

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: P332008

Luminaire Tested: **S123DIP-S1000D365U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332008
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-S1000D365U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5433.6 lumens
Efficiency: N/A
Efficacy: 124.9 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

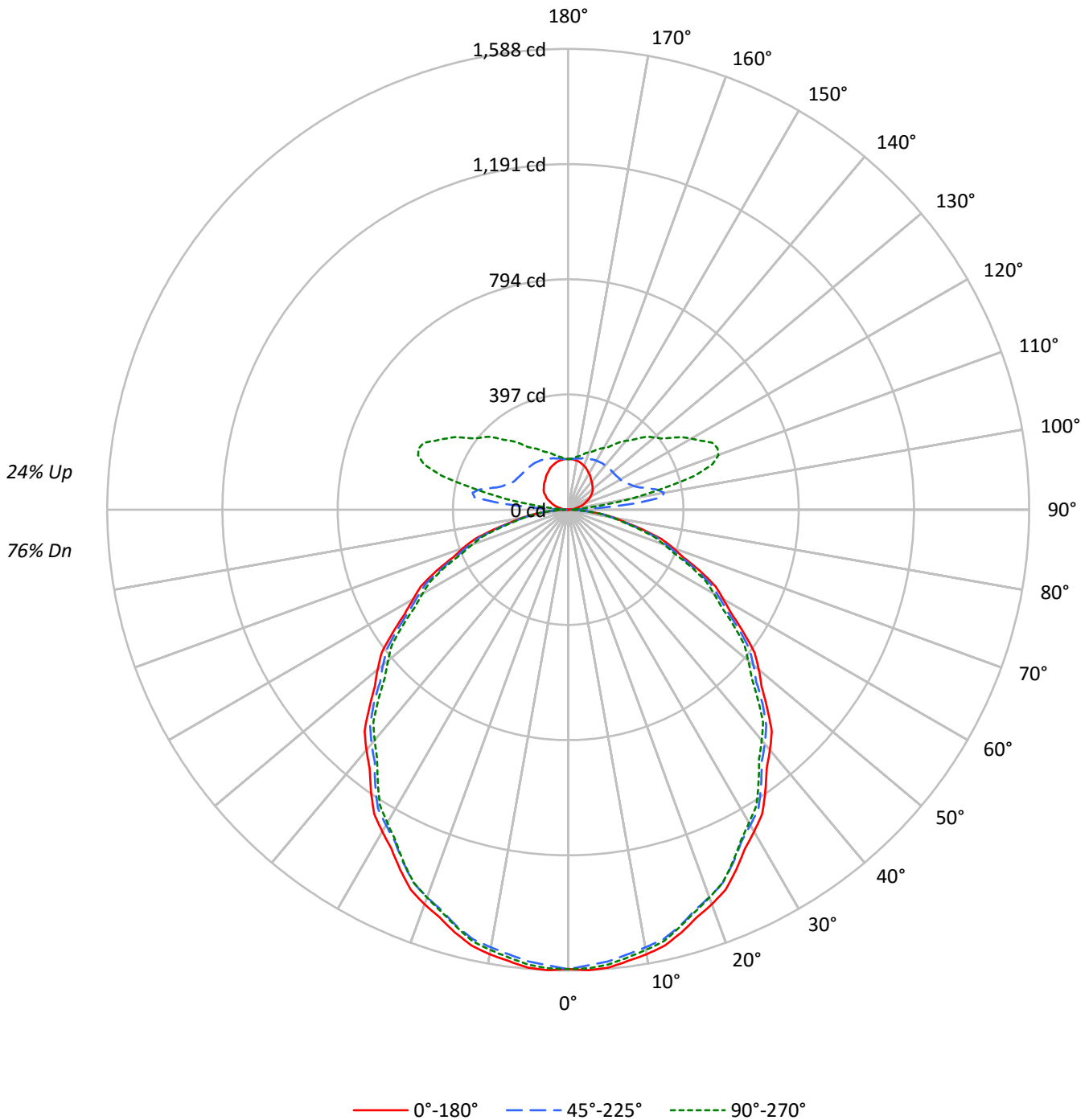
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332008

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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	113	113	113	113	108	108	108	108	98	98	98	88	88	88	80	80	80	76
1	103	99	95	91	98	94	91	87	86	83	80	78	76	74	70	69	67	64
2	94	86	80	74	89	82	77	72	75	70	66	68	65	61	62	59	57	53
3	86	76	68	62	82	73	66	60	66	61	56	60	56	52	55	51	48	45
4	79	67	59	53	75	64	57	51	59	53	48	54	49	45	49	45	42	39
5	72	60	52	45	69	58	50	44	53	46	41	48	43	39	44	40	36	34
6	67	54	46	39	63	52	44	38	48	41	36	44	38	34	40	36	32	29
7	62	49	41	35	59	47	39	34	43	37	32	40	34	30	37	32	28	26
8	58	45	37	31	55	43	35	30	40	33	29	37	31	27	34	29	25	23
9	54	41	33	28	51	39	32	27	36	30	26	34	28	24	31	26	23	21
10	50	38	30	25	48	36	29	24	34	28	23	31	26	22	29	24	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



TEST NUMBER: P332008

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	2.7
10°-20°	421.0	7.7
20°-30°	621.9	11.4
30°-40°	726.5	13.4
40°-50°	730.4	13.4
50°-60°	641.5	11.8
60°-70°	478.0	8.8
70°-80°	272.3	5.0
80°-90°	79.5	1.5
90°-100°	97.2	1.8
100°-110°	275.1	5.1
110°-120°	270.6	5.0
120°-130°	215.9	4.0
130°-140°	170.2	3.1
140°-150°	127.0	2.3
150°-160°	88.5	1.6
160°-170°	52.0	1.0
170°-180°	16.9	0.3
0°-30°	1192.0	21.9
0°-40°	1918.5	35.3
0°-60°	3290.4	60.6
0°-90°	4120.2	75.8
90°-120°	642.9	11.8
90°-150°	1155.9	21.3
90°-180°	1313.0	24.2
0°-180°	5433.6	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°	1	4	9	10	10	5
95°	12	39	210	61	41	13
105°	41	61	284	497	450	44
115°	72	90	217	477	547	72
125°	101	119	203	368	431	89
135°	118	141	200	303	350	91
145°	135	154	198	248	273	84
155°	153	165	191	217	226	70
165°	167	172	183	194	198	47
175°	174	174	176	178	178	17
180°	175	175	175	175	175	



TEST NUMBER: P332008

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F4

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°	28.5	27.9	27.3	26.8	26.2	25.8	25.8	25.8	25.8	25.7	25.4
90°	0.7	1.4	2.1	3.2	3.9	4.6	5.7	6.7	7.8	8.8	8.5
92.5°	4.4	6.5	9.5	12.2	15.2	20.4	29.7	44.9	59.8	54.3	41.0
95°	12.0	13.1	17.0	23.0	32.2	45.9	76.0	128.6	186.6	209.6	170.0
97.5°	20.5	20.8	23.9	29.1	38.2	53.1	81.8	141.1	237.8	324.8	347.4
100°	26.2	26.5	29.0	33.9	42.4	56.2	80.9	133.2	226.2	334.7	404.3
102.5°	32.1	32.7	34.9	39.6	47.2	59.9	82.1	126.4	209.2	316.3	407.1
105°	41.0	42.1	44.2	48.4	55.1	66.1	85.2	121.6	188.4	284.1	385.5
107.5°	50.5	51.5	53.6	57.7	64.0	74.2	91.0	121.2	175.1	255.7	347.8
110°	57.2	58.3	60.1	64.0	70.0	79.9	95.8	122.6	170.0	239.6	324.1



TEST NUMBER: P332008

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	63.5	64.5	66.3	70.2	76.2	85.8	100.6	125.5	167.1	228.8	303.4
115°	72.4	73.9	76.0	79.5	85.5	95.1	108.5	130.0	166.1	217.3	278.5
117.5°	81.4	83.0	84.8	88.1	94.8	103.6	116.9	136.1	166.7	210.5	263.4
120°	87.6	88.7	90.5	94.0	100.7	109.5	122.3	140.6	167.9	207.4	255.5
122.5°	93.0	94.1	95.8	99.7	106.1	115.5	127.9	144.9	169.8	205.5	249.0
125°	100.7	101.4	103.5	107.4	114.1	123.7	136.1	151.6	172.8	202.8	240.7
127.5°	106.6	107.6	110.3	114.2	121.6	131.2	143.1	157.1	176.2	201.6	233.3
130°	110.3	111.3	114.5	118.7	126.2	135.7	147.4	160.8	178.5	200.7	229.3
132.5°	113.1	114.4	117.9	123.0	130.4	139.7	151.0	164.2	180.2	200.4	225.7
135°	118.0	119.4	123.3	128.6	136.1	145.6	156.5	168.6	182.7	200.0	220.9
137.5°	122.7	124.2	128.0	133.6	141.0	149.8	160.4	171.8	184.4	199.2	216.7
140°	125.8	127.6	131.1	136.8	143.8	152.7	162.9	173.5	185.5	199.0	214.1
142.5°	129.2	130.7	134.5	139.6	146.7	154.9	164.9	175.2	186.4	198.4	211.9
145°	134.6	135.7	138.9	144.2	150.2	158.3	167.5	177.0	186.9	197.5	208.8
147.5°	140.2	140.8	143.9	148.5	154.3	161.2	169.6	178.2	186.9	196.2	205.9
150°	143.8	144.2	147.0	151.6	156.5	162.9	171.0	178.5	186.9	195.1	203.9
152.5°	147.5	147.6	150.4	154.4	158.8	164.9	171.9	179.0	186.1	193.7	201.6
155°	153.0	153.0	155.1	158.7	162.6	167.5	173.5	179.2	185.2	191.2	198.2
157.5°	157.4	157.7	159.4	162.5	165.8	169.6	174.4	179.5	184.0	189.0	194.4
160°	160.8	160.8	162.2	165.0	167.5	171.0	175.3	179.5	183.4	187.3	191.9
162.5°	163.3	163.3	164.5	166.7	168.9	171.9	175.6	179.2	182.3	185.6	189.3
165°	167.1	166.8	167.5	169.3	170.7	173.2	176.0	178.5	180.6	183.1	185.9
167.5°	170.0	169.6	170.0	171.3	172.3	173.9	175.9	177.9	178.9	180.5	182.6
170°	171.7	171.0	171.4	172.4	173.2	173.9	175.6	177.0	177.8	178.8	180.6
172.5°	172.9	172.4	172.5	173.3	173.7	174.1	175.6	176.8	176.9	177.4	178.6
175°	174.2	173.9	173.5	174.2	174.2	174.6	175.3	176.0	175.6	175.6	176.3
177.5°	174.9	174.6	174.3	174.6	174.6	174.6	174.9	175.4	174.9	174.6	174.9
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6



TEST NUMBER: P332008

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F4

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°	25.2	25.1	24.9	24.9	24.8	24.9	25.0	24.9
90°	8.8	9.2	9.5	10.2	9.9	10.2	10.6	10.2
92.5°	29.8	23.6	20.8	19.0	18.4	17.3	17.7	17.0
95°	127.2	86.2	67.5	54.8	48.1	44.9	42.4	41.0
97.5°	317.1	254.0	208.4	166.2	140.1	124.2	114.6	111.6
100°	416.6	388.0	346.7	296.5	260.8	235.0	221.2	221.6
102.5°	449.7	448.8	424.7	392.9	365.1	344.7	333.2	325.0
105°	459.4	494.7	501.4	492.3	476.0	462.6	451.3	449.5
107.5°	431.5	488.9	519.9	532.5	532.8	528.2	524.4	521.2
110°	405.0	470.0	514.5	539.3	549.2	552.0	551.3	550.6



TEST NUMBER: P332008

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.7	445.1	495.0	526.8	544.9	553.7	556.4	556.5
115°	343.8	405.3	457.3	495.8	522.3	537.8	544.9	546.7
117.5°	318.6	371.7	418.3	457.4	485.1	502.9	513.0	515.4
120°	305.3	353.0	395.4	431.1	459.0	478.8	487.3	489.4
122.5°	294.9	338.0	377.3	410.5	435.3	453.1	462.4	465.1
125°	280.9	319.5	353.4	381.7	404.3	419.8	428.7	431.1
127.5°	268.8	303.1	333.7	359.5	379.6	392.9	400.9	403.1
130°	261.1	293.0	321.6	345.6	364.3	377.1	384.5	387.3
132.5°	254.1	283.3	310.0	332.9	350.5	363.2	369.8	371.8
135°	244.5	269.6	292.6	312.7	330.1	340.7	347.0	349.5
137.5°	235.8	256.4	276.2	293.7	308.2	319.0	324.3	326.0
140°	230.8	248.8	265.7	280.9	294.4	304.3	309.9	309.6
142.5°	226.0	241.4	256.1	269.3	280.8	289.6	294.6	294.3
145°	220.2	231.8	243.1	253.4	262.2	269.6	272.5	273.2
147.5°	215.4	224.7	233.8	241.1	247.8	252.8	255.5	255.8
150°	212.0	220.2	227.6	234.3	239.6	243.5	245.6	245.6
152.5°	208.9	215.9	222.5	228.1	232.2	235.8	237.1	237.1
155°	204.3	209.9	215.2	219.4	222.6	225.5	226.2	226.5
157.5°	199.3	204.0	208.1	211.5	214.2	216.3	216.9	216.8
160°	196.5	200.4	203.9	206.4	208.8	211.0	211.0	210.6
162.5°	193.1	196.4	199.7	201.9	203.5	205.3	205.3	205.0
165°	188.7	190.8	193.3	195.1	196.5	197.9	197.5	197.5
167.5°	184.9	186.5	187.9	189.2	189.8	190.8	190.5	190.5
170°	182.3	183.4	184.8	185.5	185.9	186.6	186.2	186.2
172.5°	180.1	180.9	182.0	182.4	182.5	183.2	182.6	182.3
175°	177.0	177.4	178.1	178.1	178.1	178.5	178.1	177.8
177.5°	175.1	175.4	175.7	175.7	175.4	175.7	175.1	175.1
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6

(END OF REPORT)