

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: P332375-927

Luminaire Tested: **S123RDIP-S1165D805U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332375-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D805U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6013.0 lumens
Efficiency: N/A
Efficacy: 99.1 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: General Diffuse

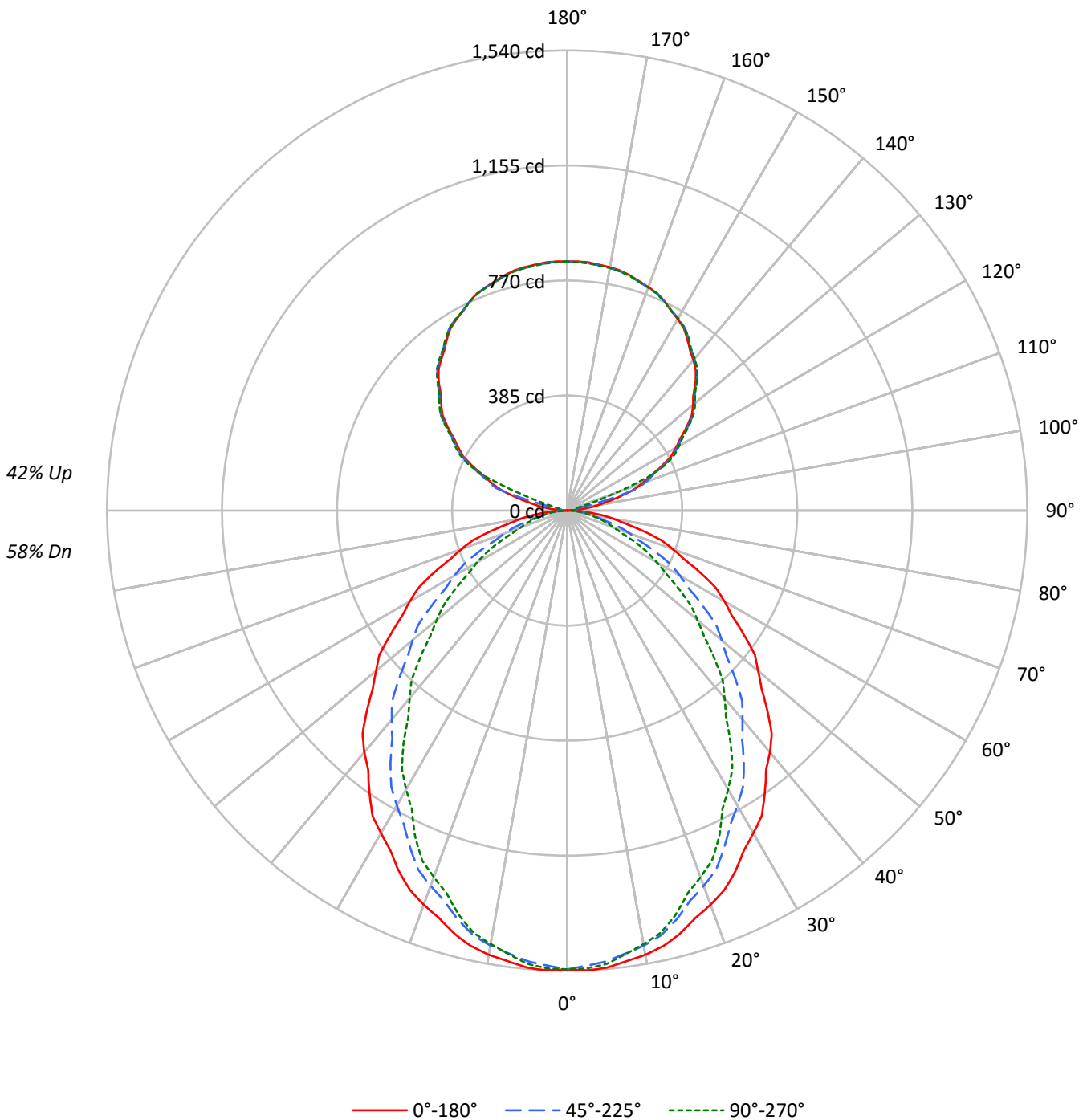
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	100	96	92	88	93	89	86	83	77	75	73	67	65	63	56	55	54	49
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46	42
3	83	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40	36
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	34	31
5	70	59	51	45	65	55	48	43	49	43	38	42	38	34	36	33	30	27
6	65	53	45	39	60	50	43	37	44	38	34	38	34	30	33	30	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24	21
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22	19
9	52	40	33	27	49	38	31	26	34	28	24	30	25	22	26	22	20	17
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18	16

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



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	2.4
10°-20°	401.2	6.7
20°-30°	577.6	9.6
30°-40°	650.7	10.8
40°-50°	622.5	10.4
50°-60°	509.7	8.5
60°-70°	343.9	5.7
70°-80°	173.0	2.9
80°-90°	48.1	0.8
90°-100°	30.3	0.5
100°-110°	144.4	2.4
110°-120°	347.0	5.8
120°-130°	441.8	7.3
130°-140°	472.1	7.9
140°-150°	441.4	7.3
150°-160°	356.1	5.9
160°-170°	229.8	3.8
170°-180°	79.2	1.3
0°-30°	1123.0	18.7
0°-40°	1773.6	29.5
0°-60°	2905.8	48.3
0°-90°	3470.9	57.7
90°-120°	521.7	8.7
90°-150°	1877.0	31.2
90°-180°	2542.0	42.3
0°-180°	6013.0	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°	1	7	15	17	19	5
95°	38	14	19	23	24	47
105°	185	188	136	32	27	196
115°	346	350	356	361	364	342
125°	488	493	495	497	498	436
135°	608	611	614	615	614	468
145°	701	705	707	708	708	439
155°	772	771	772	774	771	356
165°	814	813	812	816	812	230
175°	834	831	831	835	830	79
180°	834	834	834	834	834	



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

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	21.9	19.7	17.6	15.4	14.5	14.8	15.2	15.5	15.9	15.8
90°	0.6	2.0	3.4	4.8	6.1	7.7	9.5	11.2	13.1	14.9	15.4
92.5°	11.5	11.2	10.8	10.4	10.0	10.5	11.8	13.2	14.5	15.8	16.7
95°	37.8	32.2	26.5	20.8	15.2	13.2	14.7	16.2	17.7	19.2	20.2
97.5°	75.9	73.4	70.9	68.4	65.8	59.6	49.7	39.8	29.9	20.0	21.1
100°	104.6	107.4	110.2	112.9	115.7	106.3	84.8	63.4	41.9	20.4	21.5
102.5°	137.4	139.3	141.3	143.3	145.3	134.6	111.1	87.6	64.2	40.7	37.3
105°	184.6	186.1	187.6	189.1	190.6	185.2	172.8	160.4	148.0	135.6	111.3
107.5°	234.3	235.6	236.8	238.0	239.2	240.7	242.7	244.7	246.6	248.6	230.8
110°	267.5	268.6	269.7	270.8	272.0	273.2	274.8	276.3	277.8	279.3	274.8



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	299.3	300.2	301.3	302.2	303.2	304.4	306.0	307.5	309.0	310.5	310.6
115°	346.2	347.1	347.8	348.7	349.5	350.5	351.8	353.0	354.3	355.5	356.9
117.5°	391.7	392.7	393.7	394.7	395.7	396.6	397.2	397.8	398.5	399.1	400.2
120°	419.9	421.1	422.4	423.6	424.8	425.7	426.1	426.5	426.9	427.3	428.4
122.5°	448.6	449.6	450.7	451.7	452.7	453.4	454.0	454.6	455.0	455.6	456.4
125°	488.1	489.1	490.2	491.3	492.4	493.3	493.8	494.3	494.9	495.4	495.7
127.5°	526.2	527.3	528.4	529.5	530.6	531.5	532.1	532.8	533.5	534.1	534.6
130°	549.9	551.0	552.2	553.3	554.4	555.2	555.7	556.3	556.8	557.4	557.9
132.5°	572.7	573.9	575.0	576.1	577.2	577.9	578.4	578.8	579.2	579.7	580.3
135°	607.5	608.4	609.2	610.1	610.9	611.6	612.1	612.7	613.2	613.8	614.2
137.5°	637.3	638.3	639.4	640.4	641.4	642.1	642.5	642.8	643.0	643.3	644.0
140°	657.1	657.9	658.8	659.6	660.4	661.0	661.5	661.9	662.3	662.7	663.2
142.5°	675.4	676.3	677.1	677.9	678.7	679.4	679.8	680.2	680.6	681.0	681.4
145°	701.1	702.0	703.0	703.9	705.0	705.5	705.8	706.1	706.4	706.6	706.9
147.5°	725.2	725.9	726.5	727.1	727.8	728.3	728.5	728.7	729.0	729.3	729.6
150°	740.1	740.5	740.9	741.3	741.7	742.1	742.4	742.7	742.9	743.2	743.5
152.5°	753.4	753.7	753.8	754.1	754.2	754.4	754.6	754.7	754.9	755.1	755.6
155°	772.3	772.1	771.7	771.5	771.2	771.1	771.3	771.4	771.5	771.7	772.4
157.5°	786.9	786.9	786.9	786.8	786.8	786.7	786.6	786.5	786.3	786.2	787.0
160°	795.8	795.7	795.6	795.4	795.3	795.1	795.0	794.9	794.7	794.6	795.4
162.5°	804.2	803.9	803.5	803.2	802.8	802.6	802.4	802.3	802.2	802.0	803.0
165°	814.4	814.0	813.6	813.2	812.8	812.5	812.4	812.2	812.1	811.9	813.0
167.5°	822.4	821.8	821.3	820.7	820.1	819.8	819.8	819.8	819.8	819.8	820.9
170°	826.8	826.2	825.7	825.1	824.6	824.3	824.3	824.3	824.3	824.3	825.5
172.5°	829.7	829.1	828.5	827.8	827.1	826.9	827.0	827.0	827.2	827.3	828.4
175°	833.6	832.9	832.3	831.6	830.8	830.6	830.7	830.8	831.0	831.2	832.1
177.5°	834.6	834.1	833.5	833.0	832.4	832.2	832.3	832.4	832.5	832.6	833.5
180°	833.6	833.6	833.6	833.6	833.6	833.6	833.6	833.6	833.6	833.6	833.6



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

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°	15.7	15.6	15.4	15.4	15.2	15.0	14.8	14.7
90°	16.0	16.5	17.0	17.5	17.7	18.1	18.3	18.6
92.5°	17.6	18.5	19.4	19.9	20.0	20.2	20.4	20.6
95°	21.2	22.1	23.1	23.5	23.5	23.5	23.5	23.5
97.5°	22.2	23.2	24.3	25.0	25.1	25.3	25.3	25.5
100°	22.7	23.8	24.9	25.4	25.6	25.7	25.9	26.0
102.5°	33.9	30.5	27.1	25.5	25.7	26.0	26.2	26.5
105°	86.9	62.6	38.2	26.1	26.5	26.7	27.0	27.3
107.5°	212.9	195.0	177.1	159.0	140.7	122.3	103.9	85.6
110°	270.2	265.7	261.2	249.1	229.3	209.7	190.0	170.3



TEST NUMBER: P332375-927

CATALOG NUMBER: S123RDIP-S1165D805U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	310.7	310.8	310.9	308.8	304.7	300.5	296.4	292.2
115°	358.2	359.7	361.0	361.9	362.5	363.1	363.6	364.2
117.5°	401.3	402.4	403.5	404.1	404.3	404.3	404.4	404.6
120°	429.5	430.6	431.7	432.3	432.3	432.3	432.3	432.3
122.5°	457.1	457.9	458.7	459.1	459.2	459.3	459.5	459.5
125°	496.0	496.3	496.5	496.9	497.1	497.4	497.6	498.0
127.5°	535.0	535.4	535.8	535.9	535.7	535.4	535.1	534.9
130°	558.5	559.0	559.6	559.8	559.4	559.2	558.9	558.6
132.5°	580.7	581.3	581.9	581.9	581.6	581.2	580.8	580.4
135°	614.6	615.0	615.4	615.4	615.0	614.6	614.2	613.8
137.5°	644.7	645.3	646.0	646.2	645.9	645.6	645.4	645.1
140°	663.8	664.3	664.9	665.0	664.7	664.5	664.2	663.9
142.5°	681.9	682.3	682.8	682.8	682.4	682.0	681.7	681.3
145°	707.2	707.5	707.7	707.9	707.9	707.9	707.9	707.9
147.5°	729.8	730.2	730.4	730.2	729.6	729.0	728.3	727.7
150°	743.7	744.0	744.3	744.3	743.8	743.4	743.0	742.6
152.5°	756.1	756.5	757.1	757.0	756.4	755.7	755.1	754.5
155°	773.1	773.7	774.4	774.4	773.6	772.7	771.9	771.0
157.5°	787.8	788.6	789.5	789.3	788.3	787.2	786.2	785.1
160°	796.2	797.1	797.9	797.8	796.9	795.9	795.0	794.0
162.5°	803.9	804.9	805.7	805.8	804.9	804.1	803.3	802.4
165°	814.1	815.2	816.3	816.4	815.5	814.4	813.5	812.5
167.5°	822.0	823.2	824.3	824.3	823.2	822.0	820.9	819.8
170°	826.5	827.6	828.7	828.7	827.6	826.5	825.5	824.3
172.5°	829.5	830.6	831.7	831.6	830.4	829.3	828.0	826.8
175°	833.1	834.0	835.0	834.9	833.9	832.7	831.6	830.5
177.5°	834.4	835.3	836.1	836.1	835.0	833.9	832.7	831.6
180°	833.6	833.6	833.6	833.6	833.6	833.6	833.6	833.6

(END OF REPORT)