

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: P332375-930

Luminaire Tested: **S123RDIP-S1165D805U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332375-930
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-S1165D805U930-4F0-1E-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: 6188.5 lumens
Efficiency: N/A
Efficacy: 102.0 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

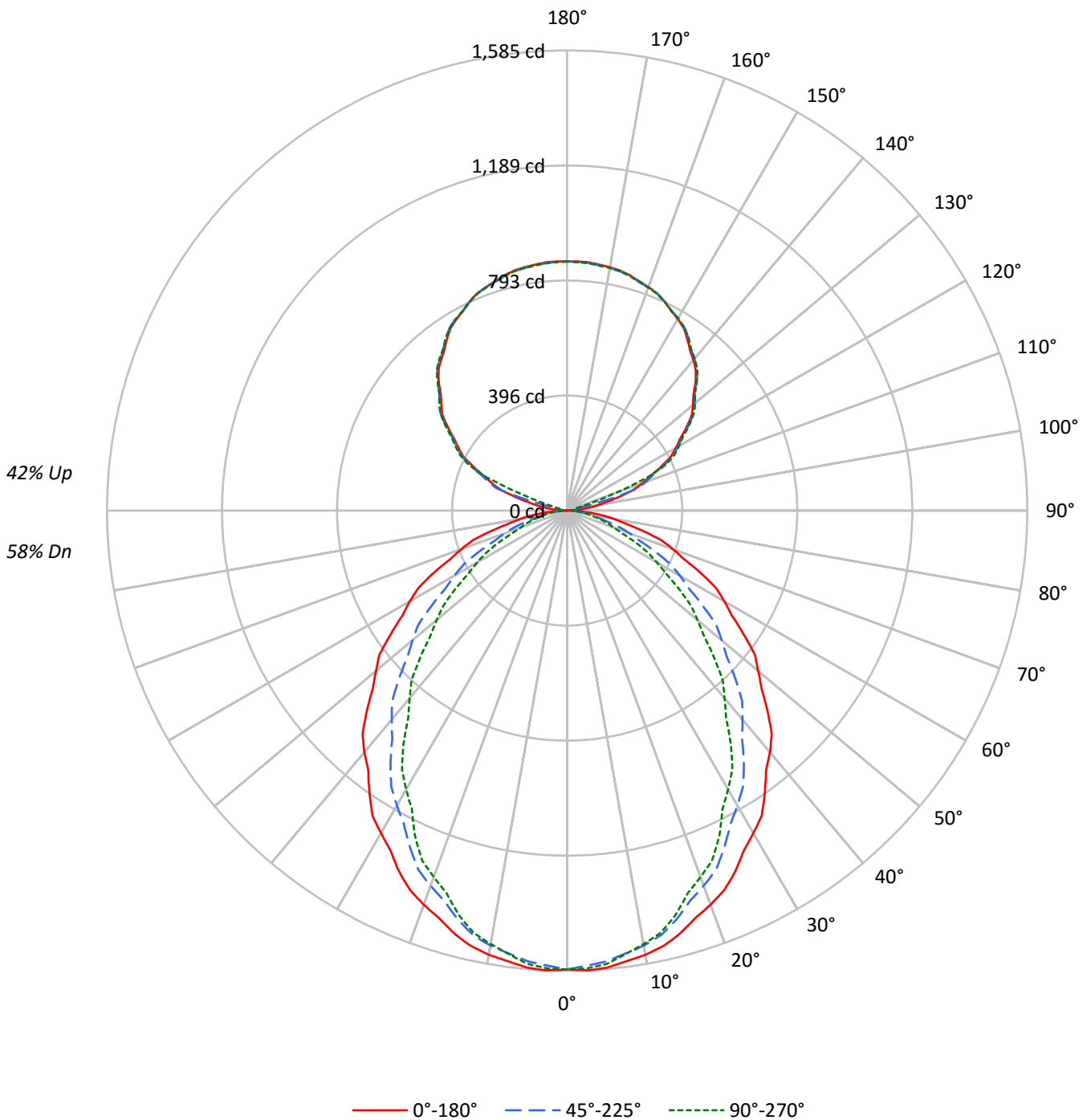
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	17009	17009	17009
5°	17074	16839	16935
10°	16978	16628	16571
15°	16796	16238	16067
20°	16544	15753	15385
25°	16286	15206	14719
30°	15945	14574	13779
35°	15594	13943	12917
40°	15271	13200	11849
45°	14846	12466	10886
50°	14380	11632	9808
55°	13902	10678	8801
60°	13464	9657	7698
65°	12893	8550	6594
70°	12180	7179	5325
75°	11137	5648	5011
80°	9930	5002	4612
85°	8386	4434	4113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	2.4
10°-20°	412.9	6.7
20°-30°	594.5	9.6
30°-40°	669.6	10.8
40°-50°	640.6	10.4
50°-60°	524.6	8.5
60°-70°	354.0	5.7
70°-80°	178.1	2.9
80°-90°	49.5	0.8
90°-100°	31.2	0.5
100°-110°	148.7	2.4
110°-120°	357.1	5.8
120°-130°	454.7	7.3
130°-140°	485.8	7.9
140°-150°	454.3	7.3
150°-160°	366.5	5.9
160°-170°	236.5	3.8
170°-180°	81.5	1.3
0°-30°	1155.7	18.7
0°-40°	1825.4	29.5
0°-60°	2990.6	48.3
0°-90°	3572.2	57.7
90°-120°	536.9	8.7
90°-150°	1931.8	31.2
90°-180°	2616.0	42.3
0°-180°	6188.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1580	1580	1580	1580	1580	
5°	1580	1573	1558	1569	1567	150
15°	1507	1492	1457	1451	1442	424
25°	1371	1338	1280	1254	1239	630
35°	1187	1139	1061	1008	983	742
45°	975	915	819	748	715	752
55°	741	675	569	497	469	664
65°	506	434	336	276	259	501
75°	268	206	136	124	120	286
85°	68	41	36	33	33	76
90°	1	7	15	18	19	5
95°	39	15	20	24	24	48
105°	190	193	140	33	28	201
115°	356	360	366	372	375	352
125°	502	507	510	511	512	448
135°	625	629	632	633	632	481
145°	722	726	727	728	729	451
155°	795	794	794	797	794	366
165°	838	836	836	840	836	237
175°	858	855	855	859	855	82
180°	858	858	858	858	858	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1585.3	1584.4	1583.5	1582.6	1581.7	1579.8	1577.1	1574.3	1571.7	1568.9	1571.4
5°	1580.2	1578.7	1577.4	1575.9	1574.5	1572.1	1568.6	1565.2	1561.8	1558.4	1561.0
7.5°	1565.5	1564.1	1562.5	1561.0	1559.4	1556.4	1552.0	1547.5	1543.1	1538.6	1540.1
10°	1553.3	1551.3	1549.3	1547.3	1545.3	1541.7	1536.6	1531.5	1526.3	1521.3	1521.5
12.5°	1535.9	1533.7	1531.4	1529.2	1527.0	1522.7	1516.5	1510.2	1503.9	1497.6	1497.5
15°	1507.2	1504.0	1500.9	1497.7	1494.6	1489.1	1481.1	1473.1	1465.1	1457.2	1455.7
17.5°	1471.0	1467.4	1463.7	1460.0	1456.5	1449.5	1439.4	1429.2	1419.1	1409.0	1406.0
20°	1444.3	1439.8	1435.3	1430.7	1426.1	1418.5	1407.6	1396.8	1385.9	1375.2	1371.4
22.5°	1414.6	1409.3	1404.1	1398.9	1393.7	1385.3	1373.8	1362.3	1350.8	1339.2	1334.6
25°	1371.3	1364.2	1357.1	1349.9	1342.8	1332.7	1319.6	1306.5	1293.4	1280.3	1274.3
27.5°	1318.7	1310.9	1303.0	1295.2	1287.3	1276.1	1261.5	1246.9	1232.3	1217.7	1209.4
30°	1282.9	1274.3	1265.8	1257.2	1248.7	1236.4	1220.5	1204.5	1188.6	1172.6	1162.9
32.5°	1247.0	1237.3	1227.6	1217.9	1208.3	1195.0	1178.1	1161.2	1144.4	1127.6	1117.0
35°	1186.7	1176.5	1166.2	1156.0	1145.7	1131.8	1114.1	1096.5	1078.8	1061.1	1048.9
37.5°	1125.8	1114.4	1102.9	1091.5	1080.2	1065.0	1046.2	1027.4	1008.5	989.6	975.8
40°	1086.8	1074.2	1061.7	1049.2	1036.7	1020.3	1000.0	979.8	959.6	939.4	924.5
42.5°	1042.7	1030.1	1017.7	1005.1	992.5	975.8	955.0	934.0	913.1	892.3	876.0
45°	975.3	962.5	949.7	936.9	924.0	906.6	884.7	862.7	840.8	818.9	802.7
47.5°	907.8	893.8	879.7	865.7	851.6	833.6	811.6	789.7	767.8	745.9	728.2
50°	858.7	845.3	831.8	818.5	805.1	786.9	763.9	740.8	717.7	694.6	676.9
52.5°	814.6	800.1	785.5	771.0	756.4	737.8	714.9	692.1	669.3	646.5	628.1
55°	740.8	726.8	712.8	698.9	684.9	665.9	641.6	617.4	593.2	569.0	552.5
57.5°	672.5	657.4	642.1	627.0	611.7	592.0	567.7	543.3	519.0	494.7	479.1
60°	625.4	609.8	594.1	578.5	562.7	543.1	519.4	495.9	472.2	448.6	433.2
62.5°	578.2	562.6	546.9	531.2	515.6	495.9	472.3	448.7	425.0	401.4	386.9
65°	506.2	490.6	474.9	459.3	443.6	424.6	402.4	380.2	358.0	335.7	321.8
67.5°	434.2	418.3	402.5	386.7	370.9	352.3	331.0	309.7	288.4	267.1	256.7
70°	387.0	371.7	356.3	340.9	325.5	307.9	288.0	268.0	248.1	228.1	218.2
72.5°	339.9	324.7	309.6	294.4	279.2	262.6	244.5	226.4	208.3	190.2	182.1
75°	267.8	254.2	240.5	226.8	213.2	198.5	182.9	167.1	151.5	135.8	133.0
77.5°	202.2	189.9	177.5	165.2	152.8	141.5	131.5	121.4	111.3	101.3	99.7
80°	160.2	148.5	136.8	125.1	113.5	104.7	98.7	92.7	86.7	80.7	79.9
82.5°	120.2	110.1	100.0	89.9	79.9	73.5	70.7	67.8	65.1	62.3	61.4
85°	67.9	61.6	55.4	49.2	42.9	39.3	38.5	37.6	36.8	35.9	35.3
87.5°	24.7	22.5	20.3	18.1	15.8	14.9	15.2	15.7	16.0	16.4	16.3
90°	0.7	2.0	3.5	4.9	6.3	7.9	9.8	11.6	13.5	15.3	15.9
92.5°	11.8	11.5	11.1	10.7	10.3	10.8	12.1	13.5	14.9	16.3	17.2
95°	38.9	33.1	27.2	21.4	15.7	13.5	15.1	16.6	18.2	19.7	20.8
97.5°	78.1	75.6	73.0	70.4	67.8	61.3	51.1	40.9	30.7	20.5	21.7
100°	107.7	110.6	113.4	116.2	119.0	109.4	87.3	65.2	43.1	21.0	22.2
102.5°	141.4	143.4	145.4	147.5	149.5	138.5	114.4	90.2	66.0	41.9	38.4
105°	190.0	191.5	193.1	194.6	196.2	190.6	177.8	165.1	152.3	139.6	114.5
107.5°	241.2	242.5	243.7	244.9	246.1	247.8	249.8	251.8	253.8	255.8	237.5
110°	275.3	276.5	277.6	278.8	279.9	281.2	282.8	284.4	285.9	287.5	282.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.0	309.0	310.1	311.0	312.1	313.3	315.0	316.5	318.0	319.6	319.7
115°	356.3	357.2	358.0	358.9	359.7	360.8	362.1	363.3	364.6	365.9	367.3
117.5°	403.1	404.1	405.2	406.3	407.2	408.1	408.8	409.4	410.1	410.7	411.9
120°	432.2	433.4	434.7	435.9	437.2	438.1	438.5	439.0	439.4	439.8	440.9
122.5°	461.7	462.8	463.8	464.9	465.9	466.7	467.2	467.8	468.3	468.9	469.7
125°	502.3	503.4	504.5	505.6	506.8	507.7	508.3	508.7	509.3	509.9	510.2
127.5°	541.5	542.7	543.8	544.9	546.1	547.0	547.6	548.4	549.0	549.7	550.2
130°	566.0	567.1	568.3	569.4	570.5	571.4	571.9	572.5	573.1	573.6	574.2
132.5°	589.5	590.6	591.7	592.9	594.0	594.8	595.3	595.7	596.1	596.6	597.2
135°	625.3	626.1	627.0	627.9	628.7	629.4	630.0	630.6	631.1	631.7	632.1
137.5°	655.9	657.0	658.0	659.1	660.1	660.9	661.2	661.5	661.8	662.1	662.8
140°	676.3	677.1	678.0	678.8	679.7	680.3	680.8	681.2	681.6	682.0	682.6
142.5°	695.1	696.0	696.8	697.7	698.5	699.2	699.6	700.0	700.4	700.9	701.3
145°	721.5	722.5	723.5	724.5	725.5	726.1	726.4	726.7	727.0	727.2	727.6
147.5°	746.4	747.1	747.7	748.4	749.0	749.5	749.7	750.0	750.3	750.6	750.9
150°	761.7	762.1	762.5	763.0	763.4	763.8	764.0	764.3	764.6	764.9	765.2
152.5°	775.4	775.7	775.8	776.1	776.2	776.4	776.6	776.7	777.0	777.1	777.6
155°	794.8	794.6	794.3	794.0	793.7	793.6	793.8	793.9	794.0	794.2	794.9
157.5°	809.8	809.8	809.8	809.8	809.8	809.7	809.5	809.4	809.3	809.1	810.0
160°	819.0	818.9	818.8	818.6	818.5	818.3	818.2	818.1	817.9	817.7	818.6
162.5°	827.7	827.4	827.0	826.6	826.2	826.0	825.8	825.7	825.6	825.4	826.4
165°	838.2	837.7	837.3	836.9	836.5	836.2	836.1	835.9	835.8	835.6	836.7
167.5°	846.4	845.8	845.2	844.7	844.1	843.8	843.8	843.8	843.8	843.8	844.9
170°	850.9	850.4	849.8	849.2	848.6	848.4	848.4	848.4	848.4	848.4	849.5
172.5°	853.9	853.3	852.6	851.9	851.3	851.0	851.1	851.2	851.3	851.4	852.6
175°	857.9	857.2	856.6	855.8	855.1	854.8	854.9	855.1	855.2	855.4	856.4
177.5°	858.9	858.4	857.9	857.3	856.7	856.5	856.6	856.7	856.8	856.9	857.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1573.9	1576.5	1578.9	1580.0	1579.5	1579.1	1578.6	1578.1
5°	1563.5	1566.1	1568.6	1569.6	1569.0	1568.5	1567.9	1567.3
7.5°	1541.5	1543.0	1544.3	1544.6	1543.6	1542.6	1541.6	1540.7
10°	1521.8	1522.1	1522.4	1521.8	1520.4	1519.0	1517.5	1516.1
12.5°	1497.3	1497.1	1497.0	1496.1	1494.4	1492.7	1491.1	1489.5
15°	1454.3	1452.9	1451.5	1449.8	1447.7	1445.8	1443.7	1441.8
17.5°	1403.0	1399.9	1396.9	1393.9	1390.9	1388.0	1385.0	1382.0
20°	1367.7	1364.0	1360.3	1356.7	1353.3	1349.9	1346.5	1343.1
22.5°	1330.0	1325.4	1320.8	1316.9	1313.7	1310.5	1307.3	1304.2
25°	1268.4	1262.3	1256.4	1251.8	1248.7	1245.5	1242.4	1239.3
27.5°	1201.1	1192.8	1184.5	1177.9	1173.1	1168.4	1163.6	1158.8
30°	1153.2	1143.6	1133.9	1126.8	1122.3	1117.7	1113.1	1108.6
32.5°	1106.4	1095.8	1085.2	1077.5	1072.7	1067.9	1063.2	1058.3
35°	1036.7	1024.4	1012.2	1003.5	998.3	993.2	988.1	983.0
37.5°	961.8	947.9	934.0	923.9	917.6	911.3	905.0	898.6
40°	909.8	895.0	880.2	869.5	862.9	856.4	849.9	843.3
42.5°	859.9	843.7	827.5	816.5	810.7	804.8	798.9	793.0
45°	786.4	770.2	754.0	742.5	735.6	728.8	721.9	715.1
47.5°	710.5	692.9	675.2	663.4	657.3	651.2	645.1	639.0
50°	659.3	641.6	623.9	611.9	605.4	598.8	592.2	585.7
52.5°	609.8	591.4	573.1	560.9	555.1	549.3	543.4	537.5
55°	536.0	519.4	503.0	491.9	486.2	480.5	474.7	469.0
57.5°	463.5	447.8	432.3	422.0	417.2	412.4	407.5	402.7
60°	417.8	402.4	387.0	376.9	372.1	367.2	362.4	357.6
62.5°	372.4	358.0	343.5	333.8	328.6	323.6	318.5	313.5
65°	307.9	293.9	280.0	271.4	268.3	265.1	262.0	258.9
67.5°	246.2	235.8	225.3	218.5	215.2	211.7	208.4	205.0
70°	208.1	198.2	188.3	181.7	178.6	175.5	172.3	169.2
72.5°	173.9	165.8	157.6	152.9	151.6	150.3	149.0	147.7
75°	130.1	127.3	124.4	122.8	122.2	121.6	121.1	120.5
77.5°	98.2	96.6	95.1	94.0	93.4	92.9	92.3	91.7
80°	79.0	78.2	77.3	76.6	76.1	75.5	74.9	74.4
82.5°	60.6	59.8	58.9	58.4	58.3	58.1	58.0	58.0
85°	34.7	34.2	33.6	33.3	33.3	33.3	33.3	33.3
87.5°	16.1	16.1	15.9	15.8	15.7	15.4	15.2	15.1
90°	16.5	17.0	17.5	18.0	18.3	18.6	18.8	19.2
92.5°	18.1	19.0	20.0	20.5	20.6	20.8	21.0	21.2
95°	21.8	22.7	23.7	24.2	24.2	24.2	24.2	24.2
97.5°	22.8	23.9	25.0	25.7	25.8	26.0	26.1	26.3
100°	23.3	24.5	25.6	26.2	26.3	26.5	26.7	26.7
102.5°	34.9	31.4	27.9	26.3	26.5	26.7	27.0	27.3
105°	89.4	64.4	39.3	26.9	27.2	27.5	27.8	28.0
107.5°	219.1	200.7	182.3	163.6	144.8	125.9	107.0	88.1
110°	278.1	273.5	268.8	256.3	236.0	215.8	195.5	175.3



TEST NUMBER: P332375-930

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.8	319.8	319.9	317.8	313.6	309.2	305.0	300.8
115°	368.7	370.1	371.5	372.5	373.1	373.7	374.2	374.8
117.5°	413.0	414.2	415.2	415.9	416.0	416.1	416.2	416.4
120°	442.1	443.2	444.3	444.9	444.9	444.9	444.9	444.9
122.5°	470.4	471.2	472.1	472.5	472.6	472.7	472.9	473.0
125°	510.5	510.8	511.0	511.4	511.6	511.9	512.2	512.5
127.5°	550.6	551.1	551.5	551.5	551.3	551.1	550.7	550.5
130°	574.8	575.4	575.9	576.1	575.8	575.5	575.2	574.9
132.5°	597.7	598.3	598.8	598.9	598.6	598.2	597.8	597.4
135°	632.5	632.9	633.3	633.3	632.9	632.5	632.1	631.7
137.5°	663.5	664.1	664.9	665.0	664.8	664.5	664.2	663.9
140°	683.1	683.7	684.3	684.4	684.1	683.9	683.5	683.3
142.5°	701.8	702.2	702.7	702.7	702.3	701.9	701.6	701.2
145°	727.8	728.1	728.4	728.6	728.6	728.6	728.6	728.6
147.5°	751.1	751.5	751.7	751.5	750.9	750.2	749.6	748.9
150°	765.4	765.7	766.0	766.0	765.5	765.1	764.7	764.3
152.5°	778.1	778.6	779.2	779.1	778.4	777.8	777.1	776.5
155°	795.7	796.3	797.0	797.0	796.1	795.2	794.4	793.5
157.5°	810.8	811.6	812.5	812.4	811.3	810.2	809.1	808.0
160°	819.5	820.4	821.2	821.1	820.1	819.1	818.2	817.2
162.5°	827.4	828.3	829.2	829.3	828.4	827.5	826.7	825.8
165°	837.9	839.0	840.2	840.2	839.3	838.2	837.2	836.3
167.5°	846.0	847.2	848.3	848.3	847.2	846.0	844.9	843.8
170°	850.6	851.7	852.9	852.9	851.7	850.6	849.5	848.4
172.5°	853.7	854.8	856.0	855.9	854.7	853.5	852.2	850.9
175°	857.4	858.3	859.3	859.2	858.2	857.0	855.9	854.8
177.5°	858.8	859.7	860.5	860.5	859.3	858.2	857.0	855.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9

(END OF REPORT)