

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: P332007

Luminaire Tested: **S123DIP-S1000D365U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332007
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D365U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5366.6 lumens
Efficiency: N/A
Efficacy: 123.4 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

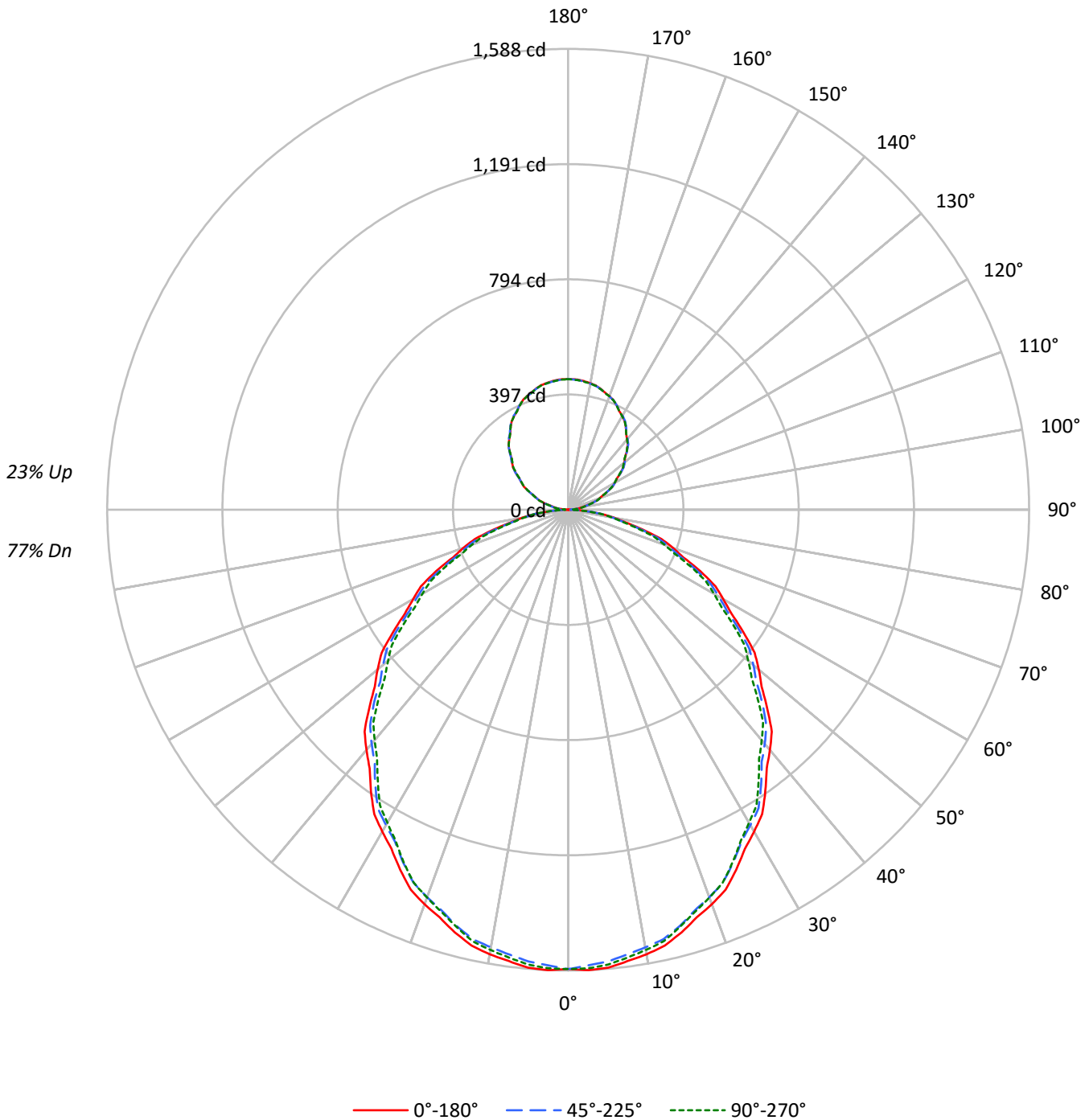
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77																												
1	104	99	95	91	99	95	91	88	86	83	81	78	76	74	71	70	68	64																												
2	94	87	80	75	90	83	77	72	75	71	67	69	65	62	63	60	57	54																												
3	86	76	68	62	82	73	66	60	67	61	56	61	56	52	55	52	49	46																												
4	79	67	59	53	75	65	57	51	59	53	48	54	49	45	50	45	42	39																												
5	73	60	52	45	69	58	50	44	53	47	42	49	43	39	45	40	37	34																												
6	67	54	46	40	64	52	44	39	48	41	36	44	39	34	41	36	32	30																												
7	62	49	41	35	59	47	39	34	44	37	32	40	35	30	37	32	29	26																												
8	58	45	37	31	55	43	36	30	40	33	29	37	31	27	34	29	26	24																												
9	54	41	33	28	51	40	32	27	37	30	26	34	29	25	32	27	23	21																												
10	50	38	30	25	48	36	29	25	34	28	23	32	26	22	29	25	21	19																												

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	2.8
10°-20°	421.0	7.8
20°-30°	621.9	11.6
30°-40°	726.5	13.5
40°-50°	730.4	13.6
50°-60°	641.5	12.0
60°-70°	478.0	8.9
70°-80°	272.3	5.1
80°-90°	79.5	1.5
90°-100°	29.3	0.5
100°-110°	87.7	1.6
110°-120°	149.2	2.8
120°-130°	196.2	3.7
130°-140°	220.6	4.1
140°-150°	216.8	4.0
150°-160°	182.5	3.4
160°-170°	121.5	2.3
170°-180°	42.5	0.8
0°-30°	1192.0	22.2
0°-40°	1918.5	35.7
0°-60°	3290.4	61.3
0°-90°	4120.1	76.8
90°-120°	266.2	5.0
90°-150°	899.9	16.8
90°-180°	1246.0	23.2
0°-180°	5366.6	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°	0	4	8	10	11	5
95°	21	23	26	28	28	23
105°	80	80	83	83	84	85
115°	150	151	150	151	150	149
125°	220	221	220	219	217	196
135°	285	287	287	286	285	220
145°	346	347	348	347	346	216
155°	396	396	396	398	395	182
165°	432	430	430	432	430	122
175°	449	448	447	449	447	43
180°	450	450	450	450	450	



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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°	28.4	27.8	27.2	26.7	26.1	25.8	25.8	25.7	25.7	25.7	25.5
90°	0.4	1.1	1.9	2.7	3.5	4.4	5.4	6.4	7.5	8.5	8.8
92.5°	8.6	9.1	9.6	10.2	10.7	11.2	11.8	12.4	13.0	13.6	13.8
95°	20.9	21.4	21.9	22.5	23.0	23.6	24.3	24.9	25.5	26.2	26.5
97.5°	37.0	37.4	37.9	38.3	38.7	39.1	39.6	40.0	40.5	40.9	41.3
100°	48.1	48.5	49.0	49.5	49.9	50.4	50.8	51.2	51.6	51.9	52.2
102.5°	60.8	61.1	61.3	61.6	61.9	62.3	62.8	63.4	63.9	64.4	64.6
105°	79.5	79.7	79.8	80.0	80.1	80.6	81.3	82.0	82.7	83.4	83.4
107.5°	101.3	101.4	101.5	101.6	101.7	101.8	102.1	102.4	102.7	103.0	103.2
110°	114.9	115.0	115.2	115.3	115.5	115.6	115.8	116.0	116.1	116.3	116.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	129.0	129.1	129.2	129.3	129.4	129.4	129.5	129.5	129.5	129.6	129.9
115°	150.2	150.4	150.7	150.9	151.1	151.2	151.0	150.9	150.7	150.5	150.6
117.5°	171.5	171.7	171.9	172.0	172.2	172.1	171.9	171.7	171.5	171.3	171.3
120°	184.8	185.3	185.8	186.2	186.7	186.7	186.4	186.0	185.6	185.2	185.1
122.5°	198.7	199.0	199.4	199.7	200.1	200.1	199.9	199.7	199.5	199.3	199.1
125°	219.8	220.0	220.3	220.5	220.8	220.8	220.6	220.5	220.3	220.2	219.8
127.5°	239.3	239.8	240.3	240.8	241.3	241.5	241.3	241.1	241.0	240.8	240.4
130°	252.3	252.9	253.6	254.2	254.8	255.0	254.8	254.6	254.3	254.1	253.8
132.5°	265.3	266.0	266.6	267.2	267.8	268.1	267.9	267.7	267.5	267.4	267.0
135°	285.2	285.7	286.1	286.6	287.1	287.3	287.2	287.1	287.0	287.0	286.6
137.5°	303.6	304.0	304.3	304.7	305.1	305.4	305.6	305.8	306.0	306.2	305.9
140°	316.3	316.7	317.1	317.5	317.9	318.1	318.2	318.2	318.3	318.4	318.3
142.5°	327.9	328.3	328.7	329.1	329.4	329.7	329.9	330.0	330.1	330.3	330.2
145°	346.0	346.1	346.3	346.4	346.6	346.8	347.0	347.3	347.5	347.7	347.7
147.5°	361.8	362.1	362.4	362.7	362.9	363.2	363.4	363.6	363.8	364.1	364.1
150°	372.8	373.0	373.1	373.3	373.5	373.6	373.8	373.9	374.1	374.2	374.2
152.5°	381.9	382.1	382.3	382.5	382.8	382.9	383.0	383.1	383.2	383.3	383.4
155°	396.2	396.2	396.2	396.2	396.2	396.2	396.3	396.3	396.4	396.5	396.8
157.5°	408.3	408.2	408.1	408.0	407.9	407.9	408.0	408.0	408.1	408.2	408.5
160°	415.9	415.8	415.6	415.5	415.3	415.2	415.2	415.2	415.2	415.2	415.6
162.5°	422.7	422.5	422.3	422.1	421.8	421.8	421.8	421.9	422.0	422.0	422.4
165°	431.5	431.3	431.0	430.8	430.5	430.4	430.4	430.4	430.4	430.4	430.9
167.5°	438.5	438.2	437.9	437.5	437.2	437.1	437.2	437.2	437.3	437.4	437.8
170°	442.4	442.1	441.8	441.5	441.2	441.0	441.0	441.0	441.0	441.0	441.6
172.5°	445.6	445.2	444.9	444.6	444.3	444.1	444.1	444.1	444.1	444.1	444.6
175°	448.8	448.5	448.2	447.9	447.6	447.4	447.4	447.4	447.4	447.4	447.9
177.5°	450.1	449.9	449.6	449.4	449.1	449.0	449.0	449.0	449.0	449.0	449.4
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



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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°	25.3	25.1	24.9	24.9	24.9	24.9	25.0	25.0
90°	9.1	9.4	9.7	10.0	10.1	10.3	10.4	10.6
92.5°	14.1	14.3	14.6	14.7	14.6	14.5	14.4	14.3
95°	26.8	27.1	27.4	27.6	27.6	27.6	27.6	27.6
97.5°	41.6	42.0	42.4	42.5	42.5	42.5	42.4	42.4
100°	52.4	52.7	52.9	53.1	53.2	53.4	53.6	53.7
102.5°	64.9	65.1	65.3	65.4	65.4	65.4	65.3	65.3
105°	83.4	83.4	83.4	83.5	83.6	83.8	84.0	84.1
107.5°	103.5	103.7	104.0	104.1	104.0	103.9	103.8	103.7
110°	116.9	117.2	117.5	117.6	117.4	117.3	117.1	117.0



TEST NUMBER: P332007

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	130.3	130.7	131.1	131.2	131.2	131.2	131.1	131.1
115°	150.7	150.8	150.9	150.9	150.8	150.7	150.6	150.5
117.5°	171.3	171.3	171.3	171.1	170.9	170.7	170.5	170.3
120°	185.0	184.9	184.9	184.7	184.6	184.4	184.3	184.1
122.5°	198.9	198.7	198.5	198.3	198.1	197.8	197.6	197.4
125°	219.5	219.2	218.9	218.6	218.3	218.0	217.6	217.3
127.5°	239.9	239.5	239.0	238.6	238.3	237.9	237.6	237.2
130°	253.5	253.1	252.8	252.4	251.9	251.3	250.8	250.2
132.5°	266.6	266.2	265.9	265.5	265.0	264.6	264.2	263.8
135°	286.3	286.0	285.7	285.5	285.3	285.1	285.0	284.8
137.5°	305.6	305.3	304.9	304.6	304.3	304.0	303.7	303.4
140°	318.2	318.2	318.1	317.8	317.2	316.7	316.1	315.6
142.5°	330.1	330.0	330.0	329.7	329.3	328.9	328.4	328.0
145°	347.6	347.5	347.4	347.2	346.9	346.6	346.3	346.0
147.5°	364.1	364.1	364.1	363.8	363.4	362.9	362.4	361.9
150°	374.2	374.2	374.2	374.0	373.5	373.1	372.6	372.1
152.5°	383.5	383.7	383.8	383.6	383.2	382.8	382.4	382.0
155°	397.1	397.4	397.8	397.6	397.1	396.5	396.0	395.4
157.5°	408.8	409.2	409.5	409.4	409.0	408.6	408.1	407.7
160°	416.0	416.4	416.8	416.8	416.5	416.2	415.9	415.6
162.5°	422.8	423.2	423.6	423.5	423.0	422.5	422.0	421.5
165°	431.4	431.8	432.3	432.3	431.7	431.2	430.6	430.1
167.5°	438.3	438.8	439.3	439.3	438.8	438.3	437.8	437.4
170°	442.1	442.7	443.2	443.2	442.7	442.1	441.6	441.0
172.5°	445.1	445.6	446.1	446.1	445.5	445.0	444.4	443.9
175°	448.3	448.8	449.3	449.2	448.7	448.1	447.6	447.0
177.5°	449.8	450.1	450.5	450.5	450.1	449.6	449.2	448.7
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9

(END OF REPORT)