

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: P332345-940

Luminaire Tested: **S123RDIP-S1000D805U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332345-940
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-S1000D805U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 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: 6244.7 lumens
Efficiency: N/A
Efficacy: 114.8 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

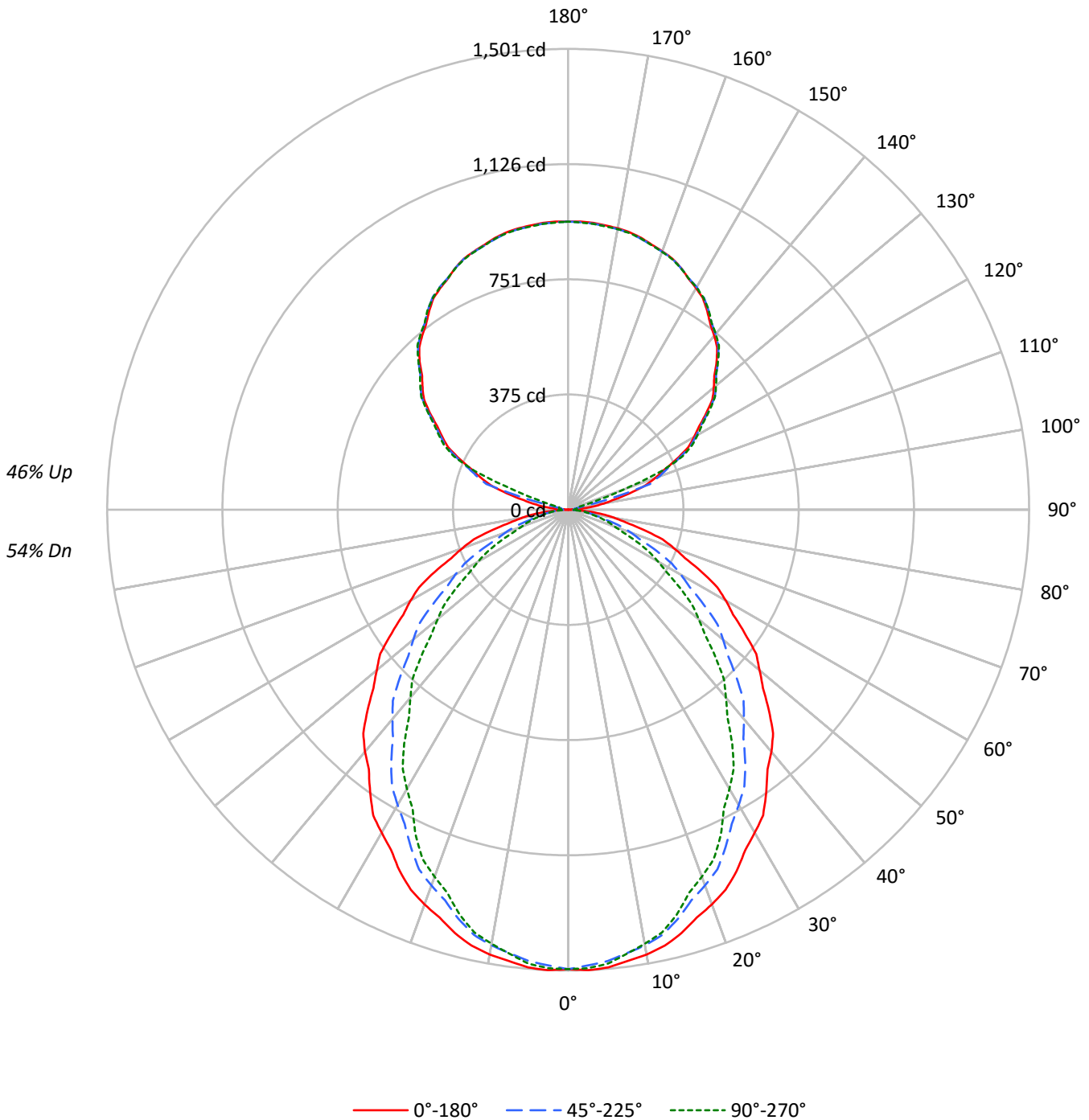
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	95	91	88	92	88	85	82	76	73	71	64	62	61	54	52	51	46
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	39
3	83	73	66	61	77	68	62	57	59	54	50	50	47	44	42	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	55	47	42	47	42	37	41	36	33	34	31	29	26
6	64	52	44	39	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	40	34	55	45	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	36	30	51	41	34	29	36	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	30	26	33	27	23	28	24	21	24	21	19	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16108	16108	16108
5°	16170	15946	16038
10°	16078	15746	15692
15°	15905	15377	15216
20°	15668	14917	14569
25°	15423	14400	13938
30°	15100	13803	13048
35°	14767	13205	12232
40°	14462	12500	11221
45°	14059	11805	10310
50°	13618	11015	9287
55°	13165	10113	8336
60°	12751	9145	7289
65°	12210	8099	6243
70°	11534	6801	5042
75°	10551	5352	4741
80°	9403	4736	4364
85°	7941	4199	3903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.3
10°-20°	391.0	6.3
20°-30°	563.0	9.0
30°-40°	634.1	10.2
40°-50°	606.7	9.7
50°-60°	496.8	8.0
60°-70°	335.2	5.4
70°-80°	168.6	2.7
80°-90°	47.2	0.8
90°-100°	34.1	0.5
100°-110°	162.6	2.6
110°-120°	390.6	6.3
120°-130°	497.3	8.0
130°-140°	531.4	8.5
140°-150°	496.9	8.0
150°-160°	400.8	6.4
160°-170°	258.7	4.1
170°-180°	89.2	1.4
0°-30°	1094.5	17.5
0°-40°	1728.6	27.7
0°-60°	2832.1	45.4
0°-90°	3383.2	54.2
90°-120°	587.3	9.4
90°-150°	2112.9	33.8
90°-180°	2862.0	45.8
0°-180°	6244.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1496	1490	1476	1486	1484	142
15°	1427	1413	1380	1374	1365	402
25°	1299	1267	1212	1188	1174	597
35°	1124	1078	1005	954	931	703
45°	924	867	776	709	677	712
55°	702	640	539	471	444	629
65°	479	411	318	261	245	474
75°	254	195	129	117	114	270
85°	64	39	34	32	32	72
90°	1	8	17	19	21	5
95°	42	16	22	26	26	53
105°	208	212	153	36	31	220
115°	390	394	400	407	410	385
125°	549	555	558	559	560	490
135°	684	688	691	693	691	526
145°	789	794	795	797	797	494
155°	869	868	869	872	868	400
165°	917	915	914	919	915	259
175°	938	935	936	940	935	89
180°	938	938	938	938	938	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1501.3	1500.4	1499.6	1498.7	1497.8	1496.1	1493.5	1490.9	1488.4	1485.8	1488.1
5°	1496.5	1495.0	1493.7	1492.4	1491.0	1488.7	1485.5	1482.3	1479.1	1475.8	1478.2
7.5°	1482.6	1481.1	1479.7	1478.2	1476.8	1473.9	1469.7	1465.5	1461.3	1457.1	1458.5
10°	1471.0	1469.1	1467.1	1465.3	1463.4	1460.0	1455.2	1450.3	1445.5	1440.6	1440.9
12.5°	1454.5	1452.3	1450.3	1448.1	1446.0	1442.0	1436.1	1430.1	1424.2	1418.3	1418.1
15°	1427.3	1424.3	1421.3	1418.4	1415.4	1410.2	1402.6	1395.0	1387.5	1379.9	1378.6
17.5°	1393.0	1389.6	1386.2	1382.7	1379.2	1372.7	1363.1	1353.5	1343.9	1334.3	1331.4
20°	1367.8	1363.5	1359.1	1354.9	1350.5	1343.3	1333.0	1322.8	1312.5	1302.3	1298.8
22.5°	1339.6	1334.7	1329.7	1324.7	1319.8	1311.9	1300.9	1290.0	1279.2	1268.3	1263.9
25°	1298.6	1291.9	1285.1	1278.4	1271.7	1262.0	1249.6	1237.2	1224.9	1212.5	1206.8
27.5°	1248.8	1241.4	1233.9	1226.5	1219.1	1208.4	1194.6	1180.8	1167.0	1153.2	1145.3
30°	1214.9	1206.8	1198.7	1190.6	1182.5	1170.9	1155.8	1140.7	1125.6	1110.5	1101.4
32.5°	1180.9	1171.7	1162.5	1153.3	1144.2	1131.7	1115.7	1099.7	1083.7	1067.7	1057.7
35°	1123.8	1114.1	1104.4	1094.8	1085.0	1071.7	1055.1	1038.3	1021.6	1004.9	993.3
37.5°	1066.0	1055.3	1044.5	1033.7	1022.9	1008.6	990.8	972.9	955.0	937.2	924.0
40°	1029.2	1017.4	1005.4	993.5	981.7	966.2	947.1	927.9	908.7	889.6	875.6
42.5°	987.4	975.5	963.7	951.8	940.0	924.2	904.4	884.6	864.8	845.0	829.6
45°	923.6	911.4	899.3	887.2	875.0	858.6	837.9	817.1	796.3	775.5	760.2
47.5°	859.8	846.4	833.1	819.7	806.5	789.4	768.7	747.9	727.1	706.3	689.6
50°	813.2	800.5	787.8	775.2	762.4	745.2	723.4	701.5	679.7	657.8	641.1
52.5°	771.4	757.7	743.9	730.1	716.4	698.7	677.1	655.4	633.8	612.2	594.8
55°	701.5	688.3	675.0	661.8	648.6	630.5	607.6	584.7	561.8	538.9	523.3
57.5°	636.9	622.5	608.1	593.7	579.3	560.6	537.5	514.5	491.5	468.5	453.7
60°	592.3	577.5	562.6	547.8	532.9	514.3	492.0	469.6	447.2	424.8	410.2
62.5°	547.6	532.8	517.9	503.1	488.3	469.7	447.3	424.9	402.5	380.1	366.4
65°	479.4	464.6	449.7	434.9	420.1	402.2	381.1	360.1	339.0	318.0	304.8
67.5°	411.2	396.2	381.2	366.2	351.2	333.6	313.4	293.3	273.1	252.9	243.1
70°	366.5	352.0	337.4	322.8	308.3	291.6	272.7	253.8	234.9	216.1	206.6
72.5°	321.8	307.6	293.2	278.8	264.5	248.7	231.6	214.5	197.2	180.1	172.4
75°	253.7	240.7	227.7	214.8	201.9	188.0	173.2	158.3	143.5	128.7	125.9
77.5°	191.5	179.8	168.1	156.4	144.7	134.0	124.5	114.9	105.4	95.9	94.4
80°	151.7	140.6	129.6	118.5	107.5	99.2	93.5	87.7	82.1	76.4	75.6
82.5°	113.9	104.3	94.8	85.2	75.6	69.6	66.9	64.3	61.6	58.9	58.1
85°	64.3	58.4	52.4	46.5	40.6	37.2	36.4	35.6	34.8	34.0	33.4
87.5°	23.5	21.4	19.4	17.2	15.2	14.4	14.8	15.2	15.6	16.0	15.9
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	12.9	12.6	12.1	11.7	11.2	11.8	13.3	14.8	16.3	17.8	18.8
95°	42.5	36.2	29.8	23.5	17.1	14.8	16.5	18.2	19.9	21.6	22.7
97.5°	85.4	82.7	79.8	77.0	74.1	67.1	55.9	44.8	33.6	22.5	23.7
100°	117.8	120.9	124.0	127.1	130.2	119.7	95.5	71.3	47.2	23.0	24.3
102.5°	154.6	156.9	159.1	161.3	163.5	151.5	125.1	98.6	72.2	45.8	42.0
105°	207.8	209.5	211.2	212.9	214.5	208.5	194.5	180.6	166.6	152.7	125.3
107.5°	263.8	265.2	266.5	267.9	269.2	271.0	273.2	275.4	277.6	279.8	259.8
110°	301.1	302.4	303.6	304.9	306.1	307.6	309.3	311.0	312.7	314.4	309.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	338.0	339.1	340.2	341.3	342.7	344.5	346.2	347.9	349.6	349.6
115°	389.7	390.7	391.6	392.5	393.4	394.6	396.0	397.3	398.8	400.2	401.7
117.5°	440.9	442.0	443.2	444.3	445.4	446.4	447.1	447.8	448.5	449.2	450.5
120°	472.7	474.0	475.5	476.8	478.2	479.2	479.7	480.1	480.5	481.0	482.2
122.5°	505.0	506.1	507.3	508.5	509.6	510.4	511.0	511.7	512.2	512.8	513.7
125°	549.4	550.5	551.8	553.0	554.3	555.3	555.9	556.4	557.1	557.7	558.0
127.5°	592.3	593.5	594.8	596.0	597.3	598.2	599.0	599.8	600.5	601.2	601.7
130°	619.0	620.3	621.5	622.8	624.0	624.9	625.5	626.2	626.8	627.4	628.0
132.5°	644.7	646.0	647.2	648.5	649.7	650.5	651.0	651.5	652.0	652.6	653.2
135°	683.9	684.8	685.7	686.7	687.6	688.4	689.0	689.6	690.3	690.9	691.3
137.5°	717.4	718.5	719.7	720.9	722.0	722.8	723.2	723.5	723.8	724.2	725.0
140°	739.7	740.6	741.5	742.4	743.4	744.0	744.6	745.0	745.5	745.9	746.5
142.5°	760.3	761.3	762.1	763.1	764.0	764.7	765.2	765.6	766.1	766.6	767.0
145°	789.2	790.2	791.3	792.4	793.5	794.2	794.5	794.8	795.1	795.4	795.8
147.5°	816.4	817.1	817.8	818.5	819.2	819.7	820.0	820.3	820.6	820.9	821.3
150°	833.0	833.6	834.0	834.5	834.9	835.4	835.6	836.0	836.2	836.6	836.9
152.5°	848.1	848.4	848.6	848.8	849.0	849.2	849.4	849.5	849.8	850.0	850.5
155°	869.3	869.1	868.7	868.4	868.1	868.0	868.2	868.3	868.4	868.6	869.4
157.5°	885.7	885.7	885.7	885.6	885.6	885.6	885.4	885.3	885.1	884.9	885.9
160°	895.8	895.6	895.5	895.4	895.2	895.0	894.9	894.7	894.6	894.4	895.4
162.5°	905.3	904.9	904.5	904.1	903.7	903.4	903.2	903.1	902.9	902.8	903.8
165°	916.8	916.2	915.8	915.3	914.9	914.5	914.4	914.3	914.1	913.9	915.2
167.5°	925.7	925.1	924.4	923.8	923.2	922.8	922.8	922.8	922.8	922.8	924.1
170°	930.7	930.1	929.4	928.8	928.2	927.9	927.9	927.9	927.9	927.9	929.2
172.5°	934.0	933.3	932.6	931.7	931.0	930.8	930.9	930.9	931.1	931.2	932.5
175°	938.3	937.5	936.8	936.0	935.2	935.0	935.0	935.2	935.4	935.6	936.7
177.5°	939.4	938.9	938.3	937.6	937.0	936.7	936.8	937.0	937.1	937.2	938.3
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1490.5	1492.9	1495.2	1496.2	1495.8	1495.4	1495.0	1494.5
5°	1480.7	1483.1	1485.5	1486.5	1485.9	1485.4	1484.9	1484.3
7.5°	1459.8	1461.2	1462.5	1462.8	1461.8	1460.9	1460.0	1459.0
10°	1441.2	1441.5	1441.7	1441.2	1439.8	1438.4	1437.1	1435.7
12.5°	1417.9	1417.8	1417.6	1416.8	1415.2	1413.6	1412.1	1410.5
15°	1377.2	1375.9	1374.6	1372.9	1371.0	1369.1	1367.3	1365.4
17.5°	1328.6	1325.7	1322.9	1320.0	1317.2	1314.4	1311.6	1308.8
20°	1295.2	1291.7	1288.3	1284.9	1281.7	1278.4	1275.1	1271.9
22.5°	1259.5	1255.2	1250.8	1247.1	1244.1	1241.1	1238.1	1235.0
25°	1201.1	1195.4	1189.8	1185.4	1182.5	1179.6	1176.6	1173.6
27.5°	1137.5	1129.6	1121.7	1115.5	1111.0	1106.4	1101.9	1097.4
30°	1092.2	1083.0	1073.8	1067.1	1062.7	1058.5	1054.1	1049.8
32.5°	1047.7	1037.7	1027.6	1020.4	1015.8	1011.3	1006.7	1002.2
35°	981.7	970.1	958.5	950.3	945.5	940.6	935.8	930.9
37.5°	910.9	897.7	884.6	874.9	869.0	863.0	857.0	851.0
40°	861.6	847.6	833.5	823.4	817.2	811.0	804.8	798.6
42.5°	814.3	799.0	783.6	773.2	767.7	762.1	756.5	751.0
45°	744.8	729.4	714.0	703.1	696.6	690.2	683.7	677.3
47.5°	672.9	656.2	639.4	628.2	622.4	616.7	610.9	605.1
50°	624.4	607.6	590.9	579.4	573.3	567.0	560.9	554.6
52.5°	577.5	560.1	542.7	531.2	525.7	520.1	514.6	509.0
55°	507.6	492.0	476.3	465.7	460.4	455.0	449.6	444.2
57.5°	438.9	424.1	409.4	399.7	395.1	390.5	385.9	381.3
60°	395.7	381.1	366.5	357.0	352.4	347.8	343.2	338.6
62.5°	352.7	339.0	325.3	316.0	311.3	306.5	301.7	296.9
65°	291.6	278.3	265.1	257.0	254.0	251.1	248.2	245.1
67.5°	233.2	223.3	213.5	206.9	203.8	200.5	197.3	194.2
70°	197.2	187.7	178.3	172.1	169.1	166.1	163.2	160.2
72.5°	164.7	156.9	149.3	144.8	143.6	142.3	141.1	139.8
75°	123.2	120.6	117.9	116.3	115.7	115.1	114.6	114.0
77.5°	93.0	91.5	90.1	89.1	88.5	88.0	87.5	86.9
80°	74.8	74.0	73.2	72.6	72.1	71.5	70.9	70.4
82.5°	57.3	56.5	55.7	55.3	55.2	55.1	54.9	54.8
85°	32.9	32.4	31.8	31.6	31.6	31.6	31.6	31.6
87.5°	15.8	15.7	15.6	15.5	15.3	15.2	15.0	14.9
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	19.8	20.8	21.8	22.4	22.6	22.7	22.9	23.2
95°	23.8	24.9	25.9	26.5	26.5	26.5	26.5	26.5
97.5°	25.0	26.1	27.4	28.1	28.3	28.4	28.5	28.7
100°	25.5	26.8	28.0	28.6	28.8	29.0	29.2	29.2
102.5°	38.2	34.3	30.5	28.7	29.0	29.2	29.5	29.9
105°	97.8	70.4	43.0	29.4	29.8	30.1	30.4	30.7
107.5°	239.6	219.5	199.4	179.0	158.4	137.7	117.0	96.3
110°	304.2	299.1	294.0	280.4	258.2	236.0	213.8	191.7



TEST NUMBER: P332345-940

CATALOG NUMBER: S123RDIP-S1000D805U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.7	349.8	349.9	347.6	343.0	338.2	333.6	329.0
115°	403.2	404.8	406.4	407.4	408.0	408.7	409.3	409.9
117.5°	451.7	453.0	454.1	454.9	455.0	455.1	455.2	455.4
120°	483.5	484.7	486.0	486.6	486.6	486.6	486.6	486.6
122.5°	514.5	515.4	516.3	516.7	516.9	517.0	517.2	517.3
125°	558.3	558.7	558.9	559.3	559.5	559.9	560.2	560.5
127.5°	602.2	602.7	603.2	603.2	603.0	602.7	602.4	602.1
130°	628.7	629.3	629.9	630.1	629.7	629.5	629.1	628.8
132.5°	653.7	654.3	655.0	655.1	654.7	654.2	653.8	653.4
135°	691.8	692.2	692.7	692.7	692.2	691.8	691.3	690.9
137.5°	725.7	726.4	727.2	727.4	727.1	726.7	726.5	726.1
140°	747.2	747.8	748.4	748.6	748.2	748.0	747.6	747.3
142.5°	767.6	768.0	768.6	768.6	768.1	767.7	767.3	766.9
145°	796.0	796.4	796.7	796.8	796.8	796.8	796.8	796.8
147.5°	821.5	821.9	822.2	822.0	821.3	820.6	819.8	819.1
150°	837.1	837.5	837.8	837.8	837.2	836.8	836.3	835.9
152.5°	851.0	851.6	852.2	852.1	851.4	850.7	850.0	849.3
155°	870.2	870.9	871.7	871.6	870.8	869.8	868.9	867.9
157.5°	886.8	887.7	888.7	888.5	887.3	886.1	884.9	883.7
160°	896.3	897.2	898.1	898.0	897.0	895.9	894.8	893.8
162.5°	904.9	906.0	907.0	907.0	906.1	905.1	904.2	903.2
165°	916.4	917.7	918.9	919.0	917.9	916.8	915.7	914.6
167.5°	925.3	926.6	927.8	927.8	926.6	925.3	924.1	922.8
170°	930.3	931.6	932.8	932.8	931.6	930.3	929.2	927.9
172.5°	933.7	935.0	936.2	936.1	934.8	933.4	932.0	930.7
175°	937.7	938.8	939.9	939.8	938.6	937.4	936.1	934.9
177.5°	939.2	940.2	941.2	941.1	939.9	938.6	937.4	936.1
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

(END OF REPORT)