

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: P332071-927

Luminaire Tested: **S123DIP-S1165D805U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332071-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D805U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6072.6 lumens
Efficiency: N/A
Efficacy: 100.0 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-Direct

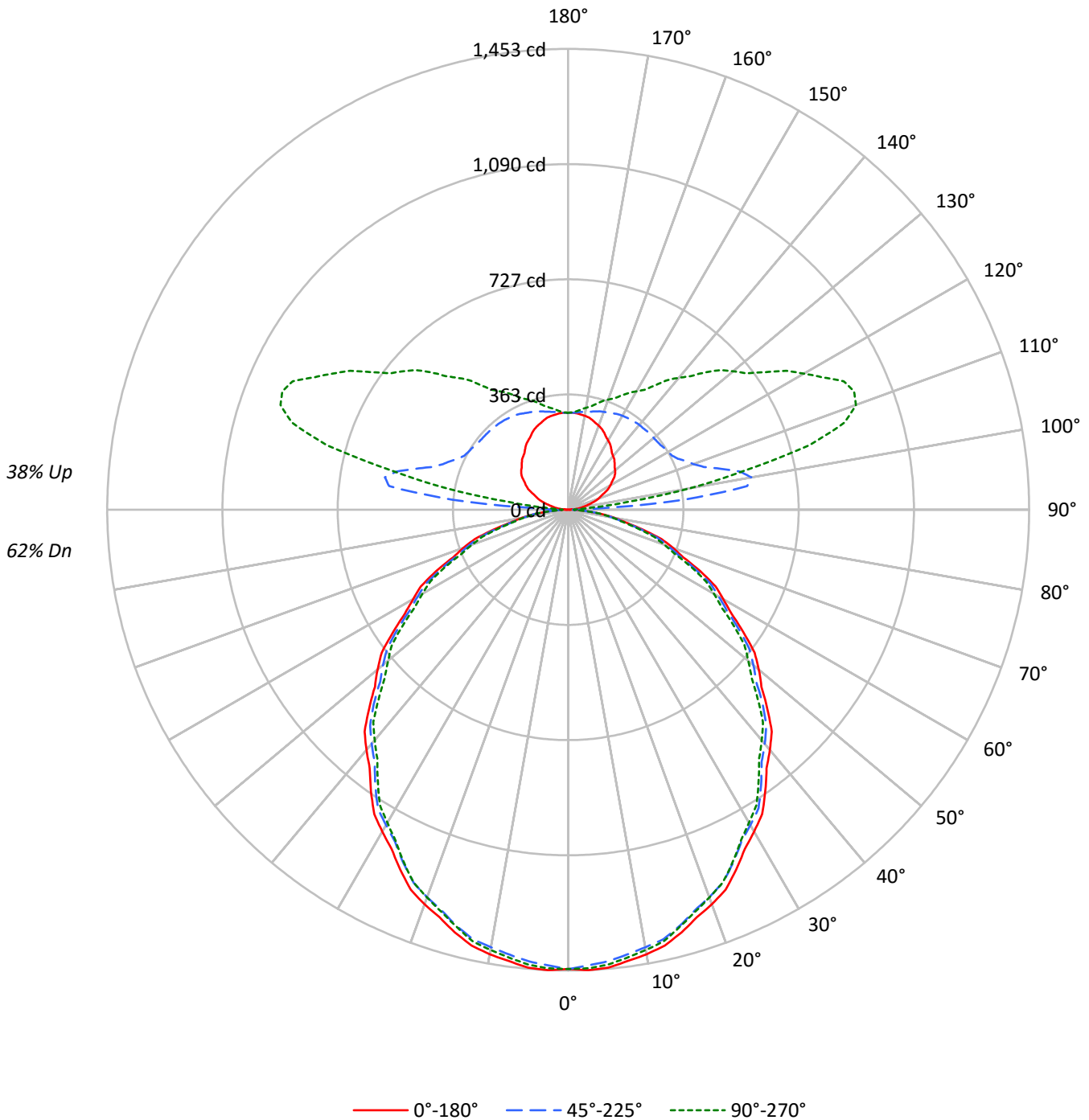
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90		78	78	78		67	67	67	62
1	100	96	92	88	94	90	87	83	79	76	74		69	67	65		59	58	57	52
2	91	84	77	72	85	79	73	68	69	65	61		60	57	54		52	50	48	44
3	83	74	66	60	78	69	63	57	61	56	51		53	49	46		46	43	41	37
4	76	65	57	51	71	61	54	49	54	48	44		48	43	39		41	38	35	32
5	70	58	50	44	65	55	47	42	49	42	38		43	38	34		37	33	30	27
6	65	52	44	38	60	49	42	36	44	38	33		39	34	30		34	30	27	24
7	60	47	39	33	56	45	37	32	40	34	29		35	30	26		31	27	24	21
8	56	43	35	30	52	41	33	28	36	30	26		32	27	24		28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23		30	25	21		26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21		27	23	19		24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15588	15588	15588
5°	15662	15446	15554
10°	15557	15312	15407
15°	15375	15139	15166
20°	15163	14892	14905
25°	14878	14598	14567
30°	14564	14270	14162
35°	14236	13925	13745
40°	13893	13543	13333
45°	13516	13192	12871
50°	13137	12762	12407
55°	12643	12314	11941
60°	12144	11795	11418
65°	11703	11227	10878
70°	11053	10581	10112
75°	10098	9736	9320
80°	9106	8722	8647
85°	7991	7694	7385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	2.2
10°-20°	385.2	6.3
20°-30°	569.0	9.4
30°-40°	664.6	10.9
40°-50°	668.2	11.0
50°-60°	587.0	9.7
60°-70°	437.3	7.2
70°-80°	249.1	4.1
80°-90°	73.9	1.2
90°-100°	170.3	2.8
100°-110°	482.1	7.9
110°-120°	474.3	7.8
120°-130°	378.3	6.2
130°-140°	298.3	4.9
140°-150°	222.6	3.7
150°-160°	155.2	2.6
160°-170°	91.2	1.5
170°-180°	29.7	0.5
0°-30°	1090.6	18.0
0°-40°	1755.3	28.9
0°-60°	3010.4	49.6
0°-90°	3770.7	62.1
90°-120°	1126.7	18.6
90°-150°	2025.9	33.4
90°-180°	2302.0	37.9
0°-180°	6072.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1450	1443	1430	1441	1440	137
15°	1380	1374	1358	1368	1361	389
25°	1253	1245	1229	1230	1226	577
35°	1083	1075	1060	1052	1046	677
45°	888	882	867	852	846	685
55°	674	672	656	643	636	603
65°	460	453	441	431	427	453
75°	243	238	234	228	224	260
85°	65	62	62	60	60	71
90°	1	7	15	17	18	5
95°	21	68	367	107	72	23
105°	72	106	498	871	788	76
115°	127	158	381	835	958	126
125°	176	208	356	644	756	157
135°	207	247	350	530	612	160
145°	236	270	346	435	479	148
155°	268	289	335	381	397	123
165°	293	301	321	340	346	83
175°	305	306	308	312	312	29
180°	306	306	306	306	306	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1453.2	1452.3	1451.4	1450.6	1449.6	1448.0	1445.6	1443.1	1440.7	1438.2	1440.4
5°	1449.5	1448.1	1446.7	1445.3	1443.9	1441.7	1438.7	1435.6	1432.6	1429.5	1432.3
7.5°	1435.3	1433.8	1432.5	1431.1	1429.7	1427.4	1424.3	1421.2	1418.0	1414.8	1417.3
10°	1423.3	1421.9	1420.5	1419.1	1417.8	1415.3	1411.7	1408.1	1404.5	1400.9	1403.4
12.5°	1407.4	1406.2	1405.0	1403.9	1402.7	1400.4	1397.1	1393.7	1390.3	1387.0	1388.8
15°	1379.7	1378.6	1377.5	1376.4	1375.3	1372.9	1369.4	1365.7	1362.2	1358.5	1360.7
17.5°	1347.6	1346.2	1344.7	1343.3	1341.8	1339.3	1335.7	1332.1	1328.5	1324.9	1326.5
20°	1323.7	1322.0	1320.3	1318.7	1317.1	1314.4	1310.8	1307.3	1303.6	1300.1	1301.2
22.5°	1296.8	1295.1	1293.5	1291.8	1290.1	1287.5	1283.9	1280.3	1276.8	1273.1	1274.0
25°	1252.7	1251.0	1249.4	1247.7	1246.1	1243.4	1239.8	1236.3	1232.6	1229.1	1229.3
27.5°	1205.6	1204.0	1202.5	1200.8	1199.2	1196.5	1192.6	1188.7	1184.9	1181.0	1181.2
30°	1171.8	1170.4	1169.0	1167.6	1166.3	1163.6	1159.8	1155.9	1152.0	1148.1	1148.1
32.5°	1137.9	1136.1	1134.2	1132.4	1130.6	1128.1	1125.2	1122.2	1119.2	1116.3	1114.7
35°	1083.4	1081.7	1080.1	1078.4	1076.7	1074.1	1070.5	1066.9	1063.3	1059.7	1058.0
37.5°	1027.5	1025.5	1023.3	1021.3	1019.1	1016.3	1012.6	1009.0	1005.4	1001.6	999.7
40°	988.7	987.1	985.4	983.7	982.1	979.3	975.4	971.5	967.7	963.8	961.6
42.5°	949.8	948.0	946.1	944.2	942.3	939.4	935.6	931.7	927.8	924.0	921.8
45°	887.9	886.8	885.7	884.6	883.4	881.1	877.5	873.9	870.3	866.6	863.4
47.5°	826.3	824.7	823.2	821.5	819.9	817.5	814.0	810.6	807.3	803.9	800.7
50°	784.5	783.2	781.7	780.4	779.0	776.5	772.9	769.3	765.6	762.1	759.1
52.5°	740.7	739.7	738.8	737.8	736.9	734.5	730.7	726.9	723.1	719.2	716.6
55°	673.7	673.4	673.1	672.9	672.6	670.7	667.0	663.5	659.8	656.2	653.2
57.5°	609.9	609.0	608.0	607.1	606.2	604.3	601.3	598.5	595.6	592.7	590.0
60°	564.1	563.8	563.6	563.2	563.0	561.2	557.9	554.5	551.2	547.9	545.4
62.5°	523.2	522.5	521.8	521.1	520.4	518.3	515.0	511.7	508.4	505.1	502.6
65°	459.5	458.1	456.7	455.3	453.9	451.9	449.1	446.3	443.5	440.8	438.6
67.5°	392.0	390.8	389.6	388.3	387.1	385.5	383.3	381.3	379.1	377.1	375.1
70°	351.2	349.5	347.8	346.2	344.5	342.9	341.2	339.5	337.9	336.2	334.3
72.5°	308.3	307.1	305.9	304.7	303.5	301.9	300.0	298.1	296.3	294.4	292.6
75°	242.8	241.7	240.6	239.5	238.4	237.4	236.6	235.8	235.0	234.1	232.7
77.5°	184.8	184.2	183.5	183.0	182.4	181.6	180.5	179.6	178.6	177.6	176.7
80°	146.9	146.1	145.3	144.4	143.6	142.9	142.4	141.8	141.2	140.7	140.5
82.5°	110.1	109.9	109.7	109.6	109.4	109.2	109.2	109.1	108.9	108.8	108.4
85°	64.7	64.2	63.6	63.1	62.5	62.3	62.3	62.3	62.3	62.3	61.7
87.5°	26.1	25.7	25.3	25.0	24.6	24.4	24.6	24.7	24.9	25.0	24.6
90°	1.3	2.5	3.7	5.5	6.8	8.1	9.9	11.8	13.6	15.4	14.9
92.5°	7.7	11.4	16.6	21.5	26.6	35.8	52.0	78.7	104.8	95.2	71.9
95°	21.1	22.9	29.7	40.2	56.3	80.5	133.2	225.5	327.0	367.3	297.9
97.5°	35.9	36.5	41.9	51.0	66.9	93.0	143.3	247.4	416.7	569.2	609.0
100°	45.9	46.4	50.8	59.5	74.3	98.5	141.8	233.5	396.4	586.5	708.5
102.5°	56.2	57.4	61.2	69.4	82.8	104.9	143.8	221.6	366.6	554.3	713.5
105°	71.9	73.7	77.4	84.8	96.6	115.8	149.2	213.0	330.1	498.0	675.7
107.5°	88.4	90.3	93.9	101.2	112.3	130.1	159.4	212.5	306.8	448.1	609.6
110°	100.4	102.2	105.3	112.1	122.6	140.0	167.9	214.9	297.9	419.9	567.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.2	113.1	116.2	123.0	133.6	150.4	176.3	219.8	292.9	401.1	531.8
115°	127.0	129.4	133.2	139.3	149.9	166.6	190.1	227.9	291.1	380.9	488.1
117.5°	142.7	145.5	148.6	154.3	166.1	181.6	204.9	238.6	292.2	369.0	461.7
120°	153.6	155.4	158.5	164.8	176.5	192.0	214.3	246.5	294.2	363.5	447.8
122.5°	163.0	164.9	167.9	174.7	185.9	202.4	224.2	253.9	297.6	360.1	436.4
125°	176.5	177.8	181.5	188.3	200.0	216.7	238.4	265.7	302.9	355.5	421.8
127.5°	186.8	188.6	193.2	200.2	213.2	229.9	250.8	275.4	308.8	353.3	408.9
130°	193.2	195.1	200.7	208.1	221.1	237.8	258.3	281.8	312.8	351.8	402.0
132.5°	198.2	200.6	206.6	215.6	228.5	244.8	264.7	287.7	315.8	351.3	395.5
135°	206.8	209.4	216.2	225.5	238.4	255.2	274.3	295.4	320.2	350.5	387.1
137.5°	215.0	217.6	224.3	234.2	247.1	262.6	281.1	301.1	323.2	349.2	379.8
140°	220.5	223.6	229.8	239.7	252.1	267.5	285.5	304.1	325.2	348.7	375.3
142.5°	226.4	229.0	235.8	244.6	257.1	271.5	289.0	307.0	326.6	347.7	371.4
145°	236.0	237.8	243.4	252.7	263.2	277.5	293.6	310.3	327.6	346.2	366.1
147.5°	245.7	246.8	252.2	260.2	270.4	282.6	297.3	312.3	327.6	343.9	360.8
150°	252.1	252.7	257.6	265.7	274.3	285.5	299.8	312.8	327.6	341.9	357.4
152.5°	258.5	258.6	263.6	270.7	278.3	289.0	301.3	313.8	326.1	339.4	353.4
155°	268.2	268.2	271.9	278.1	284.9	293.6	304.1	314.0	324.6	335.1	347.5
157.5°	275.8	276.3	279.3	284.8	290.6	297.3	305.7	314.7	322.4	331.2	340.8
160°	281.8	281.8	284.3	289.2	293.6	299.8	307.2	314.7	321.5	328.3	336.3
162.5°	286.3	286.3	288.3	292.2	296.0	301.3	307.7	314.1	319.5	325.3	331.8
165°	292.9	292.3	293.6	296.7	299.1	303.5	308.4	312.8	316.5	320.8	325.7
167.5°	298.0	297.3	297.9	300.2	302.0	304.8	308.3	311.8	313.5	316.4	320.0
170°	301.0	299.8	300.4	302.2	303.5	304.8	307.8	310.3	311.6	313.4	316.5
172.5°	303.0	302.2	302.4	303.7	304.4	305.2	307.8	309.8	310.1	310.9	313.0
175°	305.3	304.8	304.1	305.3	305.3	305.9	307.2	308.4	307.8	307.8	309.0
177.5°	306.4	305.9	305.5	305.9	305.9	305.9	306.4	307.4	306.4	305.9	306.4
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1442.6	1444.9	1447.1	1448.1	1447.9	1447.6	1447.4	1447.2
5°	1435.0	1437.8	1440.6	1441.7	1441.1	1440.6	1440.0	1439.5
7.5°	1419.8	1422.3	1424.8	1425.8	1425.5	1425.2	1424.9	1424.6
10°	1405.9	1408.3	1410.9	1411.8	1411.3	1410.7	1410.2	1409.6
12.5°	1390.6	1392.4	1394.2	1395.0	1394.6	1394.3	1394.0	1393.7
15°	1362.9	1365.2	1367.4	1367.7	1366.0	1364.4	1362.7	1361.0
17.5°	1328.0	1329.6	1331.1	1331.6	1331.0	1330.4	1329.8	1329.2
20°	1302.3	1303.4	1304.5	1304.6	1303.8	1302.9	1302.1	1301.2
22.5°	1274.9	1275.8	1276.7	1276.6	1275.6	1274.5	1273.4	1272.4
25°	1229.6	1229.9	1230.2	1229.9	1229.1	1228.2	1227.4	1226.5
27.5°	1181.5	1181.6	1181.9	1181.5	1180.4	1179.3	1178.3	1177.3
30°	1148.1	1148.1	1148.1	1147.2	1145.2	1143.3	1141.3	1139.4
32.5°	1113.1	1111.6	1110.0	1108.7	1107.7	1106.6	1105.6	1104.5
35°	1056.4	1054.7	1053.0	1051.5	1050.1	1048.8	1047.3	1046.0
37.5°	997.7	995.7	993.7	992.3	991.3	990.5	989.6	988.7
40°	959.4	957.2	955.0	953.3	952.2	951.1	950.0	948.9
42.5°	919.6	917.3	915.1	913.5	912.4	911.2	910.1	909.0
45°	860.1	856.7	853.4	851.0	849.7	848.3	846.9	845.5
47.5°	797.4	794.2	790.8	788.6	787.4	786.2	785.0	783.8
50°	756.0	753.0	749.9	747.6	745.9	744.3	742.6	740.9
52.5°	714.1	711.5	708.8	706.7	705.0	703.4	701.7	700.1
55°	650.1	647.1	644.0	641.8	640.5	639.1	637.7	636.3
57.5°	587.3	584.6	581.9	579.7	578.1	576.6	574.9	573.3
60°	543.0	540.4	538.0	536.0	534.6	533.2	531.9	530.4
62.5°	500.1	497.6	495.1	493.4	492.4	491.5	490.6	489.6
65°	436.4	434.2	432.0	430.5	429.6	428.8	427.9	427.1
67.5°	373.2	371.2	369.3	367.7	366.6	365.4	364.2	363.1
70°	332.3	330.4	328.4	326.8	325.4	324.0	322.7	321.3
72.5°	291.0	289.2	287.5	286.3	285.6	284.9	284.2	283.4
75°	231.3	230.0	228.5	227.4	226.6	225.8	225.0	224.1
77.5°	175.7	174.8	173.8	173.3	173.3	173.3	173.3	173.3
80°	140.1	139.9	139.6	139.5	139.5	139.5	139.5	139.5
82.5°	107.8	107.3	106.9	106.5	106.2	106.1	105.8	105.6
85°	61.2	60.6	60.0	59.8	59.8	59.8	59.8	59.8
87.5°	24.6	24.5	24.4	24.5	24.4	24.5	24.6	24.5
90°	15.4	16.1	16.7	18.0	17.3	18.0	18.6	18.0
92.5°	52.1	41.4	36.5	33.4	32.2	30.3	31.0	29.9
95°	223.0	151.1	118.3	96.0	84.2	78.7	74.3	71.9
97.5°	555.8	445.2	365.3	291.2	245.5	217.6	200.9	195.6
100°	730.2	680.0	607.6	519.6	457.1	411.9	387.7	388.3
102.5°	788.1	786.6	744.3	688.6	639.9	604.1	583.9	569.7
105°	805.2	867.0	878.8	862.8	834.2	810.7	790.9	787.8
107.5°	756.4	856.9	911.2	933.2	933.7	925.8	919.1	913.4
110°	709.8	823.7	901.7	945.2	962.4	967.4	966.1	965.0



TEST NUMBER: P332071-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	663.7	780.1	867.6	923.3	955.1	970.4	975.1	975.3
115°	602.6	710.3	801.5	868.9	915.4	942.6	955.1	958.1
117.5°	558.4	651.4	733.2	801.7	850.1	881.3	899.1	903.4
120°	535.1	618.7	693.1	755.6	804.5	839.2	854.1	857.8
122.5°	516.8	592.5	661.3	719.5	762.9	794.1	810.5	815.2
125°	492.3	559.9	619.3	668.9	708.5	735.8	751.2	755.6
127.5°	471.1	531.2	584.9	630.0	665.3	688.6	702.6	706.5
130°	457.7	513.4	563.6	605.7	638.6	660.8	673.8	678.8
132.5°	445.3	496.6	543.3	583.4	614.3	636.6	648.1	651.6
135°	428.6	472.5	512.8	548.1	578.5	597.1	608.2	612.5
137.5°	413.4	449.4	484.1	514.7	540.2	559.0	568.5	571.3
140°	404.4	436.0	465.7	492.3	515.9	533.2	543.2	542.6
142.5°	396.0	423.1	448.9	472.1	492.1	507.5	516.4	515.8
145°	385.9	406.3	426.1	444.1	459.5	472.5	477.5	478.7
147.5°	377.6	393.8	409.8	422.6	434.3	443.1	447.8	448.3
150°	371.6	385.9	398.9	410.6	419.9	426.7	430.5	430.5
152.5°	366.1	378.4	389.9	399.7	407.0	413.4	415.6	415.6
155°	358.0	367.9	377.2	384.6	390.1	395.1	396.4	397.0
157.5°	349.3	357.6	364.8	370.6	375.4	379.1	380.2	380.0
160°	344.4	351.2	357.4	361.7	366.1	369.7	369.7	369.2
162.5°	338.4	344.2	349.9	353.8	356.6	359.8	359.8	359.3
165°	330.7	334.5	338.8	341.9	344.4	346.8	346.2	346.2
167.5°	324.0	326.9	329.4	331.6	332.7	334.5	333.8	333.8
170°	319.6	321.5	323.9	325.2	325.7	327.0	326.4	326.4
172.5°	315.6	317.0	318.9	319.7	319.8	321.1	320.0	319.5
175°	310.3	310.9	312.1	312.1	312.1	312.8	312.1	311.6
177.5°	307.0	307.4	307.9	307.9	307.4	307.9	307.0	307.0
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9

(END OF REPORT)