

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: P332370-927

Luminaire Tested: **S123RDIP-S1165D585U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332370-927  
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: S123RDIP-S1165D585U927-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5064.0 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Semi-Direct

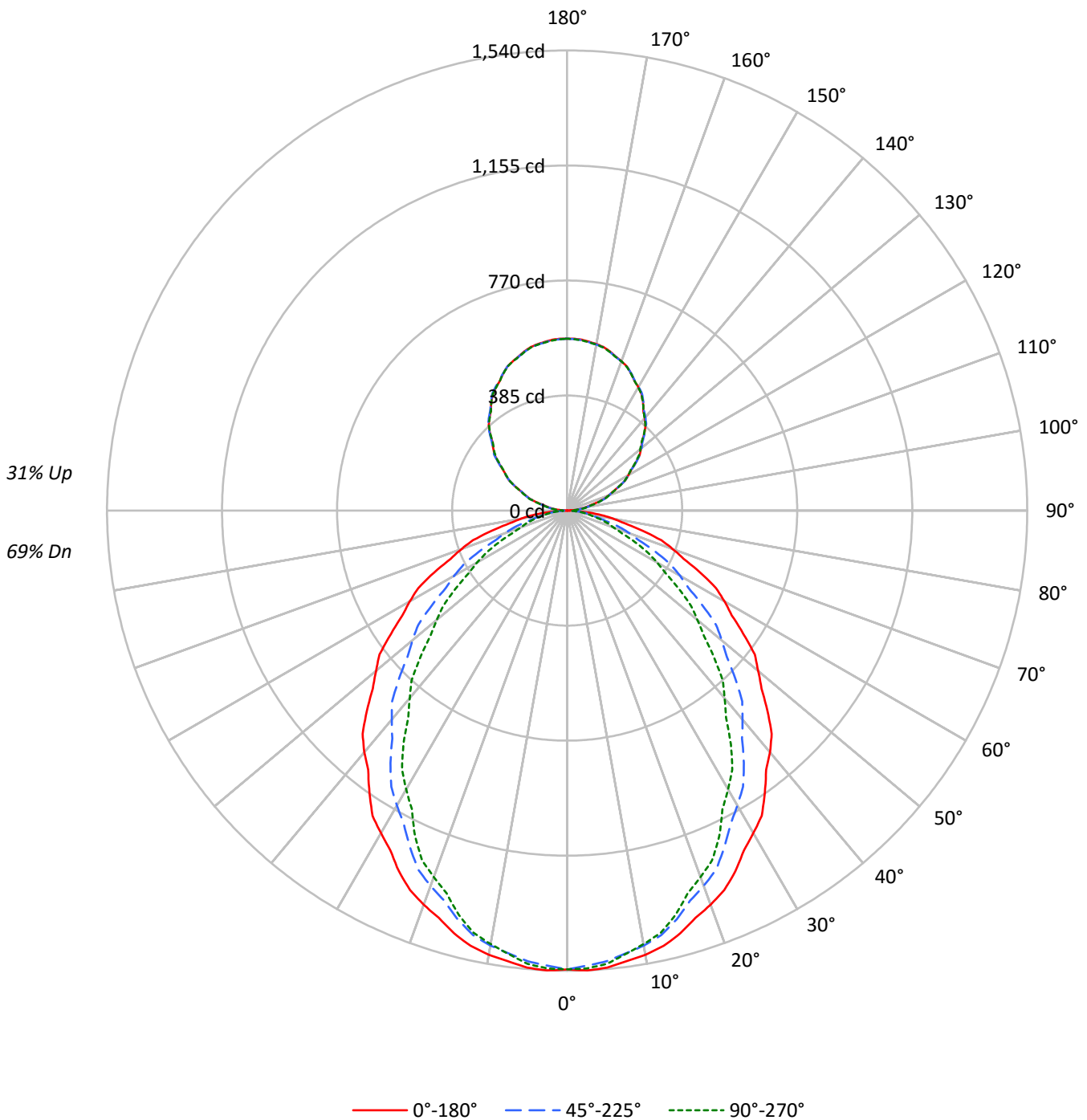
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	102	98	94	91	97	93	89	86	83	80	78	74	72	70	65	64	63	59
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	58	56	53	50
3	86	76	69	63	81	72	66	60	65	60	55	58	54	51	52	49	46	43
4	79	68	60	54	74	64	57	52	58	52	48	52	48	44	47	43	40	37
5	72	61	53	46	68	58	50	45	52	46	42	47	42	38	42	38	35	32
6	67	55	47	41	63	52	45	39	47	41	37	43	38	34	38	34	31	29
7	62	50	42	36	59	47	40	35	43	37	32	39	34	30	35	31	28	26
8	58	45	37	32	55	43	36	31	39	33	29	36	31	27	32	28	25	23
9	54	42	34	29	51	40	33	28	36	30	26	33	28	24	30	26	23	21
10	51	38	31	26	48	37	30	25	34	28	24	31	26	22	28	24	21	19

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

	0°	45°	90°
0°	16527	16527	16527
5°	16590	16361	16455
10°	16497	16156	16101
15°	16319	15778	15611
20°	16076	15306	14948
25°	15824	14775	14301
30°	15493	14162	13387
35°	15152	13548	12550
40°	14838	12826	11514
45°	14425	12113	10577
50°	13971	11302	9530
55°	13508	10376	8552
60°	13082	9384	7481
65°	12528	8308	6406
70°	11833	6977	5174
75°	10821	5490	4870
80°	9651	4860	4475
85°	8151	4310	4001



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.2	2.8
10°-20°	401.2	7.9
20°-30°	577.6	11.4
30°-40°	650.7	12.8
40°-50°	622.5	12.3
50°-60°	509.7	10.1
60°-70°	343.9	6.8
70°-80°	173.0	3.4
80°-90°	47.5	0.9
90°-100°	37.5	0.7
100°-110°	112.2	2.2
110°-120°	190.8	3.8
120°-130°	250.9	5.0
130°-140°	282.0	5.6
140°-150°	277.2	5.5
150°-160°	233.4	4.6
160°-170°	155.4	3.1
170°-180°	54.4	1.1
0°-30°	1123.0	22.2
0°-40°	1773.6	35.0
0°-60°	2905.8	57.4
0°-90°	3470.3	68.5
90°-120°	340.4	6.7
90°-150°	1150.6	22.7
90°-180°	1594.0	31.5
0°-180°	5064.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1535	1529	1514	1525	1523	146
15°	1464	1450	1416	1410	1401	412
25°	1332	1300	1244	1219	1204	613
35°	1153	1106	1031	979	955	721
45°	948	889	796	727	695	731
55°	720	656	553	483	456	645
65°	492	422	326	268	252	487
75°	260	200	132	120	117	278
85°	66	40	35	32	32	74
90°	0	5	11	13	14	5
95°	27	30	33	35	35	30
105°	102	103	107	107	108	109
115°	192	193	192	193	192	190
125°	281	282	282	280	278	251
135°	365	367	367	365	364	281
145°	442	443	445	444	442	276
155°	506	507	507	508	506	233
165°	552	550	550	553	550	155
175°	574	572	572	574	572	54
180°	575	575	575	575	575	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1540.4	1539.4	1538.6	1537.7	1536.8	1535.0	1532.4	1529.7	1527.1	1524.4	1526.9
5°	1535.4	1534.0	1532.6	1531.2	1529.9	1527.5	1524.2	1520.8	1517.5	1514.2	1516.7
7.5°	1521.1	1519.7	1518.2	1516.7	1515.2	1512.3	1508.0	1503.6	1499.4	1495.0	1496.4
10°	1509.3	1507.3	1505.4	1503.4	1501.5	1498.0	1493.0	1488.0	1483.0	1478.1	1478.4
12.5°	1492.3	1490.2	1488.0	1485.8	1483.7	1479.6	1473.5	1467.4	1461.3	1455.2	1455.0
15°	1464.4	1461.3	1458.3	1455.2	1452.2	1446.8	1439.1	1431.3	1423.6	1415.9	1414.4
17.5°	1429.3	1425.8	1422.2	1418.6	1415.2	1408.4	1398.6	1388.7	1378.9	1369.0	1366.1
20°	1403.4	1399.0	1394.6	1390.1	1385.7	1378.2	1367.7	1357.2	1346.6	1336.2	1332.5
22.5°	1374.5	1369.4	1364.3	1359.2	1354.2	1346.0	1334.8	1323.7	1312.5	1301.2	1296.8
25°	1332.4	1325.5	1318.6	1311.6	1304.7	1294.9	1282.1	1269.5	1256.7	1244.0	1238.2
27.5°	1281.4	1273.7	1266.1	1258.5	1250.8	1239.9	1225.7	1211.6	1197.4	1183.2	1175.1
30°	1246.5	1238.2	1229.9	1221.5	1213.3	1201.3	1185.9	1170.4	1154.9	1139.4	1130.0
32.5°	1211.6	1202.2	1192.8	1183.4	1174.0	1161.1	1144.7	1128.3	1111.9	1095.6	1085.3
35°	1153.1	1143.1	1133.1	1123.2	1113.3	1099.7	1082.5	1065.4	1048.2	1031.0	1019.1
37.5°	1093.8	1082.8	1071.7	1060.6	1049.6	1034.8	1016.5	998.2	979.9	961.6	948.1
40°	1056.0	1043.8	1031.6	1019.5	1007.3	991.3	971.7	952.0	932.4	912.8	898.3
42.5°	1013.1	1000.9	988.8	976.6	964.4	948.2	927.9	907.5	887.2	867.0	851.2
45°	947.6	935.2	922.7	910.3	897.8	880.9	859.6	838.3	817.0	795.7	779.9
47.5°	882.1	868.5	854.8	841.1	827.4	809.9	788.6	767.3	746.0	724.8	707.6
50°	834.3	821.3	808.3	795.3	782.3	764.6	742.2	719.8	697.4	674.9	657.7
52.5°	791.5	777.4	763.3	749.2	735.0	716.8	694.7	672.5	650.3	628.1	610.3
55°	719.8	706.2	692.6	679.1	665.5	647.0	623.4	599.9	576.4	552.9	536.9
57.5°	653.5	638.7	623.9	609.2	594.4	575.2	551.6	527.9	504.3	480.7	465.5
60°	607.7	592.5	577.3	562.1	546.8	527.7	504.7	481.8	458.8	435.9	420.9
62.5°	561.8	546.6	531.4	516.2	501.0	481.9	458.9	435.9	413.0	390.0	376.0
65°	491.9	476.7	461.4	446.2	431.0	412.6	391.0	369.4	347.8	326.2	312.7
67.5°	421.9	406.5	391.1	375.7	360.4	342.3	321.6	300.9	280.2	259.5	249.4
70°	376.0	361.2	346.2	331.2	316.3	299.1	279.8	260.4	241.1	221.7	212.0
72.5°	330.3	315.5	300.8	286.1	271.3	255.2	237.6	220.0	202.4	184.8	176.9
75°	260.2	247.0	233.7	220.4	207.2	192.9	177.7	162.4	147.2	132.0	129.2
77.5°	196.5	184.5	172.5	160.5	148.5	137.5	127.8	118.0	108.1	98.4	96.9
80°	155.7	144.3	132.9	121.6	110.3	101.7	95.9	90.1	84.3	78.4	77.6
82.5°	116.8	107.0	97.2	87.4	77.6	71.4	68.7	65.9	63.2	60.5	59.7
85°	66.0	59.9	53.8	47.8	41.7	38.2	37.4	36.5	35.7	34.9	34.3
87.5°	24.0	21.8	19.6	17.3	15.1	14.1	14.3	14.6	14.9	15.1	15.0
90°	0.5	1.4	2.5	3.5	4.4	5.6	6.9	8.2	9.5	10.9	11.2
92.5°	10.9	11.6	12.3	13.0	13.7	14.4	15.1	15.8	16.6	17.3	17.7
95°	26.7	27.3	28.0	28.8	29.5	30.3	31.1	31.8	32.6	33.4	33.8
97.5°	47.4	47.8	48.4	49.0	49.4	50.0	50.5	51.2	51.7	52.4	52.8
100°	61.5	62.0	62.7	63.3	63.8	64.4	64.9	65.4	65.9	66.4	66.7
102.5°	77.7	78.1	78.4	78.8	79.1	79.7	80.3	81.0	81.7	82.3	82.6
105°	101.6	101.9	102.0	102.3	102.5	103.0	103.9	104.8	105.8	106.6	106.6
107.5°	129.5	129.6	129.8	129.8	130.0	130.2	130.6	130.9	131.3	131.7	132.0
110°	146.9	147.0	147.3	147.4	147.7	147.8	148.1	148.3	148.5	148.7	149.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	164.9	165.0	165.2	165.2	165.4	165.5	165.6	165.6	165.6	165.6	166.1
115°	192.0	192.3	192.7	193.0	193.2	193.3	193.1	192.9	192.7	192.5	192.6
117.5°	219.4	219.5	219.8	219.9	220.1	220.1	219.8	219.6	219.4	219.0	219.0
120°	236.3	236.9	237.5	238.1	238.8	238.8	238.3	237.8	237.3	236.8	236.7
122.5°	254.1	254.4	254.9	255.3	255.8	255.9	255.6	255.4	255.1	254.8	254.6
125°	281.1	281.4	281.6	281.9	282.3	282.3	282.1	281.9	281.7	281.5	281.1
127.5°	306.0	306.7	307.3	307.9	308.6	308.8	308.6	308.3	308.1	307.9	307.4
130°	322.7	323.4	324.2	325.0	325.8	326.1	325.8	325.5	325.2	324.9	324.5
132.5°	339.2	340.1	340.9	341.7	342.5	342.8	342.5	342.3	342.1	341.9	341.4
135°	364.6	365.3	365.8	366.5	367.0	367.3	367.2	367.1	367.0	366.9	366.5
137.5°	388.2	388.6	389.1	389.7	390.1	390.5	390.8	391.0	391.3	391.6	391.2
140°	404.4	404.9	405.4	405.9	406.4	406.7	406.8	406.9	407.0	407.1	407.0
142.5°	419.2	419.7	420.3	420.7	421.2	421.6	421.8	421.9	422.2	422.3	422.2
145°	442.4	442.6	442.8	443.0	443.1	443.4	443.7	444.0	444.3	444.7	444.5
147.5°	462.6	463.0	463.3	463.7	464.1	464.4	464.7	464.9	465.2	465.5	465.5
150°	476.7	476.9	477.1	477.3	477.5	477.7	477.9	478.1	478.3	478.5	478.5
152.5°	488.3	488.5	488.9	489.1	489.4	489.6	489.7	489.8	490.0	490.0	490.2
155°	506.5	506.5	506.5	506.5	506.5	506.6	506.7	506.8	506.9	507.0	507.4
157.5°	522.0	522.0	521.8	521.7	521.6	521.6	521.7	521.7	521.8	521.9	522.3
160°	531.8	531.6	531.4	531.2	531.0	530.9	530.9	530.9	530.9	530.9	531.4
162.5°	540.5	540.2	540.0	539.6	539.4	539.3	539.4	539.5	539.6	539.6	540.1
165°	551.7	551.4	551.1	550.8	550.5	550.3	550.3	550.3	550.3	550.3	551.0
167.5°	560.6	560.2	559.8	559.4	559.0	558.9	559.0	559.0	559.1	559.2	559.8
170°	565.7	565.3	564.9	564.5	564.1	563.9	563.9	563.9	563.9	563.9	564.6
172.5°	569.7	569.3	568.9	568.5	568.1	567.9	567.9	567.9	567.9	567.9	568.5
175°	573.9	573.5	573.1	572.7	572.3	572.0	572.0	572.0	572.0	572.0	572.7
177.5°	575.6	575.3	575.0	574.6	574.3	574.1	574.1	574.1	574.1	574.1	574.6
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1529.3	1531.8	1534.1	1535.2	1534.7	1534.3	1533.8	1533.3
5°	1519.2	1521.7	1524.2	1525.1	1524.6	1524.0	1523.4	1522.9
7.5°	1497.8	1499.2	1500.6	1500.8	1499.8	1498.9	1497.9	1497.0
10°	1478.7	1478.9	1479.2	1478.7	1477.3	1475.9	1474.5	1473.1
12.5°	1454.8	1454.7	1454.5	1453.7	1452.1	1450.4	1448.8	1447.2
15°	1413.1	1411.7	1410.3	1408.7	1406.7	1404.8	1402.8	1400.9
17.5°	1363.2	1360.2	1357.2	1354.4	1351.5	1348.6	1345.8	1342.8
20°	1329.0	1325.3	1321.8	1318.3	1314.9	1311.6	1308.4	1305.0
22.5°	1292.3	1287.9	1283.3	1279.5	1276.4	1273.4	1270.3	1267.2
25°	1232.4	1226.5	1220.8	1216.3	1213.3	1210.2	1207.2	1204.1
27.5°	1167.0	1159.0	1150.9	1144.5	1139.9	1135.3	1130.6	1125.9
30°	1120.5	1111.2	1101.8	1094.9	1090.4	1086.0	1081.6	1077.1
32.5°	1075.0	1064.7	1054.4	1046.9	1042.3	1037.6	1033.0	1028.3
35°	1007.3	995.4	983.5	975.0	970.0	965.0	960.0	955.1
37.5°	934.5	921.1	907.5	897.7	891.6	885.4	879.3	873.1
40°	884.0	869.6	855.2	844.9	838.4	832.1	825.8	819.4
42.5°	835.5	819.8	804.1	793.4	787.7	782.0	776.3	770.6
45°	764.1	748.4	732.6	721.4	714.8	708.1	701.5	694.8
47.5°	690.4	673.3	656.1	644.6	638.7	632.7	626.8	620.9
50°	640.6	623.4	606.3	594.5	588.2	581.8	575.4	569.1
52.5°	592.5	574.6	556.8	545.0	539.3	533.7	528.0	522.3
55°	520.8	504.7	488.7	477.9	472.4	466.8	461.3	455.7
57.5°	450.4	435.1	420.0	410.0	405.4	400.7	395.9	391.3
60°	405.9	391.0	376.0	366.2	361.6	356.8	352.1	347.5
62.5°	361.9	347.8	333.7	324.3	319.3	314.4	309.5	304.6
65°	299.1	285.6	272.0	263.7	260.7	257.6	254.6	251.5
67.5°	239.2	229.1	219.0	212.3	209.1	205.7	202.5	199.2
70°	202.2	192.6	182.9	176.6	173.5	170.5	167.4	164.4
72.5°	169.0	161.1	153.1	148.5	147.3	146.0	144.7	143.5
75°	126.4	123.7	120.9	119.3	118.7	118.2	117.6	117.1
77.5°	95.4	93.9	92.4	91.3	90.8	90.2	89.7	89.1
80°	76.8	76.0	75.1	74.5	73.9	73.4	72.8	72.2
82.5°	58.9	58.1	57.2	56.7	56.6	56.5	56.4	56.3
85°	33.7	33.2	32.6	32.4	32.4	32.4	32.4	32.4
87.5°	14.8	14.7	14.6	14.4	14.2	14.0	13.9	13.7
90°	11.6	12.0	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	18.0	18.3	18.6	18.8	18.6	18.5	18.4	18.2
95°	34.2	34.6	35.0	35.3	35.3	35.3	35.3	35.3
97.5°	53.2	53.7	54.2	54.3	54.3	54.3	54.3	54.2
100°	67.0	67.3	67.7	67.9	68.0	68.3	68.4	68.7
102.5°	82.9	83.3	83.5	83.7	83.7	83.6	83.6	83.5
105°	106.6	106.6	106.6	106.7	106.9	107.1	107.3	107.6
107.5°	132.3	132.6	132.9	133.1	132.9	132.8	132.7	132.6
110°	149.5	149.9	150.3	150.4	150.2	150.0	149.8	149.6





TEST NUMBER: P332370-927

CATALOG NUMBER: S123RDIP-S1165D585U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	166.6	167.1	167.5	167.8	167.8	167.7	167.7	167.6
115°	192.7	192.8	192.9	192.9	192.8	192.7	192.6	192.5
117.5°	219.0	219.0	219.0	218.8	218.6	218.2	218.0	217.7
120°	236.5	236.5	236.4	236.2	236.0	235.8	235.6	235.4
122.5°	254.3	254.1	253.8	253.5	253.3	252.9	252.7	252.4
125°	280.7	280.3	279.9	279.5	279.1	278.7	278.3	277.9
127.5°	306.7	306.2	305.6	305.1	304.7	304.2	303.7	303.2
130°	324.1	323.7	323.3	322.7	322.0	321.3	320.6	319.9
132.5°	340.9	340.4	339.9	339.5	338.9	338.3	337.8	337.2
135°	366.1	365.7	365.3	365.0	364.8	364.6	364.4	364.2
137.5°	390.7	390.3	389.9	389.5	389.1	388.7	388.3	387.9
140°	406.9	406.8	406.7	406.3	405.6	404.9	404.2	403.5
142.5°	422.1	422.0	421.9	421.6	421.0	420.5	419.9	419.4
145°	444.4	444.3	444.3	443.9	443.5	443.1	442.8	442.4
147.5°	465.5	465.5	465.5	465.2	464.6	464.0	463.4	462.8
150°	478.5	478.5	478.5	478.2	477.6	477.0	476.4	475.8
152.5°	490.4	490.6	490.8	490.5	490.0	489.5	489.0	488.5
155°	507.8	508.2	508.6	508.4	507.7	507.0	506.4	505.6
157.5°	522.8	523.2	523.6	523.5	522.9	522.4	521.8	521.3
160°	532.0	532.4	532.9	533.0	532.6	532.2	531.8	531.4
162.5°	540.6	541.1	541.6	541.5	540.9	540.3	539.6	539.0
165°	551.6	552.2	552.8	552.7	552.0	551.3	550.6	549.9
167.5°	560.5	561.1	561.7	561.7	561.1	560.5	559.8	559.2
170°	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9
172.5°	569.1	569.7	570.4	570.4	569.7	568.9	568.2	567.5
175°	573.2	573.9	574.5	574.4	573.7	573.0	572.3	571.6
177.5°	575.1	575.6	576.1	576.0	575.4	574.9	574.3	573.8
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

(END OF REPORT)