1	1003.6	1007.2	1010.7	1014.3	1017.9	1020.4
130°	1029.8	1033.8	1037.8	1041.8	1045.8	1049.2	1051.9	1054.7	1057.4	1060.2	1063.0
132.5°	1074.8	1078.2	1081.6	1085.1	1088.5	1091.5	1094.3	1097.0	1099.8	1102.6	1104.9
135°	1133.5	1137.4	1141.5	1145.4	1149.5	1152.5	1154.8	1157.1	1159.4	1161.6	1164.1
137.5°	1192.7	1195.5	1198.3	1201.1	1203.9	1206.6	1209.1	1211.7	1214.3	1216.8	1219.2
140°	1231.4	1233.4	1235.5	1237.5	1239.4	1241.8	1244.6	1247.4	1250.1	1252.8	1255.1
142.5°	1263.9	1265.7	1267.5	1269.3	1271.1	1273.6	1276.8	1279.9	1283.0	1286.2	1288.2
145°	1314.9	1314.5	1314.3	1314.1	1313.8	1315.8	1320.1	1324.4	1328.6	1332.8	1334.6
147.5°	1359.2	1358.3	1357.3	1356.4	1355.4	1357.0	1361.2	1365.5	1369.7	1373.9	1375.1
150°	1388.1	1386.3	1384.6	1382.8	1381.0	1382.2	1386.2	1390.2	1394.2	1398.2	1399.7
152.5°	1412.4	1410.5	1408.5	1406.5	1404.6	1405.5	1409.3	1413.1	1416.9	1420.7	1422.2
155°	1447.8	1445.5	1443.3	1441.0	1438.8	1439.2	1442.2	1445.2	1448.2	1451.1	1452.6
157.5°	1475.5	1473.6	1471.7	1469.8	1467.9	1468.0	1470.1	1472.2	1474.3	1476.4	1478.1
160°	1491.7	1490.2	1488.7	1487.2	1485.7	1485.7	1487.2	1488.7	1490.2	1491.7	1493.2
162.5°	1506.1	1504.7	1503.2	1501.7	1500.2	1500.0	1501.3	1502.6	1504.0	1505.2	1507.0
165°	1525.5	1524.0	1522.5	1521.0	1519.5	1519.2	1519.9	1520.6	1521.4	1522.1	1523.9
167.5°	1539.9	1538.4	1536.9	1535.4	1533.9	1533.5	1534.2	1534.9	1535.6	1536.4	1538.1
170°	1548.1	1546.6	1545.1	1543.6	1542.1	1541.5	1542.1	1542.5	1543.0	1543.6	1545.3
172.5°	1553.5	1552.0	1550.5	1549.0	1547.4	1547.0	1547.4	1547.9	1548.5	1549.0	1550.7
175°	1560.4	1558.7	1557.0	1555.2	1553.5	1552.8	1553.3	1553.8	1554.3	1554.8	1556.6
177.5°	1561.5	1560.2	1558.8	1557.4	1555.9	1555.4	1555.5	1555.8	1555.9	1556.2	1557.6
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	15.7	15.4	15.1	14.8	14.7	14.7	14.6	14.5
90°	25.0	26.3	27.6	28.4	28.9	29.4	29.9	30.4
92.5°	27.4	28.1	28.8	29.2	29.5	29.8	30.1	30.4
95°	46.4	47.7	49.0	49.4	49.2	49.0	48.7	48.5
97.5°	60.8	61.8	62.8	63.5	63.8	64.1	64.4	64.6
100°	68.2	70.3	72.2	73.5	74.0	74.5	75.0	75.5
102.5°	71.2	73.8	76.4	78.1	78.8	79.5	80.2	80.9
105°	74.2	77.0	79.8	81.6	82.6	83.7	84.6	85.6
107.5°	90.6	87.8	85.0	84.1	85.1	86.1	87.1	88.1
110°	147.1	122.1	97.0	85.0	86.0	87.0	88.0	89.0



TEST NUMBER: P331583-927

CATALOG NUMBER: S122DIW-S865D1440U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	314.7	223.3	132.0	86.7	87.5	88.3	89.1	89.9
115°	463.3	347.4	231.5	164.5	146.5	128.4	110.4	92.4
117.5°	713.9	685.9	657.8	614.2	554.9	495.7	436.4	377.2
120°	831.9	834.9	837.9	822.4	788.7	754.9	721.0	687.3
122.5°	882.6	884.5	886.2	883.8	877.3	870.8	864.2	857.6
125°	955.5	957.3	959.0	960.3	961.1	961.8	962.6	963.3
127.5°	1022.9	1025.5	1028.0	1029.4	1029.5	1029.7	1029.8	1030.0
130°	1065.7	1068.5	1071.2	1072.5	1072.2	1072.0	1071.7	1071.4
132.5°	1107.2	1109.6	1112.0	1113.0	1112.8	1112.5	1112.3	1112.0
135°	1166.6	1169.1	1171.6	1172.6	1172.1	1171.6	1171.1	1170.6
137.5°	1221.7	1224.2	1226.6	1227.4	1226.5	1225.7	1224.9	1224.0
140°	1257.4	1259.6	1261.9	1262.3	1261.2	1259.9	1258.6	1257.4
142.5°	1290.3	1292.4	1294.4	1294.8	1293.6	1292.3	1291.1	1289.8
145°	1336.3	1338.1	1339.9	1340.1	1338.9	1337.6	1336.3	1335.1
147.5°	1376.5	1377.8	1379.1	1379.2	1378.2	1377.1	1376.0	1375.0
150°	1401.2	1402.7	1404.2	1404.3	1403.1	1401.8	1400.6	1399.3
152.5°	1423.7	1425.2	1426.7	1426.6	1425.0	1423.4	1421.7	1420.1
155°	1454.1	1455.6	1457.1	1456.9	1454.9	1452.9	1450.9	1448.9
157.5°	1479.8	1481.5	1483.2	1483.0	1481.1	1479.2	1477.2	1475.3
160°	1494.7	1496.2	1497.7	1497.6	1495.9	1494.1	1492.3	1490.6
162.5°	1508.6	1510.4	1512.0	1511.8	1509.7	1507.5	1505.4	1503.2
165°	1525.7	1527.4	1529.1	1529.1	1527.4	1525.7	1523.9	1522.1
167.5°	1539.8	1541.6	1543.3	1543.1	1540.9	1538.6	1536.4	1534.1
170°	1547.1	1548.8	1550.5	1550.3	1548.1	1545.8	1543.6	1541.3
172.5°	1552.4	1554.2	1555.9	1555.7	1553.5	1551.2	1549.0	1546.7
175°	1558.3	1560.0	1561.8	1561.5	1558.9	1556.4	1553.9	1551.4
177.5°	1558.9	1560.4	1561.8	1561.5	1559.7	1558.0	1556.2	1554.3
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0

(END OF REPORT)