

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: P332006-940

Luminaire Tested: **S123DIP-S1000D365U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332006-940
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: S123DIP-S1000D365U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4967.4 lumens
Efficiency: N/A
Efficacy: 114.2 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: Semi-Direct

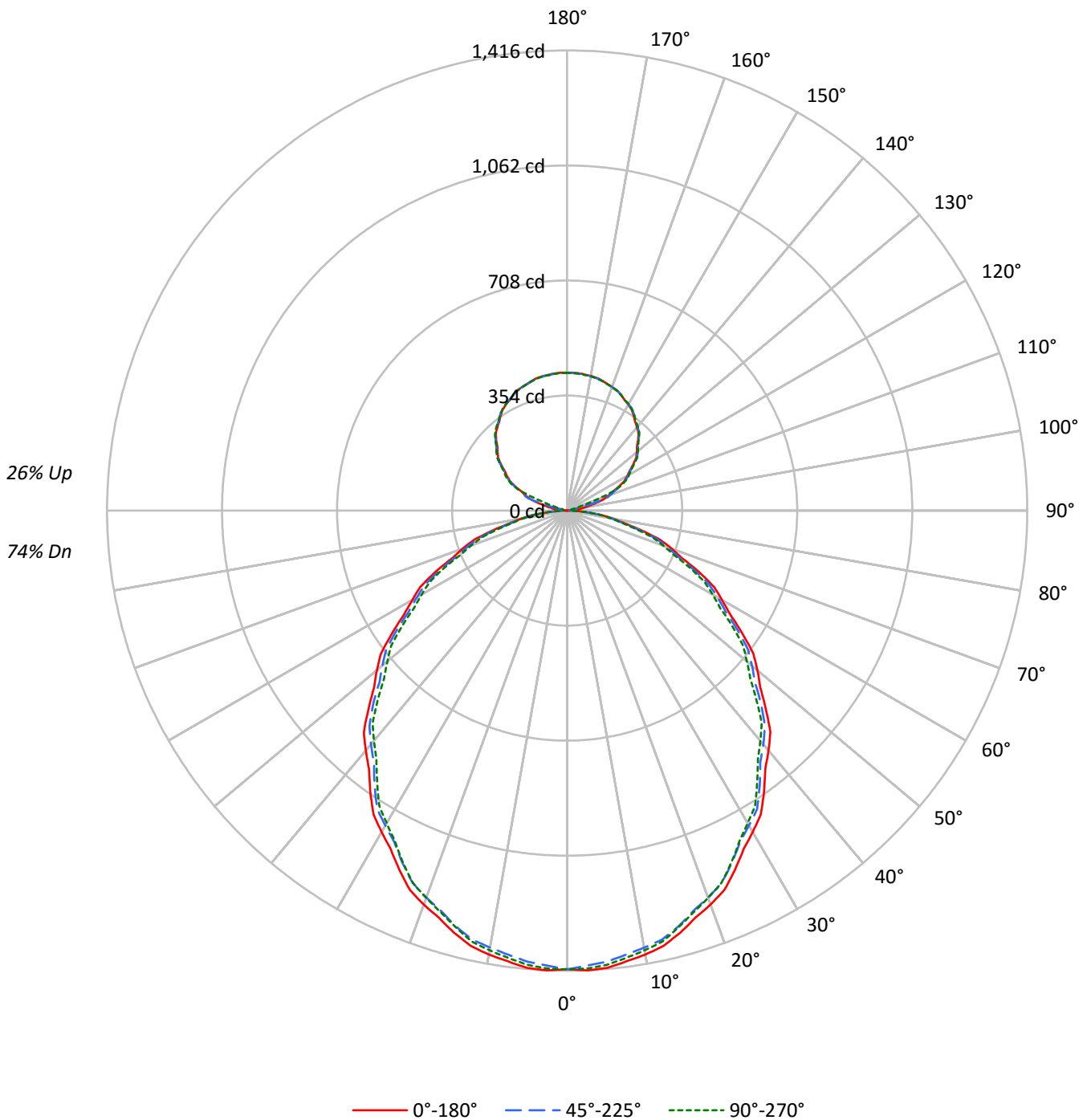
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	103	99	94	91	98	94	90	87	85	82	79	77	74	72	69	67	66	62
2	94	86	80	74	89	82	76	71	74	70	66	67	64	60	61	58	55	52
3	86	76	68	62	81	72	65	60	66	60	55	59	55	51	54	50	47	44
4	78	67	59	52	74	64	56	51	58	52	47	53	48	44	48	44	41	38
5	72	60	51	45	68	57	49	44	52	46	41	48	42	38	43	39	35	33
6	67	54	45	39	63	52	44	38	47	41	36	43	38	33	39	35	31	29
7	62	49	40	35	58	47	39	34	43	36	32	39	34	30	36	31	28	25
8	57	44	36	31	54	43	35	30	39	33	28	36	31	27	33	28	25	23
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	26	23	21
10	50	37	30	25	48	36	29	24	33	27	23	31	25	22	28	24	20	19

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	2.7
10°-20°	375.4	7.6
20°-30°	554.6	11.2
30°-40°	647.8	13.0
40°-50°	651.3	13.1
50°-60°	572.1	11.5
60°-70°	426.2	8.6
70°-80°	242.8	4.9
80°-90°	70.9	1.4
90°-100°	15.4	0.3
100°-110°	73.5	1.5
110°-120°	176.5	3.6
120°-130°	224.8	4.5
130°-140°	240.2	4.8
140°-150°	224.6	4.5
150°-160°	181.2	3.6
160°-170°	116.9	2.4
170°-180°	40.3	0.8
0°-30°	1062.9	21.4
0°-40°	1710.7	34.4
0°-60°	2934.1	59.1
0°-90°	3674.0	74.0
90°-120°	265.4	5.3
90°-150°	955.0	19.2
90°-180°	1293.0	26.0
0°-180°	4967.4	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°	0	4	8	9	10	4
95°	19	7	10	12	12	24
105°	94	96	69	16	14	100
115°	176	178	181	184	185	174
125°	248	251	252	253	253	222
135°	309	311	312	313	312	238
145°	357	359	360	360	360	223
155°	393	392	393	394	392	181
165°	414	413	413	415	413	117
175°	424	423	423	425	423	40
180°	424	424	424	424	424	



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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°	25.3	24.8	24.3	23.8	23.3	23.0	23.0	22.9	22.9	22.9	22.7
90°	0.4	1.0	1.7	2.4	3.1	3.9	4.8	5.7	6.7	7.6	7.8
92.5°	5.9	5.7	5.4	5.3	5.1	5.4	6.0	6.7	7.4	8.0	8.5
95°	19.3	16.3	13.5	10.6	7.8	6.7	7.5	8.2	9.0	9.8	10.3
97.5°	38.6	37.4	36.0	34.8	33.4	30.3	25.2	20.2	15.2	10.2	10.7
100°	53.2	54.7	56.1	57.4	58.9	54.1	43.2	32.3	21.3	10.4	11.0
102.5°	69.9	70.9	71.9	72.9	73.9	68.5	56.5	44.6	32.6	20.8	19.0
105°	93.9	94.7	95.4	96.2	97.0	94.3	87.9	81.6	75.3	69.0	56.6
107.5°	119.2	119.8	120.5	121.1	121.7	122.5	123.5	124.5	125.5	126.4	117.3
110°	136.2	136.7	137.2	137.8	138.4	139.0	139.8	140.5	141.3	142.1	139.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.2	152.8	153.3	153.7	154.3	154.9	155.7	156.5	157.2	158.0	158.0
115°	176.1	176.6	177.0	177.4	177.8	178.3	179.0	179.6	180.2	180.8	181.6
117.5°	199.3	199.8	200.3	200.8	201.3	201.8	202.1	202.4	202.8	203.0	203.6
120°	213.7	214.3	214.9	215.5	216.2	216.6	216.8	217.0	217.2	217.4	218.0
122.5°	228.3	228.8	229.3	229.8	230.3	230.7	231.0	231.2	231.5	231.8	232.2
125°	248.3	248.9	249.4	249.9	250.6	250.9	251.3	251.6	251.8	252.1	252.3
127.5°	267.7	268.3	268.9	269.4	269.9	270.4	270.7	271.1	271.4	271.7	272.0
130°	279.8	280.4	280.9	281.5	282.0	282.5	282.8	283.0	283.3	283.6	283.8
132.5°	291.4	291.9	292.6	293.1	293.6	294.0	294.3	294.5	294.7	295.0	295.2
135°	309.2	309.5	310.0	310.4	310.8	311.1	311.4	311.7	312.0	312.3	312.5
137.5°	324.2	324.8	325.3	325.8	326.4	326.7	326.9	327.0	327.2	327.3	327.7
140°	334.3	334.7	335.2	335.6	336.0	336.4	336.5	336.7	337.0	337.2	337.4
142.5°	343.7	344.1	344.5	344.9	345.4	345.6	345.9	346.1	346.3	346.5	346.7
145°	356.7	357.2	357.7	358.2	358.6	359.0	359.1	359.3	359.4	359.5	359.7
147.5°	369.0	369.3	369.6	370.0	370.2	370.5	370.7	370.8	371.0	371.0	371.2
150°	376.6	376.7	376.9	377.2	377.4	377.6	377.7	377.8	378.0	378.1	378.3
152.5°	383.3	383.4	383.5	383.6	383.7	383.9	383.9	384.0	384.1	384.1	384.4
155°	393.0	392.8	392.6	392.5	392.4	392.4	392.4	392.4	392.5	392.6	393.0
157.5°	400.4	400.4	400.4	400.3	400.3	400.3	400.2	400.1	400.0	400.0	400.4
160°	404.9	404.8	404.7	404.7	404.7	404.6	404.5	404.4	404.4	404.3	404.7
162.5°	409.2	409.0	408.8	408.7	408.5	408.3	408.2	408.2	408.1	408.0	408.5
165°	414.4	414.1	413.9	413.8	413.5	413.4	413.3	413.2	413.1	413.1	413.7
167.5°	418.4	418.1	417.9	417.6	417.2	417.1	417.1	417.1	417.1	417.1	417.7
170°	420.6	420.4	420.1	419.8	419.5	419.4	419.4	419.4	419.4	419.4	420.0
172.5°	422.1	421.9	421.5	421.2	420.8	420.7	420.7	420.8	420.9	420.9	421.5
175°	424.1	423.7	423.4	423.1	422.8	422.6	422.7	422.8	422.8	422.8	423.4
177.5°	424.6	424.4	424.1	423.8	423.5	423.4	423.5	423.5	423.6	423.7	424.1
180°	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1



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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°	22.6	22.4	22.2	22.2	22.2	22.2	22.3	22.3
90°	8.1	8.4	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	9.0	9.5	9.9	10.2	10.2	10.3	10.3	10.4
95°	10.8	11.2	11.8	11.9	11.9	11.9	11.9	11.9
97.5°	11.2	11.9	12.4	12.7	12.8	12.8	12.9	13.0
100°	11.5	12.0	12.7	12.9	13.0	13.1	13.2	13.2
102.5°	17.3	15.5	13.8	13.0	13.1	13.2	13.4	13.5
105°	44.2	31.8	19.4	13.3	13.5	13.6	13.7	13.8
107.5°	108.3	99.2	90.2	80.9	71.6	62.2	52.9	43.5
110°	137.5	135.2	132.9	126.7	116.7	106.6	96.7	86.7



TEST NUMBER: P332006-940

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	158.1	158.1	158.2	157.1	155.0	152.9	150.8	148.6
115°	182.3	183.0	183.7	184.1	184.4	184.8	185.0	185.3
117.5°	204.2	204.7	205.3	205.6	205.6	205.7	205.8	205.8
120°	218.6	219.1	219.6	220.0	220.0	220.0	220.0	220.0
122.5°	232.6	233.0	233.4	233.5	233.6	233.7	233.7	233.8
125°	252.4	252.5	252.6	252.8	252.9	253.1	253.2	253.3
127.5°	272.2	272.4	272.7	272.7	272.5	272.4	272.2	272.2
130°	284.2	284.5	284.7	284.8	284.6	284.5	284.4	284.2
132.5°	295.5	295.8	296.0	296.1	295.9	295.7	295.5	295.3
135°	312.7	312.9	313.1	313.1	312.9	312.7	312.5	312.3
137.5°	328.0	328.3	328.7	328.8	328.6	328.5	328.3	328.2
140°	337.7	338.0	338.3	338.3	338.2	338.0	338.0	337.8
142.5°	347.0	347.1	347.4	347.4	347.2	347.0	346.8	346.6
145°	359.8	360.0	360.1	360.2	360.2	360.2	360.2	360.2
147.5°	371.3	371.5	371.7	371.6	371.2	370.9	370.6	370.2
150°	378.4	378.5	378.7	378.6	378.4	378.3	378.0	377.8
152.5°	384.7	385.0	385.2	385.1	384.9	384.5	384.1	383.9
155°	393.3	393.7	394.0	394.0	393.6	393.2	392.7	392.3
157.5°	400.8	401.3	401.7	401.6	401.1	400.6	399.9	399.4
160°	405.1	405.6	406.0	405.9	405.5	404.9	404.5	403.9
162.5°	409.0	409.5	409.9	410.0	409.6	409.1	408.7	408.2
165°	414.2	414.8	415.4	415.4	414.9	414.4	413.9	413.4
167.5°	418.2	418.8	419.4	419.4	418.8	418.2	417.7	417.1
170°	420.5	421.1	421.6	421.6	421.1	420.5	420.0	419.4
172.5°	422.0	422.6	423.1	423.1	422.5	421.9	421.2	420.6
175°	423.8	424.4	424.8	424.8	424.3	423.7	423.1	422.6
177.5°	424.5	425.0	425.4	425.3	424.8	424.3	423.7	423.1
180°	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1

(END OF REPORT)