

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: P332190-940

Luminaire Tested: **S123DIW-S1000D755U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332190-940
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: S123DIW-S1000D755U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6368.6 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

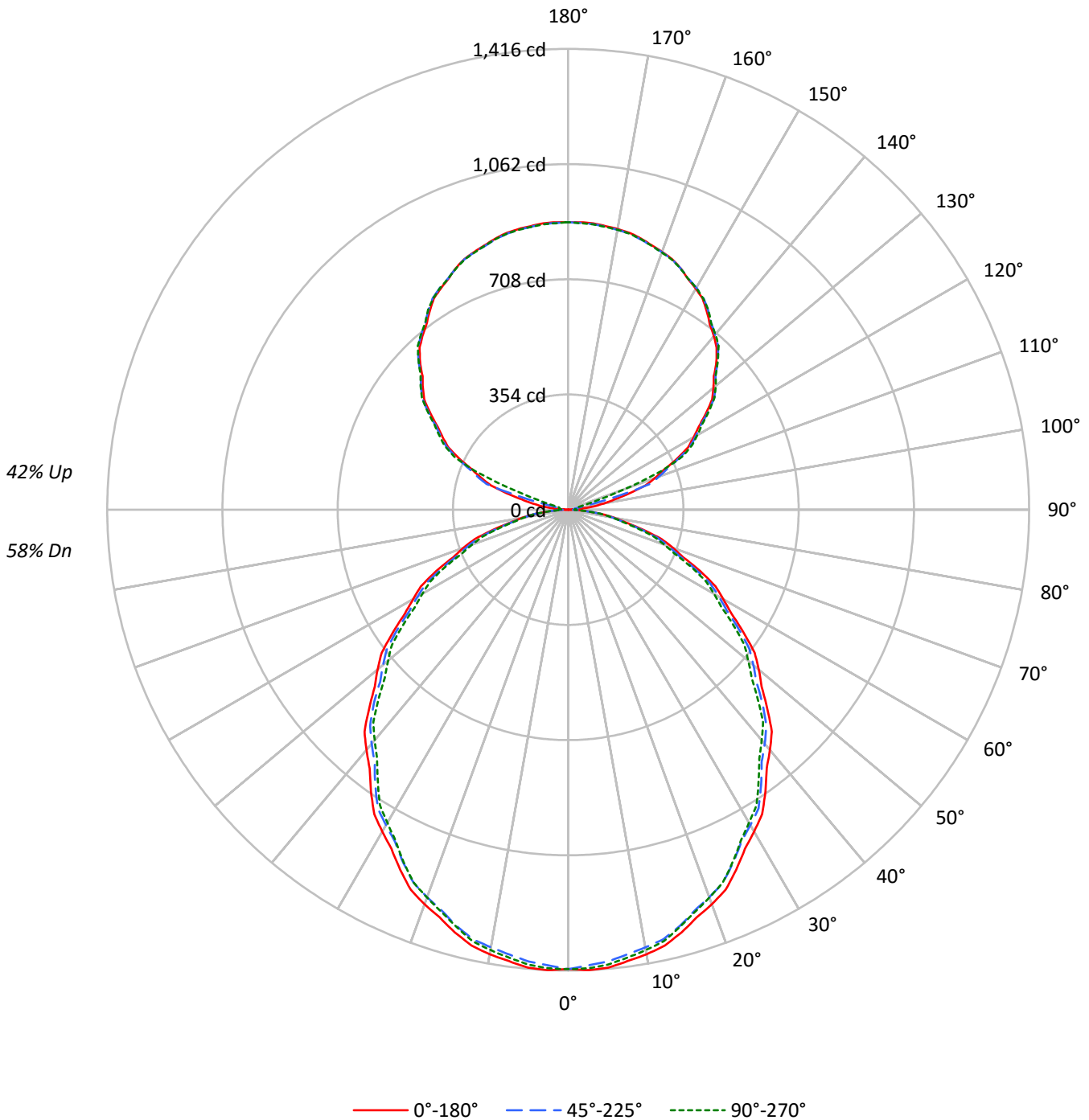
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	91	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	41
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	41	38	34
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	36	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	29	26
6	64	52	43	37	59	48	41	36	43	37	32	37	32	29	32	28	25	22
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15193	15193	15193
5°	15263	15055	15159
10°	15162	14924	15017
15°	14985	14755	14782
20°	14778	14513	14528
25°	14500	14226	14197
30°	14194	13908	13801
35°	13875	13571	13397
40°	13541	13198	12995
45°	13172	12858	12543
50°	12804	12439	12092
55°	12322	12003	11639
60°	11834	11496	11130
65°	11405	10942	10603
70°	10770	10313	9854
75°	9844	9491	9087
80°	8877	8498	8424
85°	7793	7497	7188



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	2.1
10°-20°	375.4	5.9
20°-30°	554.6	8.7
30°-40°	647.8	10.2
40°-50°	651.3	10.2
50°-60°	572.1	9.0
60°-70°	426.2	6.7
70°-80°	242.8	3.8
80°-90°	72.2	1.1
90°-100°	32.1	0.5
100°-110°	153.0	2.4
110°-120°	367.6	5.8
120°-130°	468.1	7.4
130°-140°	500.2	7.9
140°-150°	467.7	7.3
150°-160°	377.3	5.9
160°-170°	243.5	3.8
170°-180°	83.9	1.3
0°-30°	1062.9	16.7
0°-40°	1710.7	26.9
0°-60°	2934.1	46.1
0°-90°	3675.3	57.7
90°-120°	552.8	8.7
90°-150°	1988.7	31.2
90°-180°	2693.0	42.3
0°-180°	6368.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1412	1412	1412	1412	1412	
5°	1413	1406	1393	1405	1403	134
15°	1345	1339	1324	1333	1326	379
25°	1221	1213	1198	1199	1195	562
35°	1056	1048	1033	1026	1020	660
45°	865	860	845	831	824	668
55°	657	655	640	627	620	588
65°	448	441	430	420	416	442
75°	237	232	228	222	218	253
85°	63	61	61	58	58	69
90°	1	7	16	18	20	5
95°	40	15	20	25	25	49
105°	196	199	144	34	29	207
115°	367	371	377	383	386	362
125°	517	522	525	526	528	462
135°	644	648	650	652	650	495
145°	743	747	749	750	750	465
155°	818	817	818	821	817	377
165°	863	861	860	865	861	244
175°	883	880	881	885	880	84
180°	883	883	883	883	883	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5
2.5°	1416.3	1415.5	1414.6	1413.7	1412.9	1411.2	1408.9	1406.5	1404.2	1401.8	1403.9
5°	1412.6	1411.3	1410.0	1408.6	1407.3	1405.2	1402.2	1399.2	1396.2	1393.3	1396.0
7.5°	1398.8	1397.5	1396.2	1394.8	1393.5	1391.2	1388.2	1385.1	1382.1	1378.9	1381.3
10°	1387.2	1385.9	1384.5	1383.1	1381.8	1379.4	1375.9	1372.3	1368.9	1365.4	1367.8
12.5°	1371.6	1370.6	1369.4	1368.2	1367.2	1364.9	1361.6	1358.3	1355.0	1351.7	1353.5
15°	1344.7	1343.6	1342.6	1341.5	1340.4	1338.1	1334.6	1331.1	1327.6	1324.1	1326.2
17.5°	1313.4	1312.0	1310.6	1309.2	1307.8	1305.4	1301.8	1298.3	1294.9	1291.3	1292.8
20°	1290.1	1288.5	1286.9	1285.2	1283.6	1281.0	1277.6	1274.1	1270.6	1267.0	1268.1
22.5°	1263.9	1262.3	1260.7	1259.0	1257.4	1254.9	1251.3	1247.9	1244.4	1240.8	1241.7
25°	1220.9	1219.3	1217.7	1216.1	1214.4	1211.9	1208.4	1204.9	1201.4	1197.8	1198.1
27.5°	1175.1	1173.5	1171.9	1170.4	1168.8	1166.1	1162.3	1158.6	1154.8	1151.0	1151.2
30°	1142.0	1140.7	1139.3	1138.0	1136.7	1134.1	1130.3	1126.5	1122.8	1119.0	1119.0
32.5°	1109.0	1107.2	1105.5	1103.7	1101.9	1099.6	1096.6	1093.8	1090.8	1087.9	1086.4
35°	1055.9	1054.3	1052.7	1051.1	1049.4	1046.9	1043.3	1039.8	1036.3	1032.8	1031.2
37.5°	1001.5	999.4	997.4	995.3	993.3	990.5	986.9	983.4	979.8	976.2	974.3
40°	963.7	962.0	960.4	958.8	957.2	954.5	950.7	946.9	943.2	939.3	937.2
42.5°	925.8	923.9	922.1	920.2	918.5	915.6	911.9	908.1	904.3	900.5	898.4
45°	865.3	864.2	863.2	862.1	861.0	858.7	855.2	851.7	848.2	844.7	841.5
47.5°	805.4	803.8	802.3	800.7	799.2	796.7	793.4	790.1	786.8	783.5	780.3
50°	764.6	763.2	761.9	760.5	759.2	756.8	753.2	749.8	746.3	742.8	739.8
52.5°	721.8	720.9	720.1	719.2	718.2	715.9	712.2	708.5	704.7	701.0	698.5
55°	656.6	656.3	656.0	655.8	655.5	653.6	650.1	646.6	643.1	639.6	636.6
57.5°	594.4	593.5	592.6	591.7	590.8	588.9	586.1	583.3	580.5	577.7	575.1
60°	549.7	549.5	549.2	548.9	548.7	547.0	543.7	540.5	537.3	534.0	531.5
62.5°	510.0	509.3	508.5	507.8	507.2	505.2	501.9	498.7	495.5	492.2	489.8
65°	447.8	446.5	445.1	443.8	442.5	440.4	437.7	435.1	432.3	429.6	427.5
67.5°	382.1	380.8	379.7	378.5	377.3	375.7	373.6	371.6	369.5	367.5	365.6
70°	342.2	340.6	339.0	337.4	335.8	334.1	332.5	330.9	329.3	327.7	325.8
72.5°	300.5	299.3	298.1	296.9	295.8	294.3	292.4	290.6	288.7	286.9	285.3
75°	236.7	235.6	234.5	233.4	232.4	231.4	230.6	229.8	229.0	228.2	226.9
77.5°	180.1	179.5	178.9	178.3	177.7	176.9	176.0	175.0	174.1	173.1	172.2
80°	143.2	142.4	141.6	140.8	140.0	139.3	138.8	138.2	137.7	137.1	136.9
82.5°	107.3	107.1	107.0	106.8	106.6	106.5	106.4	106.3	106.2	106.1	105.6
85°	63.1	62.6	62.1	61.5	61.0	60.7	60.7	60.7	60.7	60.7	60.1
87.5°	25.4	25.1	24.7	24.3	24.0	23.9	24.0	24.2	24.3	24.5	24.4
90°	0.6	2.1	3.6	5.0	6.5	8.2	10.1	11.9	13.8	15.8	16.3
92.5°	12.2	11.8	11.4	11.0	10.6	11.1	12.5	13.9	15.3	16.8	17.7
95°	40.0	34.1	28.1	22.1	16.1	13.9	15.5	17.1	18.7	20.3	21.4
97.5°	80.4	77.8	75.1	72.4	69.7	63.1	52.6	42.1	31.7	21.1	22.3
100°	110.9	113.8	116.7	119.7	122.5	112.6	89.9	67.1	44.4	21.7	22.8
102.5°	145.5	147.7	149.7	151.9	153.9	142.6	117.7	92.8	68.0	43.2	39.6
105°	195.6	197.2	198.8	200.4	202.0	196.2	183.1	170.0	156.9	143.7	117.9
107.5°	248.3	249.6	250.8	252.2	253.4	255.1	257.2	259.2	261.4	263.4	244.4
110°	283.5	284.6	285.8	287.0	288.1	289.5	291.1	292.7	294.4	296.0	291.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	317.1	318.1	319.1	320.2	321.3	322.6	324.2	325.8	327.4	329.0	329.1
115°	366.8	367.7	368.5	369.4	370.3	371.4	372.7	374.0	375.3	376.7	378.1
117.5°	415.0	416.1	417.1	418.2	419.3	420.2	420.8	421.5	422.1	422.8	424.0
120°	444.9	446.2	447.5	448.8	450.1	451.0	451.5	451.9	452.4	452.7	454.0
122.5°	475.4	476.4	477.5	478.6	479.7	480.5	481.0	481.6	482.1	482.7	483.5
125°	517.1	518.3	519.4	520.6	521.7	522.6	523.2	523.8	524.3	525.0	525.2
127.5°	557.5	558.7	559.8	561.0	562.1	563.1	563.8	564.5	565.2	565.9	566.3
130°	582.6	583.9	585.1	586.2	587.4	588.3	588.8	589.4	590.0	590.6	591.1
132.5°	606.8	608.0	609.1	610.3	611.5	612.3	612.8	613.2	613.7	614.2	614.7
135°	643.7	644.6	645.4	646.3	647.2	647.9	648.5	649.1	649.7	650.2	650.7
137.5°	675.2	676.3	677.4	678.5	679.7	680.4	680.6	681.0	681.4	681.6	682.3
140°	696.2	697.1	697.9	698.8	699.7	700.3	700.8	701.2	701.7	702.1	702.7
142.5°	715.6	716.5	717.4	718.3	719.2	719.8	720.2	720.7	721.1	721.6	722.0
145°	742.8	743.8	744.8	745.8	746.9	747.5	747.8	748.1	748.4	748.7	748.9
147.5°	768.4	769.0	769.7	770.3	771.1	771.5	771.9	772.1	772.4	772.7	773.0
150°	784.2	784.5	785.0	785.4	785.9	786.2	786.6	786.8	787.1	787.4	787.7
152.5°	798.3	798.5	798.7	798.9	799.2	799.3	799.5	799.7	799.9	800.0	800.5
155°	818.2	818.0	817.7	817.3	817.1	817.0	817.2	817.3	817.4	817.6	818.3
157.5°	833.7	833.7	833.7	833.7	833.7	833.6	833.4	833.2	833.1	832.9	833.8
160°	843.2	843.0	842.9	842.8	842.6	842.5	842.3	842.1	842.0	841.9	842.8
162.5°	852.1	851.8	851.3	851.0	850.6	850.3	850.2	850.1	849.9	849.7	850.8
165°	862.9	862.5	862.0	861.6	861.1	860.9	860.7	860.5	860.4	860.2	861.4
167.5°	871.3	870.7	870.1	869.5	869.0	868.6	868.6	868.6	868.6	868.6	869.8
170°	876.0	875.4	874.9	874.2	873.7	873.3	873.3	873.3	873.3	873.3	874.5
172.5°	879.1	878.4	877.7	877.1	876.4	876.0	876.2	876.3	876.4	876.6	877.7
175°	883.2	882.4	881.7	881.0	880.3	880.0	880.1	880.3	880.5	880.6	881.6
177.5°	884.2	883.7	883.1	882.5	881.9	881.7	881.8	881.9	882.1	882.2	883.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5
2.5°	1406.0	1408.3	1410.4	1411.4	1411.1	1411.0	1410.7	1410.5
5°	1398.6	1401.3	1404.1	1405.2	1404.6	1404.1	1403.6	1403.0
7.5°	1383.8	1386.3	1388.7	1389.7	1389.4	1389.1	1388.8	1388.4
10°	1370.2	1372.6	1375.1	1376.0	1375.5	1374.9	1374.4	1373.9
12.5°	1355.3	1357.1	1358.9	1359.6	1359.3	1359.0	1358.6	1358.3
15°	1328.4	1330.5	1332.8	1333.0	1331.4	1329.7	1328.1	1326.5
17.5°	1294.3	1295.8	1297.4	1297.8	1297.3	1296.6	1296.0	1295.5
20°	1269.2	1270.3	1271.4	1271.5	1270.7	1269.9	1269.1	1268.3
22.5°	1242.6	1243.4	1244.3	1244.2	1243.2	1242.2	1241.2	1240.1
25°	1198.4	1198.7	1199.0	1198.7	1197.8	1197.0	1196.2	1195.4
27.5°	1151.5	1151.6	1151.9	1151.5	1150.5	1149.4	1148.4	1147.4
30°	1119.0	1119.0	1119.0	1118.0	1116.2	1114.3	1112.4	1110.4
32.5°	1084.9	1083.4	1081.9	1080.6	1079.6	1078.5	1077.5	1076.5
35°	1029.6	1028.0	1026.4	1024.8	1023.5	1022.2	1020.8	1019.5
37.5°	972.4	970.4	968.5	967.1	966.3	965.4	964.5	963.7
40°	935.0	932.9	930.8	929.1	928.0	926.9	925.9	924.8
42.5°	896.2	894.0	891.9	890.3	889.2	888.1	887.1	886.0
45°	838.2	835.0	831.8	829.5	828.1	826.8	825.5	824.0
47.5°	777.1	774.0	770.8	768.7	767.4	766.2	765.1	763.8
50°	736.8	733.9	730.8	728.6	727.0	725.3	723.7	722.1
52.5°	695.9	693.4	690.9	688.8	687.2	685.5	683.9	682.3
55°	633.6	630.7	627.8	625.5	624.2	622.9	621.5	620.2
57.5°	572.4	569.8	567.1	565.0	563.5	561.9	560.4	558.7
60°	529.1	526.7	524.3	522.5	521.0	519.7	518.4	517.0
62.5°	487.4	485.0	482.5	480.9	479.9	479.0	478.1	477.2
65°	425.3	423.1	421.0	419.5	418.7	417.9	417.1	416.3
67.5°	363.7	361.9	360.0	358.5	357.3	356.1	355.0	353.9
70°	323.9	322.0	320.1	318.5	317.2	315.8	314.5	313.1
72.5°	283.6	281.9	280.2	279.0	278.3	277.6	277.0	276.3
75°	225.5	224.1	222.7	221.7	220.9	220.1	219.3	218.5
77.5°	171.2	170.3	169.4	169.0	169.0	169.0	169.0	169.0
80°	136.6	136.3	136.1	135.9	135.9	135.9	135.9	135.9
82.5°	105.1	104.6	104.2	103.8	103.5	103.3	103.2	102.9
85°	59.6	59.0	58.5	58.2	58.2	58.2	58.2	58.2
87.5°	24.3	24.3	24.1	24.1	24.2	24.2	24.3	24.3
90°	16.9	17.5	18.1	18.5	18.8	19.1	19.4	19.7
92.5°	18.6	19.6	20.5	21.0	21.2	21.4	21.6	21.8
95°	22.4	23.4	24.4	25.0	25.0	25.0	25.0	25.0
97.5°	23.5	24.6	25.8	26.5	26.6	26.8	26.9	27.0
100°	24.0	25.1	26.3	27.0	27.1	27.3	27.4	27.6
102.5°	35.9	32.4	28.7	27.0	27.3	27.6	27.8	28.1
105°	92.1	66.3	40.5	27.7	28.0	28.3	28.6	28.9
107.5°	225.5	206.6	187.7	168.5	149.0	129.6	110.1	90.7
110°	286.3	281.5	276.7	263.9	243.0	222.1	201.3	180.5



TEST NUMBER: P332190-940

CATALOG NUMBER: S123DIW-S1000D755U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	329.2	329.3	329.4	327.2	322.8	318.4	314.0	309.6
115°	379.6	381.0	382.5	383.5	384.1	384.7	385.2	385.8
117.5°	425.2	426.3	427.5	428.1	428.3	428.4	428.5	428.6
120°	455.1	456.3	457.4	458.0	458.0	458.0	458.0	458.0
122.5°	484.3	485.1	486.0	486.4	486.5	486.6	486.8	486.9
125°	525.5	525.8	526.1	526.4	526.7	527.0	527.3	527.5
127.5°	566.9	567.3	567.8	567.8	567.6	567.2	566.9	566.7
130°	591.7	592.3	592.9	593.1	592.7	592.5	592.2	591.8
132.5°	615.4	615.9	616.5	616.6	616.2	615.8	615.4	614.9
135°	651.1	651.6	652.0	652.0	651.6	651.1	650.7	650.2
137.5°	683.1	683.8	684.5	684.7	684.4	684.0	683.8	683.5
140°	703.3	703.8	704.5	704.6	704.3	704.0	703.7	703.4
142.5°	722.5	722.9	723.4	723.4	723.0	722.6	722.2	721.8
145°	749.3	749.6	749.8	750.0	750.0	750.0	750.0	750.0
147.5°	773.3	773.6	773.9	773.6	773.0	772.3	771.7	771.0
150°	788.0	788.3	788.5	788.5	788.1	787.6	787.2	786.8
152.5°	801.0	801.6	802.1	802.0	801.4	800.7	800.0	799.3
155°	819.0	819.7	820.6	820.5	819.6	818.7	817.8	816.9
157.5°	834.7	835.5	836.4	836.3	835.2	834.0	832.9	831.8
160°	843.6	844.5	845.3	845.3	844.3	843.3	842.2	841.2
162.5°	851.8	852.7	853.7	853.7	852.8	851.9	851.0	850.2
165°	862.6	863.7	864.9	865.0	864.0	862.9	861.9	860.9
167.5°	870.9	872.2	873.3	873.3	872.2	870.9	869.8	868.6
170°	875.7	876.9	878.1	878.1	876.9	875.7	874.5	873.3
172.5°	878.9	880.0	881.2	881.1	879.9	878.6	877.3	876.0
175°	882.6	883.7	884.7	884.6	883.4	882.3	881.1	879.9
177.5°	884.0	884.9	885.9	885.7	884.6	883.4	882.3	881.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2

(END OF REPORT)