

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: P332695-927

Luminaire Tested: **SA4XXDIP-C1195D810U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332695-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D810U927-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

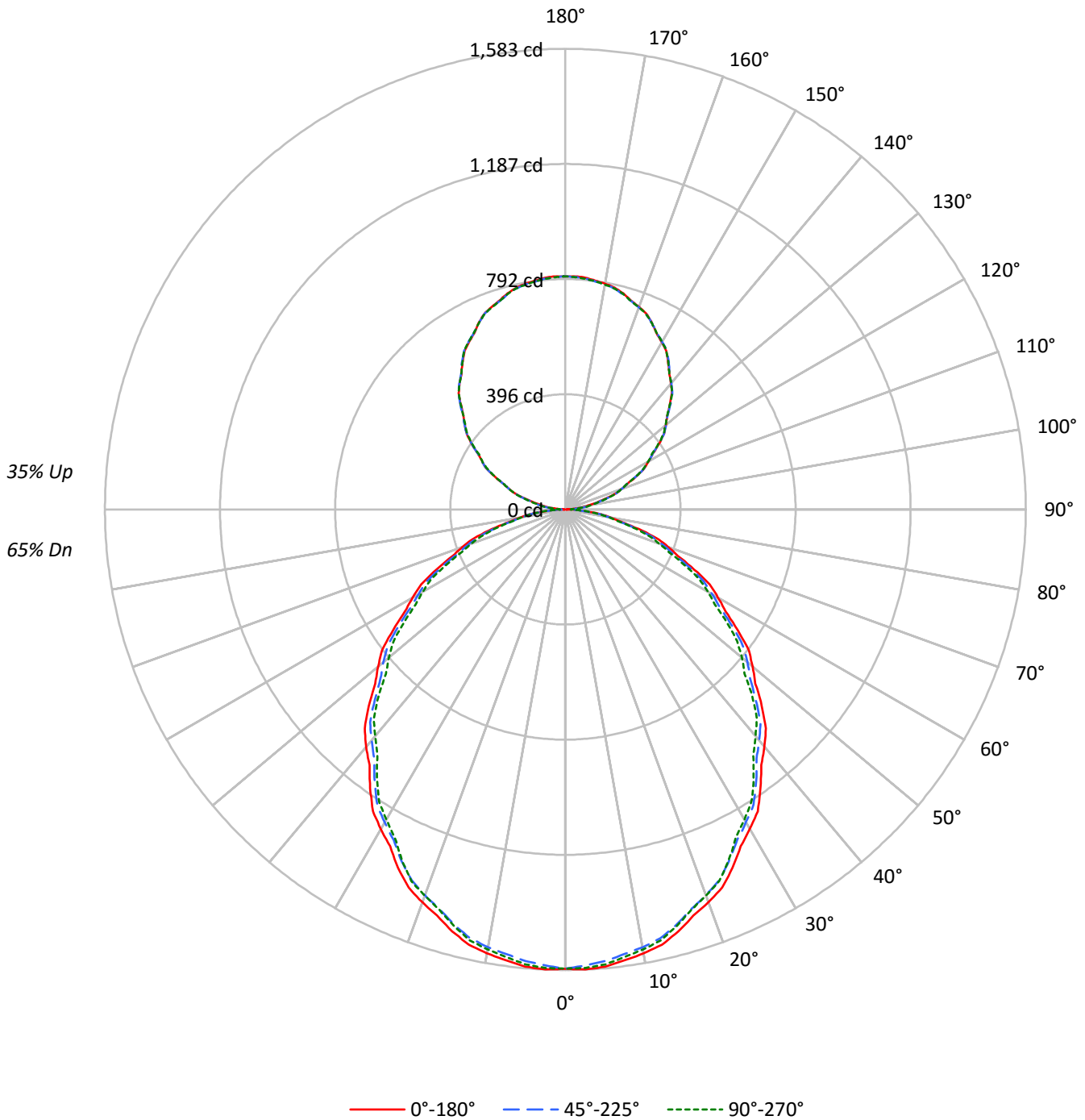
Lumens per Lamp: N/A  
Luminaire Lumens: 6275.2 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 60.7  
Input Voltage (V): 120  
Input Current (Ain): 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	50	30	10	0	
RCR																						
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	70	70	70	65				
1	101	97	93	89	95	91	87	84	80	78	75	70	68	67	61	60	59	54				
2	92	84	78	73	86	79	74	69	70	66	62	62	59	56	54	52	49	45				
3	84	74	67	61	79	70	63	58	62	57	52	55	51	47	48	45	42	38				
4	77	66	58	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33				
5	71	59	50	44	66	55	48	42	49	43	39	44	39	35	39	35	32	29				
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25				
7	60	48	39	34	56	45	38	32	41	34	30	36	31	27	32	28	25	22				
8	56	43	35	30	53	41	34	29	37	31	27	33	28	24	29	25	22	20				
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18				
10	49	36	29	24	46	35	28	23	31	26	22	28	23	20	25	21	18	16				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12745	12745	12745
5°	12783	12630	12721
10°	12703	12527	12588
15°	12549	12349	12380
20°	12345	12128	12138
25°	12113	11875	11843
30°	11828	11580	11473
35°	11532	11269	11121
40°	11225	10918	10718
45°	10904	10572	10369
50°	10550	10262	9946
55°	10166	9864	9543
60°	9783	9415	9131
65°	9352	8990	8627
70°	8868	8419	8091
75°	8125	7735	7536
80°	7234	6936	6760
85°	6326	6095	5974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.7	2.4
10°-20°	418.9	6.7
20°-30°	616.5	9.8
30°-40°	716.7	11.4
40°-50°	716.8	11.4
50°-60°	627.0	10.0
60°-70°	465.6	7.4
70°-80°	264.5	4.2
80°-90°	78.7	1.3
90°-100°	52.8	0.8
100°-110°	156.5	2.5
110°-120°	265.6	4.2
120°-130°	350.2	5.6
130°-140°	393.3	6.3
140°-150°	386.4	6.2
150°-160°	325.0	5.2
160°-170°	216.2	3.4
170°-180°	75.7	1.2
0°-30°	1184.1	18.9
0°-40°	1900.8	30.3
0°-60°	3244.6	51.7
0°-90°	4053.5	64.6
90°-120°	474.9	7.6
90°-150°	1604.7	25.6
90°-180°	2222.0	35.4
0°-180°	6275.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1577	1572	1558	1571	1570	150
15°	1502	1496	1478	1484	1481	423
25°	1360	1350	1333	1334	1330	625
35°	1170	1161	1144	1135	1128	731
45°	955	946	926	913	908	736
55°	722	718	701	686	678	647
65°	490	483	471	458	452	485
75°	260	254	248	243	242	277
85°	68	68	66	66	64	75
90°	2	9	14	17	19	6
95°	37	43	47	49	49	41
105°	144	145	147	149	151	153
115°	270	270	269	268	268	266
125°	393	393	393	391	390	350
135°	507	511	511	510	508	392
145°	616	619	619	619	617	386
155°	706	706	705	708	705	325
165°	769	767	766	769	767	217
175°	800	797	796	800	796	76
180°	801	801	801	801	801	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7
2.5°	1582.7	1582.1	1581.4	1580.7	1580.0	1578.4	1576.0	1573.5	1571.1	1568.6	1570.8
5°	1577.4	1576.3	1575.2	1574.1	1573.0	1570.8	1567.7	1564.6	1561.5	1558.5	1561.5
7.5°	1562.7	1561.6	1560.5	1559.3	1558.2	1556.0	1552.5	1549.1	1545.7	1542.2	1544.8
10°	1549.6	1548.5	1547.4	1546.2	1545.1	1542.7	1539.1	1535.4	1531.8	1528.1	1530.3
12.5°	1532.4	1531.3	1530.1	1529.0	1527.9	1525.3	1521.5	1517.7	1513.8	1509.9	1512.4
15°	1501.5	1500.4	1499.3	1498.2	1497.0	1494.4	1490.1	1485.9	1481.7	1477.5	1479.2
17.5°	1464.3	1462.9	1461.5	1460.2	1458.7	1456.0	1452.0	1448.0	1444.1	1440.0	1441.1
20°	1437.0	1435.6	1434.2	1432.8	1431.4	1428.5	1424.3	1420.1	1415.9	1411.7	1412.5
22.5°	1407.6	1405.8	1404.0	1402.1	1400.3	1397.2	1393.0	1388.8	1384.6	1380.3	1381.9
25°	1359.9	1357.9	1355.9	1353.9	1351.9	1349.0	1345.0	1341.2	1337.2	1333.2	1333.6
27.5°	1305.2	1303.1	1301.2	1299.1	1297.1	1294.3	1290.6	1287.0	1283.3	1279.6	1279.0
30°	1268.8	1266.5	1264.2	1262.0	1259.8	1256.8	1253.2	1249.5	1245.9	1242.2	1241.1
32.5°	1230.3	1228.3	1226.3	1224.2	1222.2	1219.2	1215.4	1211.5	1207.6	1203.7	1202.4
35°	1170.1	1168.2	1166.2	1164.2	1162.2	1159.3	1155.3	1151.4	1147.5	1143.5	1141.5
37.5°	1106.6	1104.8	1103.0	1101.2	1099.4	1096.4	1092.2	1088.0	1083.7	1079.5	1077.4
40°	1065.1	1062.9	1060.6	1058.4	1056.1	1052.9	1048.7	1044.4	1040.2	1036.0	1033.2
42.5°	1020.6	1019.2	1017.9	1016.5	1015.2	1012.2	1007.5	1002.8	998.1	993.5	990.2
45°	955.1	953.1	951.1	949.1	947.2	944.0	939.4	934.9	930.4	926.0	922.9
47.5°	886.5	885.1	883.8	882.4	881.1	878.4	874.2	870.1	865.9	861.7	858.3
50°	840.0	838.8	837.7	836.5	835.4	832.9	828.9	825.1	821.1	817.1	813.3
52.5°	794.4	793.1	791.7	790.4	789.0	786.2	782.1	777.9	773.8	769.6	766.1
55°	722.3	721.4	720.6	719.8	718.9	716.5	712.6	708.7	704.7	700.8	697.4
57.5°	653.5	652.5	651.6	650.6	649.7	647.2	643.3	639.4	635.6	631.7	628.5
60°	605.9	604.5	603.1	601.7	600.3	597.8	594.1	590.5	586.8	583.1	580.6
62.5°	559.4	558.2	557.0	555.8	554.7	552.2	548.3	544.4	540.5	536.6	534.3
65°	489.6	488.1	486.7	485.3	483.9	481.8	479.0	476.2	473.4	470.6	467.8
67.5°	419.2	418.0	416.6	415.3	414.1	412.0	409.3	406.6	403.9	401.2	398.5
70°	375.7	373.8	371.8	369.8	367.8	365.8	363.5	361.2	358.9	356.7	354.5
72.5°	329.2	327.2	325.2	323.2	321.3	319.4	317.6	315.8	314.0	312.2	310.4
75°	260.5	259.2	257.8	256.4	254.9	253.6	252.2	250.7	249.4	248.0	246.8
77.5°	195.0	194.4	193.8	193.2	192.6	191.6	190.4	189.2	188.0	186.7	186.4
80°	155.6	154.7	153.9	153.0	152.3	151.5	151.0	150.4	149.8	149.2	148.7
82.5°	117.2	116.8	116.4	116.0	115.6	115.3	115.2	115.1	114.9	114.9	114.5
85°	68.3	68.3	68.3	68.3	68.3	68.0	67.5	66.9	66.3	65.8	65.8
87.5°	26.7	26.8	26.9	26.9	27.0	27.0	27.0	27.0	27.0	27.0	27.2
90°	1.8	3.4	4.9	6.4	7.9	9.2	10.3	11.4	12.5	13.6	14.4
92.5°	13.2	15.0	16.7	18.5	20.2	21.5	22.2	23.0	23.8	24.6	25.0
95°	37.2	38.4	39.6	40.9	42.1	43.3	44.2	45.2	46.1	47.1	47.5
97.5°	64.9	65.9	66.9	67.9	68.8	69.9	71.1	72.2	73.3	74.5	74.9
100°	86.7	87.2	87.8	88.3	88.9	89.8	91.0	92.3	93.5	94.7	95.1
102.5°	109.5	109.7	110.0	110.2	110.4	111.1	112.2	113.3	114.5	115.6	116.0
105°	144.3	144.4	144.6	144.7	144.9	145.2	145.8	146.3	146.9	147.4	147.8
107.5°	180.9	181.0	181.2	181.3	181.5	181.6	181.7	181.8	181.9	182.0	182.4
110°	205.7	205.9	206.1	206.4	206.7	206.8	206.7	206.5	206.4	206.2	206.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	231.4	231.4	231.5	231.6	231.6	231.5	231.2	231.0	230.8	230.5	230.4
115°	270.1	270.1	270.1	270.1	270.1	269.9	269.6	269.3	269.0	268.8	268.6
117.5°	306.4	306.6	306.7	306.7	306.9	306.8	306.7	306.4	306.3	306.1	305.6
120°	330.7	331.3	331.8	332.4	333.0	333.0	332.6	332.2	331.8	331.4	330.7
122.5°	356.0	356.2	356.4	356.6	356.9	356.9	356.7	356.5	356.3	356.1	355.6
125°	393.2	393.2	393.2	393.2	393.2	393.2	393.1	392.9	392.8	392.7	392.4
127.5°	427.1	427.5	427.9	428.3	428.7	428.8	428.6	428.4	428.2	427.9	427.7
130°	450.8	451.3	451.7	452.1	452.5	452.7	452.7	452.7	452.7	452.7	452.4
132.5°	475.2	475.5	475.8	476.0	476.3	476.4	476.3	476.3	476.1	476.0	475.7
135°	507.2	508.0	508.9	509.7	510.6	511.0	511.0	511.0	511.0	511.0	510.6
137.5°	542.2	542.6	542.9	543.3	543.7	544.0	544.2	544.5	544.6	544.9	544.5
140°	565.5	565.7	566.0	566.3	566.6	566.6	566.6	566.6	566.6	566.6	566.6
142.5°	586.8	587.0	587.3	587.6	587.9	588.0	587.8	587.7	587.6	587.5	587.5
145°	616.2	616.8	617.3	617.9	618.5	618.8	618.9	619.0	619.2	619.3	619.2
147.5°	645.5	646.1	646.7	647.5	648.1	648.4	648.2	648.2	648.0	647.9	647.8
150°	663.3	663.8	664.4	665.0	665.5	665.7	665.7	665.7	665.7	665.7	665.7
152.5°	680.2	680.5	680.8	681.1	681.4	681.7	681.8	681.9	682.0	682.1	682.5
155°	706.0	706.0	706.0	706.0	706.0	705.9	705.8	705.7	705.5	705.4	705.9
157.5°	727.9	727.5	727.3	727.1	726.8	726.7	726.7	726.7	726.6	726.6	727.0
160°	740.7	740.5	740.5	740.3	740.1	740.0	739.9	739.7	739.6	739.5	739.9
162.5°	752.6	752.3	751.9	751.5	751.1	750.9	750.8	750.7	750.5	750.4	751.1
165°	768.6	768.2	767.8	767.3	766.9	766.6	766.3	766.0	765.7	765.5	766.3
167.5°	780.9	780.2	779.7	779.1	778.6	778.2	778.2	778.3	778.3	778.3	779.2
170°	787.7	787.1	786.4	785.7	785.1	784.7	784.9	785.1	785.1	785.3	786.1
172.5°	792.7	792.2	791.5	791.0	790.4	790.1	790.2	790.2	790.2	790.3	791.2
175°	799.5	798.8	798.1	797.5	796.8	796.4	796.2	796.1	796.0	795.8	796.8
177.5°	801.8	801.2	800.7	800.1	799.5	799.3	799.3	799.3	799.3	799.3	800.0
180°	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7
2.5°	1573.0	1575.3	1577.6	1578.6	1578.3	1578.1	1577.9	1577.6
5°	1564.6	1567.7	1570.8	1572.1	1571.5	1571.0	1570.4	1569.8
7.5°	1547.2	1549.7	1552.1	1553.2	1552.9	1552.5	1552.2	1551.9
10°	1532.6	1534.9	1537.1	1537.9	1537.4	1536.8	1536.2	1535.6
12.5°	1514.8	1517.3	1519.8	1520.6	1519.8	1519.0	1518.2	1517.4
15°	1480.8	1482.6	1484.2	1484.6	1483.8	1483.0	1482.1	1481.3
17.5°	1442.2	1443.3	1444.3	1444.5	1444.0	1443.4	1442.9	1442.3
20°	1413.4	1414.2	1415.1	1415.2	1414.7	1414.1	1413.6	1412.9
22.5°	1383.4	1384.9	1386.4	1386.6	1385.7	1384.7	1383.6	1382.6
25°	1333.9	1334.1	1334.4	1334.0	1332.8	1331.7	1330.6	1329.5
27.5°	1278.3	1277.6	1276.9	1275.9	1274.5	1273.1	1271.7	1270.3
30°	1239.9	1238.8	1237.7	1236.4	1235.0	1233.7	1232.2	1230.8
32.5°	1201.0	1199.7	1198.3	1197.0	1195.6	1194.1	1192.8	1191.4
35°	1139.6	1137.7	1135.7	1134.0	1132.6	1131.2	1129.7	1128.4
37.5°	1075.2	1073.1	1071.0	1069.0	1067.1	1065.2	1063.4	1061.5
40°	1030.4	1027.5	1024.8	1022.6	1021.3	1019.9	1018.4	1017.0
42.5°	987.0	983.7	980.5	978.3	977.4	976.4	975.5	974.5
45°	919.8	916.7	913.6	911.6	910.8	909.9	909.1	908.2
47.5°	854.8	851.3	847.8	844.9	842.8	840.7	838.5	836.4
50°	809.3	805.3	801.5	798.6	796.9	795.3	793.5	791.9
52.5°	762.6	759.1	755.7	752.9	750.8	748.6	746.5	744.3
55°	694.0	690.7	687.3	684.8	683.1	681.4	679.7	678.0
57.5°	625.3	622.1	618.9	616.5	614.9	613.2	611.6	610.0
60°	578.1	575.6	573.1	571.1	569.7	568.2	566.9	565.5
62.5°	532.0	529.7	527.4	525.5	524.1	522.7	521.3	519.9
65°	464.9	462.2	459.3	457.2	455.8	454.4	453.0	451.6
67.5°	395.9	393.2	390.5	388.9	388.5	388.1	387.7	387.3
70°	352.2	350.0	347.7	346.2	345.3	344.5	343.6	342.8
72.5°	308.6	306.8	305.0	303.6	302.9	302.0	301.1	300.3
75°	245.7	244.5	243.4	242.7	242.5	242.2	241.9	241.6
77.5°	186.0	185.7	185.4	184.8	184.1	183.4	182.6	181.9
80°	148.1	147.6	147.0	146.6	146.3	146.0	145.8	145.4
82.5°	114.2	113.8	113.5	113.2	112.9	112.6	112.3	112.1
85°	65.8	65.8	65.8	65.7	65.4	65.0	64.8	64.5
87.5°	27.3	27.5	27.6	27.8	27.8	27.9	28.0	28.0
90°	15.3	16.1	17.0	17.5	17.7	18.1	18.3	18.6
92.5°	25.5	26.0	26.5	26.9	27.0	27.2	27.3	27.5
95°	47.9	48.3	48.7	49.0	49.0	49.0	49.0	49.0
97.5°	75.4	75.9	76.4	76.7	76.7	76.7	76.7	76.7
100°	95.3	95.6	95.9	96.0	96.0	96.0	96.0	96.0
102.5°	116.4	116.7	117.1	117.3	117.5	117.6	117.7	117.8
105°	148.2	148.6	149.0	149.5	149.9	150.3	150.7	151.1
107.5°	182.8	183.1	183.5	183.7	183.6	183.6	183.6	183.5
110°	205.7	205.4	205.1	205.2	205.7	206.0	206.4	206.8





TEST NUMBER: P332695-927

CATALOG NUMBER: SA4XXDIP-C1195D810U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	230.4	230.4	230.3	230.3	230.4	230.4	230.5	230.6
115°	268.5	268.4	268.2	268.1	268.0	267.8	267.7	267.5
117.5°	305.1	304.7	304.2	303.8	303.6	303.2	303.0	302.7
120°	329.9	329.2	328.6	328.4	328.7	328.9	329.2	329.5
122.5°	355.1	354.7	354.3	353.8	353.2	352.8	352.3	351.8
125°	392.1	391.8	391.6	391.3	391.0	390.7	390.5	390.1
127.5°	427.4	427.1	426.8	426.6	426.4	426.2	426.0	425.7
130°	452.2	451.9	451.6	451.2	450.7	450.1	449.6	449.0
132.5°	475.5	475.2	474.9	474.7	474.4	474.2	474.0	473.8
135°	510.4	510.1	509.8	509.5	509.1	508.7	508.3	507.9
137.5°	544.2	543.8	543.4	543.3	543.4	543.4	543.5	543.7
140°	566.4	566.3	566.1	566.0	565.9	565.7	565.5	565.5
142.5°	587.4	587.4	587.4	587.3	587.3	587.3	587.2	587.2
145°	619.0	618.9	618.8	618.5	618.1	617.7	617.3	616.9
147.5°	647.7	647.6	647.5	647.4	647.2	647.1	647.0	646.8
150°	665.7	665.7	665.7	665.7	665.6	665.4	665.3	665.1
152.5°	682.8	683.1	683.4	683.4	683.1	682.7	682.4	682.0
155°	706.5	707.0	707.6	707.6	707.0	706.5	705.9	705.4
157.5°	727.4	727.9	728.3	728.2	727.8	727.3	726.8	726.4
160°	740.3	740.7	741.1	741.0	740.3	739.6	738.9	738.2
162.5°	751.9	752.6	753.4	753.4	752.7	752.0	751.3	750.6
165°	767.1	767.9	768.8	768.9	768.3	767.8	767.2	766.8
167.5°	780.0	780.9	781.6	781.6	780.8	779.9	779.1	778.2
170°	787.0	787.7	788.6	788.5	787.6	786.6	785.6	784.7
172.5°	792.1	793.1	794.0	794.0	793.1	792.0	791.1	790.1
175°	797.7	798.7	799.7	799.7	798.7	797.7	796.8	795.8
177.5°	800.8	801.6	802.4	802.3	801.5	800.6	799.7	798.8
180°	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7

(END OF REPORT)