

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: P332016-940

Luminaire Tested: **S123DIP-S1000D585U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332016-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D585U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5468.6 lumens
Efficiency: N/A
Efficacy: 112.1 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

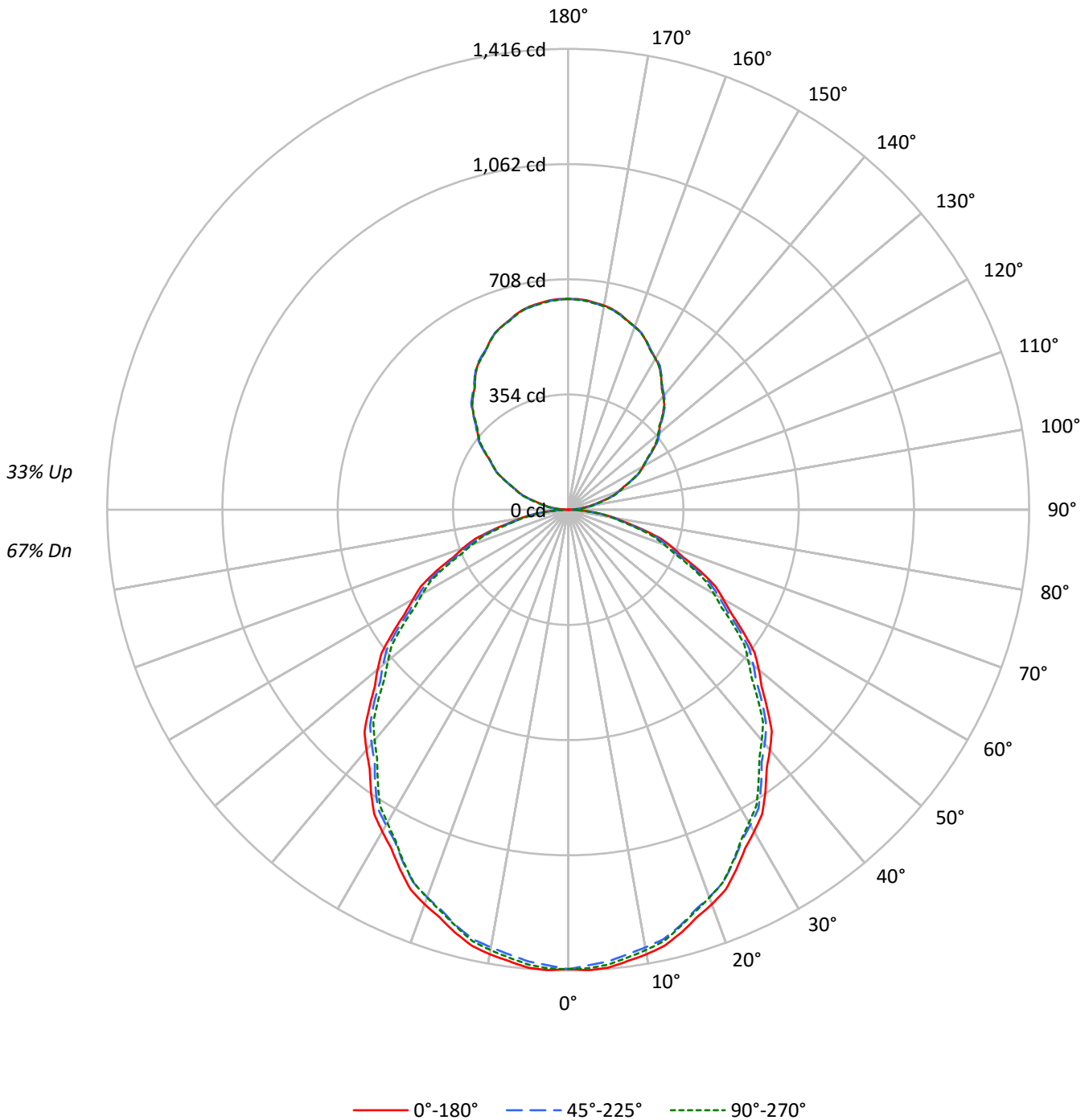
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	97	93	89	96	92	88	85	81	79	76	72	70	68	63	62	61	56
2	92	85	78	73	87	80	74	70	71	67	63	63	60	57	56	53	51	47
3	84	75	67	61	79	70	64	58	63	58	53	56	52	48	49	46	43	40
4	77	66	58	52	72	63	55	49	56	50	45	50	45	41	44	40	37	34
5	71	59	50	44	67	56	48	43	50	44	39	45	40	36	40	36	33	30
6	65	53	45	39	61	50	43	37	45	39	34	41	35	31	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	31	27	34	29	25	30	26	23	21
9	53	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	21	19
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17

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	2.4
10°-20°	375.4	6.9
20°-30°	554.6	10.1
30°-40°	647.8	11.8
40°-50°	651.3	11.9
50°-60°	572.1	10.5
60°-70°	426.2	7.8
70°-80°	242.8	4.4
80°-90°	71.6	1.3
90°-100°	42.2	0.8
100°-110°	126.2	2.3
110°-120°	214.7	3.9
120°-130°	282.4	5.2
130°-140°	317.5	5.8
140°-150°	312.1	5.7
150°-160°	262.7	4.8
160°-170°	174.9	3.2
170°-180°	61.2	1.1
0°-30°	1062.9	19.4
0°-40°	1710.7	31.3
0°-60°	2934.1	53.7
0°-90°	3674.7	67.2
90°-120°	383.2	7.0
90°-150°	1295.1	23.7
90°-180°	1794.0	32.8
0°-180°	5468.6	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°	0	6	12	14	15	5
95°	30	34	38	40	40	34
105°	114	116	120	120	121	123
115°	216	218	217	217	217	214
125°	316	318	317	315	313	282
135°	410	413	413	411	410	316
145°	498	499	500	500	498	311
155°	570	570	571	572	569	262
165°	621	620	620	622	619	175
175°	646	644	644	647	643	61
180°	648	648	648	648	648	



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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	25.0	24.5	24.1	23.6	23.5	23.5	23.6	23.7	23.8	23.7
90°	0.5	1.6	2.8	3.9	5.0	6.3	7.8	9.3	10.7	12.2	12.7
92.5°	12.3	13.1	13.8	14.6	15.4	16.2	17.0	17.8	18.7	19.5	19.9
95°	30.1	30.8	31.6	32.4	33.2	34.1	35.0	35.8	36.7	37.6	38.1
97.5°	53.3	53.9	54.5	55.1	55.6	56.3	56.9	57.6	58.2	58.9	59.4
100°	69.2	69.8	70.5	71.2	71.9	72.5	73.0	73.7	74.2	74.7	75.1
102.5°	87.5	87.9	88.3	88.7	89.1	89.7	90.4	91.2	91.9	92.6	93.0
105°	114.4	114.7	114.9	115.1	115.4	115.9	117.0	118.0	119.0	120.0	120.0
107.5°	145.8	145.9	146.1	146.2	146.3	146.6	147.0	147.4	147.8	148.2	148.6
110°	165.3	165.5	165.8	165.9	166.2	166.4	166.7	166.9	167.1	167.4	167.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.7	185.7	185.9	186.0	186.2	186.3	186.4	186.4	186.5	186.5	187.0
115°	216.2	216.5	216.9	217.2	217.5	217.6	217.3	217.1	216.9	216.7	216.8
117.5°	246.9	247.1	247.4	247.5	247.8	247.7	247.4	247.2	246.9	246.6	246.6
120°	266.0	266.7	267.3	268.0	268.8	268.8	268.2	267.7	267.1	266.5	266.4
122.5°	286.0	286.4	287.0	287.4	287.9	288.0	287.8	287.5	287.1	286.9	286.6
125°	316.4	316.7	317.0	317.4	317.7	317.8	317.5	317.4	317.1	316.9	316.4
127.5°	344.5	345.2	345.9	346.6	347.3	347.6	347.3	347.1	346.8	346.6	346.0
130°	363.2	364.1	365.0	365.9	366.8	367.0	366.8	366.4	366.0	365.7	365.2
132.5°	381.8	382.8	383.7	384.6	385.5	385.8	385.6	385.3	385.0	384.9	384.2
135°	410.5	411.2	411.8	412.5	413.1	413.5	413.3	413.2	413.1	413.0	412.6
137.5°	436.9	437.5	438.0	438.6	439.2	439.6	439.9	440.1	440.5	440.8	440.3
140°	455.2	455.8	456.4	456.9	457.4	457.8	457.9	458.1	458.2	458.3	458.2
142.5°	471.9	472.4	473.1	473.6	474.1	474.6	474.7	474.9	475.2	475.4	475.3
145°	497.9	498.2	498.4	498.6	498.8	499.1	499.4	499.8	500.2	500.5	500.3
147.5°	520.8	521.1	521.6	521.9	522.4	522.7	523.1	523.3	523.7	524.0	524.0
150°	536.6	536.8	537.1	537.3	537.5	537.7	538.0	538.1	538.4	538.6	538.6
152.5°	549.7	549.9	550.3	550.5	550.9	551.1	551.3	551.3	551.5	551.6	551.8
155°	570.2	570.2	570.2	570.2	570.2	570.2	570.3	570.4	570.6	570.7	571.1
157.5°	587.6	587.5	587.4	587.3	587.1	587.1	587.2	587.3	587.4	587.5	587.9
160°	598.6	598.4	598.2	598.0	597.7	597.6	597.6	597.6	597.6	597.6	598.2
162.5°	608.4	608.1	607.8	607.4	607.2	607.1	607.2	607.3	607.3	607.4	608.0
165°	621.0	620.7	620.4	620.0	619.6	619.5	619.5	619.5	619.5	619.5	620.2
167.5°	631.1	630.6	630.2	629.7	629.3	629.1	629.2	629.3	629.4	629.5	630.2
170°	636.8	636.3	635.9	635.4	635.0	634.7	634.7	634.7	634.7	634.7	635.5
172.5°	641.2	640.8	640.3	639.9	639.4	639.3	639.3	639.3	639.3	639.3	640.0
175°	646.0	645.5	645.1	644.6	644.2	643.9	643.9	643.9	643.9	643.9	644.6
177.5°	647.9	647.6	647.2	646.8	646.4	646.2	646.2	646.2	646.2	646.2	646.8
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



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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°	23.5	23.5	23.3	23.3	23.3	23.4	23.4	23.5
90°	13.1	13.6	14.0	14.4	14.6	14.8	15.1	15.2
92.5°	20.2	20.6	21.0	21.1	21.0	20.8	20.7	20.5
95°	38.5	39.0	39.4	39.7	39.7	39.7	39.7	39.7
97.5°	59.9	60.5	61.0	61.2	61.2	61.1	61.1	61.0
100°	75.4	75.8	76.2	76.4	76.6	76.9	77.0	77.3
102.5°	93.4	93.7	94.0	94.2	94.2	94.1	94.1	94.0
105°	120.0	120.0	120.0	120.1	120.4	120.6	120.8	121.1
107.5°	148.9	149.3	149.6	149.8	149.6	149.5	149.4	149.3
110°	168.3	168.7	169.2	169.2	169.1	168.8	168.6	168.4



TEST NUMBER: P332016-940

CATALOG NUMBER: S123DIP-S1000D585U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	187.5	188.1	188.6	188.9	188.9	188.8	188.8	188.7
115°	216.9	217.0	217.1	217.1	217.0	216.9	216.8	216.7
117.5°	246.6	246.5	246.5	246.3	246.0	245.7	245.4	245.0
120°	266.3	266.2	266.1	265.9	265.6	265.5	265.2	265.0
122.5°	286.2	286.0	285.7	285.3	285.1	284.7	284.5	284.1
125°	315.9	315.5	315.0	314.6	314.1	313.7	313.3	312.8
127.5°	345.3	344.6	344.0	343.5	343.0	342.4	341.9	341.3
130°	364.8	364.4	363.9	363.3	362.5	361.7	360.9	360.1
132.5°	383.7	383.2	382.6	382.1	381.5	380.8	380.2	379.6
135°	412.1	411.6	411.2	410.8	410.6	410.4	410.2	409.9
137.5°	439.8	439.3	438.9	438.5	438.0	437.6	437.1	436.7
140°	458.1	457.9	457.8	457.4	456.6	455.8	455.0	454.2
142.5°	475.1	475.0	474.9	474.6	473.9	473.3	472.7	472.1
145°	500.2	500.2	500.1	499.7	499.3	498.8	498.4	497.9
147.5°	524.0	524.0	524.0	523.6	523.0	522.3	521.7	520.9
150°	538.6	538.6	538.6	538.3	537.6	536.9	536.3	535.6
152.5°	552.1	552.2	552.4	552.1	551.6	551.0	550.5	549.8
155°	571.6	572.0	572.5	572.3	571.5	570.7	570.0	569.2
157.5°	588.4	588.9	589.3	589.2	588.6	588.0	587.4	586.7
160°	598.8	599.3	599.9	599.9	599.5	599.1	598.6	598.2
162.5°	608.5	609.1	609.7	609.6	608.9	608.1	607.4	606.7
165°	620.9	621.5	622.2	622.1	621.3	620.5	619.8	619.0
167.5°	630.9	631.6	632.3	632.3	631.6	630.9	630.2	629.5
170°	636.3	637.1	637.9	637.9	637.1	636.3	635.5	634.7
172.5°	640.6	641.3	642.0	642.0	641.2	640.4	639.6	638.8
175°	645.2	646.0	646.7	646.6	645.8	645.0	644.2	643.4
177.5°	647.4	647.9	648.5	648.4	647.7	647.1	646.5	645.9
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5

(END OF REPORT)