

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: P332044

Luminaire Tested: **S123DIP-S1000D1195U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332044
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-S1000D1195U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8441.4 lumens
Efficiency: N/A
Efficacy: 129.1 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

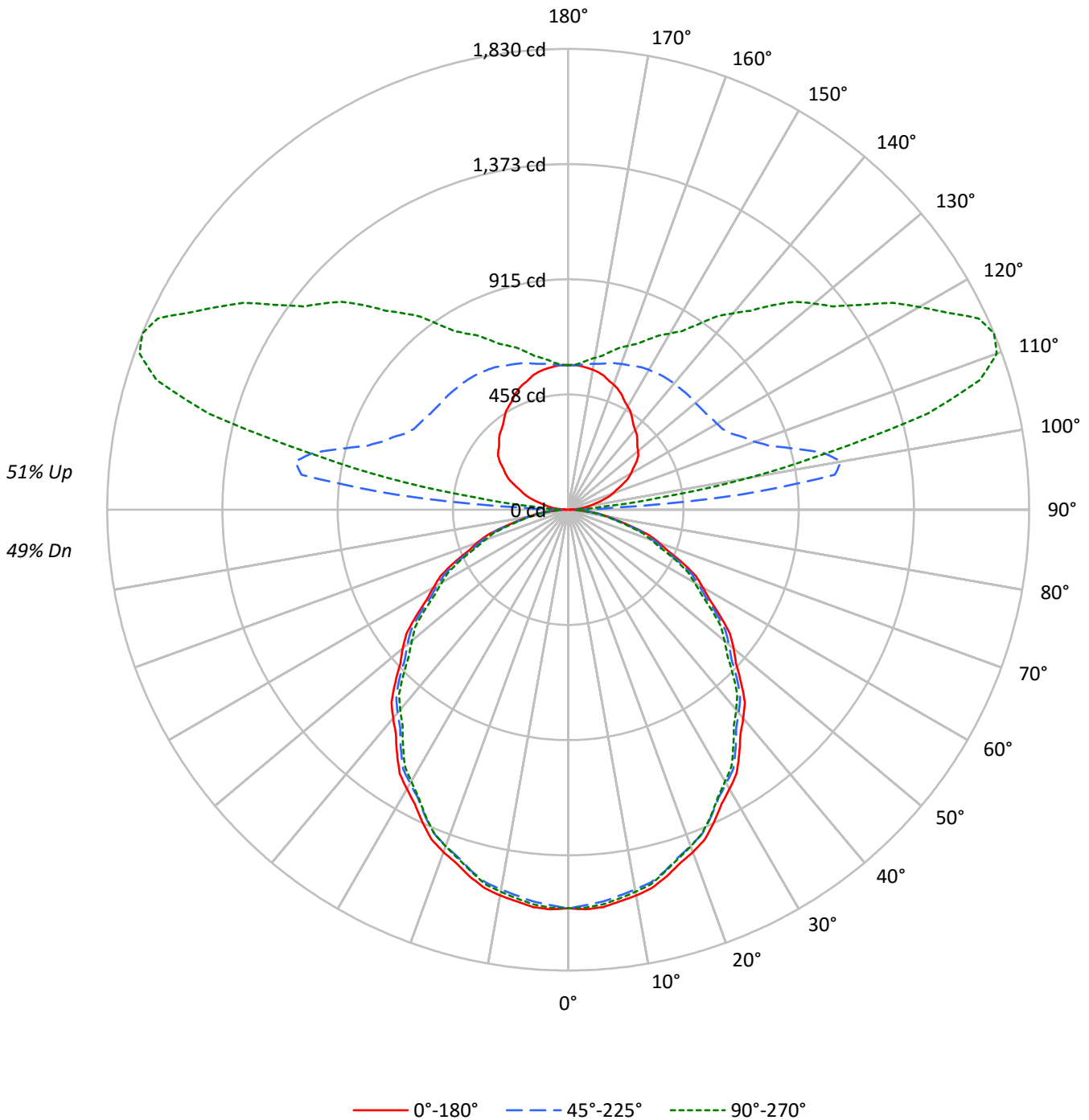
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49				
1	97	93	89	86	90	86	83	80	72	70	68	60	58	57	49	47	46	41				
2	89	81	75	70	81	75	70	65	63	59	56	53	50	47	43	41	39	34				
3	81	71	64	58	74	66	60	54	56	51	47	47	43	40	38	35	33	29				
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	29	25				
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	22				
6	63	50	42	36	57	47	40	34	40	34	30	34	29	26	28	24	22	19				
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	19	17				
8	54	41	34	28	49	38	31	27	33	27	24	28	24	20	23	20	17	15				
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17038	17038	17038
5°	17117	16883	17001
10°	17004	16736	16840
15°	16805	16547	16577
20°	16573	16276	16292
25°	16262	15954	15922
30°	15918	15597	15478
35°	15559	15219	15023
40°	15185	14802	14573
45°	14772	14420	14067
50°	14359	13949	13561
55°	13818	13461	13052
60°	13272	12893	12482
65°	12791	12271	11889
70°	12079	11566	11050
75°	11038	10643	10189
80°	9955	9534	9447
85°	8744	8410	8065



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	1.8
10°-20°	421.0	5.0
20°-30°	621.9	7.4
30°-40°	726.5	8.6
40°-50°	730.4	8.7
50°-60°	641.5	7.6
60°-70°	478.0	5.7
70°-80°	272.3	3.2
80°-90°	82.6	1.0
90°-100°	319.4	3.8
100°-110°	904.4	10.7
110°-120°	889.7	10.5
120°-130°	709.7	8.4
130°-140°	559.5	6.6
140°-150°	417.6	4.9
150°-160°	291.1	3.4
160°-170°	171.0	2.0
170°-180°	55.6	0.7
0°-30°	1192.0	14.1
0°-40°	1918.5	22.7
0°-60°	3290.4	39.0
0°-90°	4123.3	48.8
90°-120°	2113.6	25.0
90°-150°	3800.4	45.0
90°-180°	4318.0	51.2
0°-180°	8441.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1584	1577	1562	1575	1573	150
15°	1508	1502	1485	1495	1488	425
25°	1369	1360	1343	1344	1341	630
35°	1184	1175	1158	1150	1143	740
45°	970	964	947	932	924	749
55°	736	734	717	703	696	659
65°	502	495	482	471	467	495
75°	265	260	256	249	245	284
85°	71	68	68	65	65	78
90°	2	14	29	33	34	7
95°	40	128	689	201	135	43
105°	135	199	934	1634	1478	143
115°	238	297	714	1567	1797	236
125°	331	391	667	1208	1418	294
135°	388	463	658	995	1149	300
145°	443	507	650	816	898	277
155°	503	543	629	715	745	231
165°	550	565	602	638	650	155
175°	573	573	577	586	584	54
180°	574	574	574	574	574	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1588.3	1587.4	1586.4	1585.4	1584.5	1582.6	1580.0	1577.3	1574.7	1572.0	1574.4
5°	1584.2	1582.7	1581.2	1579.7	1578.2	1575.8	1572.5	1569.1	1565.8	1562.5	1565.5
7.5°	1568.7	1567.2	1565.7	1564.2	1562.7	1560.2	1556.8	1553.3	1549.9	1546.4	1549.1
10°	1555.7	1554.2	1552.6	1551.1	1549.6	1546.9	1543.0	1539.0	1535.1	1531.2	1533.9
12.5°	1538.2	1537.0	1535.7	1534.4	1533.2	1530.7	1527.0	1523.3	1519.6	1515.9	1517.9
15°	1508.0	1506.8	1505.6	1504.4	1503.2	1500.6	1496.7	1492.8	1488.8	1484.9	1487.3
17.5°	1472.9	1471.3	1469.8	1468.2	1466.6	1463.9	1459.9	1456.0	1452.1	1448.1	1449.8
20°	1446.8	1445.0	1443.2	1441.3	1439.5	1436.6	1432.7	1428.8	1424.9	1420.9	1422.1
22.5°	1417.4	1415.6	1413.8	1411.9	1410.1	1407.3	1403.3	1399.4	1395.5	1391.5	1392.5
25°	1369.2	1367.4	1365.6	1363.8	1361.9	1359.1	1355.1	1351.2	1347.3	1343.3	1343.6
27.5°	1317.8	1316.0	1314.2	1312.5	1310.7	1307.7	1303.5	1299.3	1295.0	1290.8	1291.0
30°	1280.7	1279.2	1277.7	1276.2	1274.7	1271.8	1267.6	1263.3	1259.1	1254.9	1254.9
32.5°	1243.7	1241.7	1239.7	1237.7	1235.7	1233.1	1229.8	1226.6	1223.3	1220.0	1218.3
35°	1184.1	1182.3	1180.5	1178.7	1176.8	1174.0	1170.0	1166.1	1162.2	1158.2	1156.4
37.5°	1123.1	1120.8	1118.5	1116.2	1113.9	1110.8	1106.8	1102.8	1098.8	1094.8	1092.6
40°	1080.7	1078.8	1077.0	1075.2	1073.4	1070.4	1066.1	1061.9	1057.7	1053.4	1051.0
42.5°	1038.2	1036.1	1034.1	1032.0	1030.0	1026.8	1022.6	1018.4	1014.1	1009.9	1007.5
45°	970.4	969.2	968.0	966.8	965.6	963.0	959.1	955.1	951.2	947.3	943.7
47.5°	903.2	901.4	899.7	897.9	896.2	893.4	889.8	886.1	882.4	878.7	875.1
50°	857.5	855.9	854.4	852.9	851.4	848.7	844.7	840.8	836.9	833.0	829.6
52.5°	809.5	808.5	807.5	806.5	805.4	802.8	798.7	794.5	790.3	786.1	783.3
55°	736.3	736.0	735.7	735.4	735.1	733.0	729.1	725.1	721.2	717.3	713.9
57.5°	666.6	665.6	664.6	663.6	662.5	660.4	657.3	654.1	651.0	647.9	644.9
60°	616.5	616.2	615.9	615.6	615.3	613.4	609.7	606.1	602.5	598.9	596.1
62.5°	571.9	571.1	570.3	569.5	568.8	566.6	562.9	559.3	555.7	552.0	549.3
65°	502.2	500.7	499.2	497.7	496.2	493.9	490.9	487.9	484.8	481.8	479.4
67.5°	428.5	427.1	425.8	424.5	423.1	421.3	419.0	416.7	414.4	412.1	410.0
70°	383.8	382.0	380.2	378.4	376.6	374.7	372.9	371.1	369.3	367.5	365.4
72.5°	337.0	335.7	334.3	333.0	331.7	330.0	327.9	325.9	323.8	321.7	319.9
75°	265.4	264.2	263.0	261.8	260.6	259.5	258.6	257.7	256.8	255.9	254.4
77.5°	202.0	201.3	200.6	200.0	199.3	198.4	197.4	196.3	195.2	194.1	193.1
80°	160.6	159.7	158.8	157.9	157.0	156.2	155.6	155.0	154.4	153.8	153.5
82.5°	120.3	120.1	120.0	119.8	119.6	119.4	119.3	119.2	119.1	119.0	118.4
85°	70.8	70.2	69.6	69.0	68.4	68.1	68.1	68.1	68.1	68.1	67.4
87.5°	28.8	28.5	28.3	28.2	28.0	27.9	28.4	28.9	29.3	29.8	29.3
90°	2.3	4.6	7.0	10.5	12.8	15.1	18.6	22.1	25.6	29.0	27.9
92.5°	14.4	21.4	31.1	40.2	50.0	67.2	97.6	147.6	196.6	178.7	134.8
95°	39.5	43.0	55.8	75.5	105.7	151.0	249.8	422.9	613.5	689.0	558.8
97.5°	67.4	68.5	78.5	95.7	125.5	174.5	268.9	464.0	781.7	1067.7	1142.3
100°	86.0	87.1	95.3	111.5	139.4	184.7	266.1	438.0	743.6	1100.3	1329.2
102.5°	105.5	107.6	114.8	130.1	155.2	196.8	269.8	415.7	687.8	1039.9	1338.4
105°	134.8	138.3	145.2	159.2	181.2	217.3	280.0	399.7	619.3	934.1	1267.6
107.5°	165.9	169.4	176.1	189.8	210.5	244.0	299.1	398.5	575.6	840.7	1143.5
110°	188.2	191.7	197.5	210.3	230.0	262.6	314.9	403.2	558.8	787.7	1065.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.7	212.2	218.0	230.7	250.5	282.1	330.7	412.5	549.6	752.4	997.6
115°	238.2	242.8	249.8	261.4	281.2	312.5	356.7	427.6	546.1	714.5	915.5
117.5°	267.7	273.0	278.8	289.5	311.6	340.7	384.3	447.5	548.2	692.2	866.0
120°	288.1	291.6	297.4	309.1	331.1	360.2	402.0	462.4	551.9	682.0	840.0
122.5°	305.8	309.3	315.1	327.6	348.8	379.7	420.6	476.4	558.4	675.5	818.6
125°	331.1	333.5	340.4	353.2	375.3	406.6	447.3	498.4	568.1	666.9	791.2
127.5°	350.4	353.9	362.5	375.5	399.9	431.3	470.5	516.6	579.3	662.7	767.1
130°	362.5	366.0	376.4	390.4	414.8	446.1	484.5	528.6	586.7	659.9	754.0
132.5°	371.8	376.2	387.6	404.3	428.7	459.2	496.6	539.8	592.3	659.0	742.0
135°	388.1	392.7	405.5	422.9	447.3	478.7	514.7	554.2	600.7	657.6	726.2
137.5°	403.4	408.3	420.8	439.4	463.6	492.6	527.2	564.9	606.3	655.0	712.4
140°	413.6	419.4	431.0	449.6	472.9	501.9	535.6	570.5	610.0	654.1	704.1
142.5°	424.8	429.7	442.2	458.9	482.2	509.4	542.1	576.0	612.8	652.3	696.6
145°	442.7	446.1	456.6	474.0	493.8	520.5	550.7	582.1	614.6	649.5	686.7
147.5°	460.8	462.9	473.1	488.2	507.3	530.0	557.7	585.8	614.6	645.1	676.9
150°	472.9	474.0	483.3	498.4	514.7	535.6	562.3	586.7	614.6	641.3	670.4
152.5°	485.0	485.2	494.5	507.7	522.1	542.1	565.1	588.6	611.8	636.7	663.0
155°	503.1	503.1	510.1	521.7	534.4	550.7	570.5	589.1	608.8	628.6	651.8
157.5°	517.5	518.4	524.0	534.2	545.1	557.7	573.5	590.2	604.9	621.4	639.2
160°	528.6	528.6	533.3	542.6	550.7	562.3	576.3	590.2	603.0	615.8	630.9
162.5°	537.0	537.0	540.7	548.2	555.4	565.1	577.2	589.3	599.3	610.2	622.5
165°	549.6	548.4	550.7	556.5	561.2	569.3	578.6	586.7	593.7	601.8	611.1
167.5°	559.1	557.7	558.8	563.3	566.5	571.6	578.4	584.9	588.1	593.5	600.2
170°	564.7	562.3	563.5	567.0	569.3	571.6	577.4	582.1	584.4	587.9	593.7
172.5°	568.4	567.0	567.2	569.8	571.2	572.6	577.4	581.2	581.6	583.2	587.2
175°	572.8	571.6	570.5	572.8	572.8	574.0	576.3	578.6	577.4	577.4	579.8
177.5°	574.9	574.0	573.0	574.0	574.0	574.0	574.9	576.7	574.9	574.0	574.9
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1576.8	1579.3	1581.7	1582.8	1582.5	1582.3	1582.0	1581.8
5°	1568.5	1571.5	1574.6	1575.8	1575.2	1574.6	1574.0	1573.4
7.5°	1551.9	1554.6	1557.3	1558.5	1558.1	1557.8	1557.4	1557.0
10°	1536.6	1539.3	1542.1	1543.1	1542.5	1541.9	1541.3	1540.7
12.5°	1519.9	1521.9	1523.9	1524.7	1524.4	1524.0	1523.6	1523.3
15°	1489.7	1492.1	1494.6	1494.9	1493.1	1491.2	1489.4	1487.6
17.5°	1451.5	1453.2	1454.9	1455.4	1454.8	1454.1	1453.4	1452.8
20°	1423.3	1424.6	1425.8	1425.9	1425.0	1424.1	1423.2	1422.3
22.5°	1393.5	1394.4	1395.4	1395.3	1394.2	1393.0	1391.9	1390.7
25°	1343.9	1344.3	1344.6	1344.3	1343.3	1342.4	1341.5	1340.6
27.5°	1291.3	1291.5	1291.8	1291.3	1290.2	1289.0	1287.9	1286.7
30°	1254.9	1254.9	1254.9	1253.8	1251.7	1249.6	1247.5	1245.3
32.5°	1216.6	1215.0	1213.3	1211.8	1210.7	1209.5	1208.4	1207.2
35°	1154.6	1152.8	1151.0	1149.3	1147.8	1146.3	1144.8	1143.3
37.5°	1090.5	1088.3	1086.1	1084.5	1083.6	1082.6	1081.6	1080.7
40°	1048.6	1046.2	1043.8	1041.9	1040.7	1039.5	1038.3	1037.1
42.5°	1005.0	1002.6	1000.2	998.4	997.2	996.0	994.8	993.6
45°	940.0	936.4	932.8	930.2	928.7	927.2	925.7	924.1
47.5°	871.5	868.0	864.4	862.0	860.6	859.3	858.0	856.6
50°	826.3	823.0	819.6	817.1	815.3	813.4	811.6	809.8
52.5°	780.4	777.6	774.8	772.4	770.6	768.8	767.0	765.2
55°	710.6	707.3	704.0	701.5	700.0	698.5	697.0	695.5
57.5°	641.9	639.0	636.0	633.6	631.9	630.1	628.4	626.6
60°	593.4	590.7	588.0	585.9	584.3	582.8	581.3	579.8
62.5°	546.6	543.9	541.1	539.3	538.2	537.2	536.2	535.2
65°	477.0	474.5	472.1	470.5	469.6	468.7	467.7	466.8
67.5°	407.9	405.8	403.7	402.0	400.7	399.4	398.1	396.9
70°	363.2	361.1	359.0	357.2	355.7	354.2	352.7	351.1
72.5°	318.0	316.1	314.2	312.9	312.1	311.3	310.6	309.8
75°	252.9	251.3	249.8	248.6	247.7	246.8	245.9	245.0
77.5°	192.0	191.0	190.0	189.5	189.5	189.5	189.5	189.5
80°	153.2	152.9	152.6	152.4	152.4	152.4	152.4	152.4
82.5°	117.9	117.3	116.8	116.4	116.1	115.9	115.7	115.4
85°	66.8	66.2	65.6	65.3	65.3	65.3	65.3	65.3
87.5°	29.3	29.3	29.3	29.6	29.4	29.6	29.8	29.6
90°	29.0	30.2	31.4	33.7	32.5	33.7	34.9	33.7
92.5°	97.8	77.6	68.5	62.5	60.4	56.9	58.1	56.0
95°	418.3	283.5	221.9	180.1	158.0	147.6	139.4	134.8
97.5°	1042.6	835.1	685.3	546.3	460.6	408.3	376.9	366.9
100°	1369.8	1275.7	1139.8	974.8	857.4	772.6	727.3	728.5
102.5°	1478.6	1475.5	1396.3	1291.7	1200.4	1133.3	1095.4	1068.7
105°	1510.4	1626.6	1648.7	1618.5	1565.0	1520.9	1483.7	1477.9
107.5°	1418.8	1607.5	1709.3	1750.7	1751.6	1736.7	1724.2	1713.5
110°	1331.5	1545.3	1691.7	1773.0	1805.5	1814.8	1812.5	1810.2



TEST NUMBER: P332044

CATALOG NUMBER: S123DIP-S1000D1195U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1245.0	1463.5	1627.5	1732.1	1791.6	1820.4	1829.2	1829.7
115°	1130.5	1332.6	1503.4	1630.1	1717.2	1768.3	1791.6	1797.4
117.5°	1047.5	1222.0	1375.4	1503.9	1594.8	1653.3	1686.8	1694.7
120°	1003.8	1160.7	1300.1	1417.5	1509.2	1574.3	1602.2	1609.2
122.5°	969.4	1111.4	1240.6	1349.6	1431.2	1489.7	1520.4	1529.2
125°	923.7	1050.3	1161.8	1254.8	1329.2	1380.3	1409.3	1417.5
127.5°	883.7	996.6	1097.2	1181.8	1248.1	1291.7	1318.0	1325.4
130°	858.6	963.2	1057.3	1136.3	1197.9	1239.7	1264.1	1273.4
132.5°	835.4	931.6	1019.2	1094.5	1152.3	1194.1	1215.8	1222.3
135°	804.0	886.5	962.0	1028.2	1085.2	1120.0	1140.9	1149.1
137.5°	775.4	843.0	908.1	965.5	1013.4	1048.7	1066.3	1071.7
140°	758.7	817.9	873.7	923.7	967.8	1000.4	1018.9	1017.8
142.5°	742.9	793.8	842.1	885.6	923.2	952.0	968.7	967.6
145°	723.8	762.2	799.4	833.0	862.1	886.5	895.8	898.1
147.5°	708.3	738.7	768.7	792.6	814.7	831.2	840.0	840.9
150°	697.1	723.8	748.2	770.3	787.7	800.5	807.5	807.5
152.5°	686.9	709.9	731.5	749.9	763.6	775.4	779.6	779.6
155°	671.5	690.1	707.6	721.5	732.0	741.3	743.6	744.7
157.5°	655.3	670.9	684.3	695.2	704.3	711.3	713.1	712.9
160°	646.0	658.8	670.4	678.5	686.7	693.6	693.6	692.5
162.5°	634.8	645.8	656.4	663.6	669.0	675.0	675.0	673.9
165°	620.4	627.4	635.5	641.3	646.0	650.6	649.5	649.5
167.5°	607.9	613.2	617.9	622.1	624.1	627.4	626.2	626.2
170°	599.5	603.0	607.6	610.0	611.1	613.5	612.3	612.3
172.5°	592.1	594.6	598.4	599.7	600.0	602.3	600.2	599.3
175°	582.1	583.2	585.6	585.6	585.6	586.7	585.6	584.4
177.5°	575.8	576.7	577.7	577.7	576.7	577.7	575.8	575.8
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0

(END OF REPORT)