

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: P332016-830

Luminaire Tested: **S123DIP-S1000D585U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332016-830
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-S1000D585U830-4F0-1E-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: 5780.4 lumens
Efficiency: N/A
Efficacy: 118.5 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

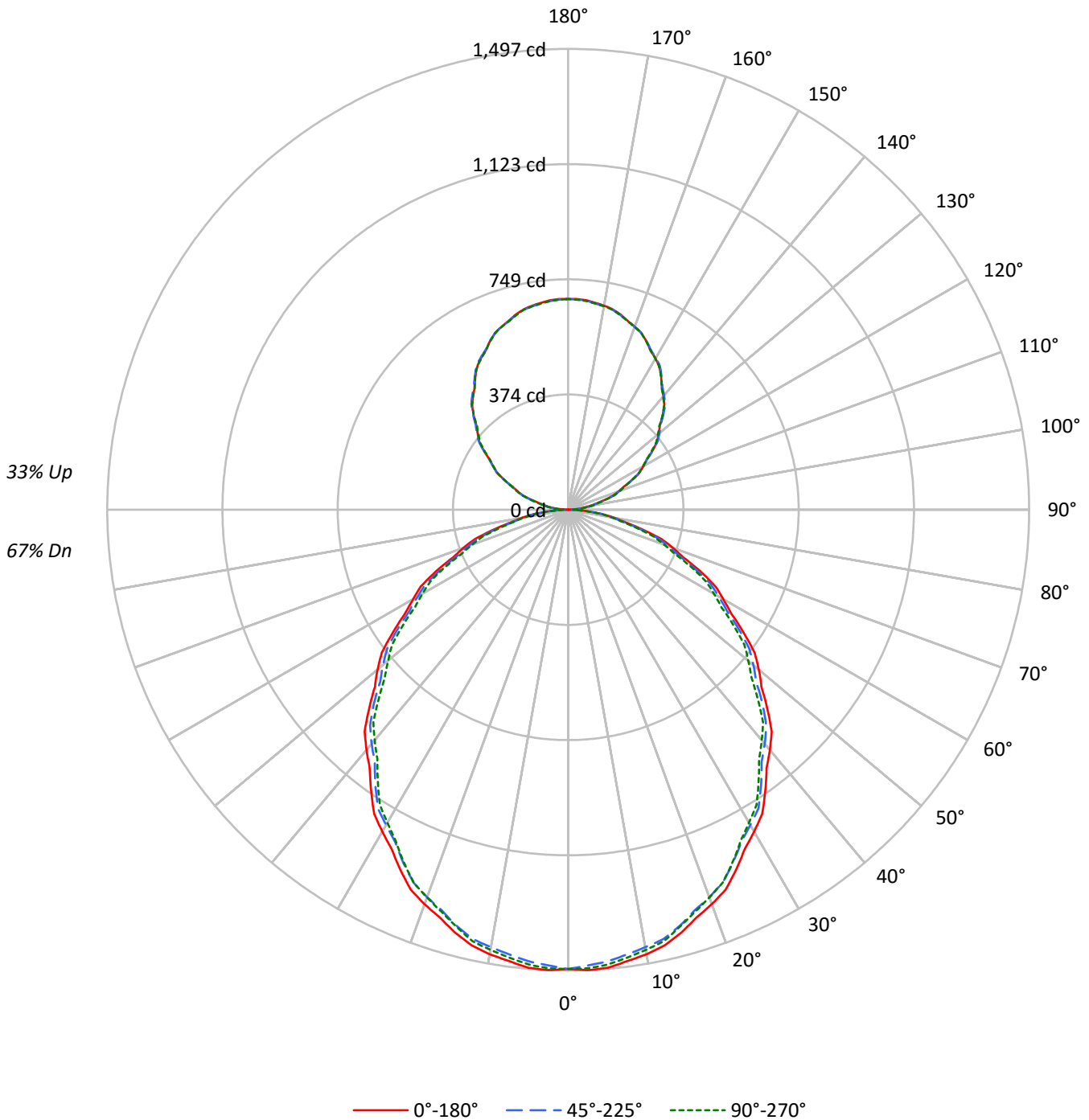
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	16060	16060	16060
5°	16134	15913	16024
10°	16027	15774	15872
15°	15840	15597	15624
20°	15621	15341	15356
25°	15327	15037	15007
30°	15003	14701	14588
35°	14666	14345	14160
40°	14313	13952	13735
45°	13922	13592	13259
50°	13534	13147	12782
55°	13024	12688	12301
60°	12510	12152	11765
65°	12055	11566	11207
70°	11383	10902	10414
75°	10405	10031	9603
80°	9385	8988	8901
85°	8238	7929	7595



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.4
10°-20°	396.8	6.9
20°-30°	586.2	10.1
30°-40°	684.7	11.8
40°-50°	688.4	11.9
50°-60°	604.7	10.5
60°-70°	450.5	7.8
70°-80°	256.7	4.4
80°-90°	75.7	1.3
90°-100°	44.6	0.8
100°-110°	133.4	2.3
110°-120°	227.0	3.9
120°-130°	298.5	5.2
130°-140°	335.6	5.8
140°-150°	329.8	5.7
150°-160°	277.7	4.8
160°-170°	184.8	3.2
170°-180°	64.7	1.1
0°-30°	1123.5	19.4
0°-40°	1808.2	31.3
0°-60°	3101.3	53.7
0°-90°	3884.2	67.2
90°-120°	405.0	7.0
90°-150°	1368.9	23.7
90°-180°	1896.0	32.8
0°-180°	5780.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1492	1492	1492	1492	1492	
5°	1493	1486	1473	1485	1483	141
15°	1421	1416	1400	1409	1402	401
25°	1290	1282	1266	1267	1264	594
35°	1116	1108	1092	1084	1078	698
45°	915	909	893	878	871	706
55°	694	692	676	662	656	621
65°	473	467	454	444	440	467
75°	250	245	241	235	231	267
85°	67	64	64	62	62	73
90°	1	6	13	15	16	6
95°	32	36	40	42	42	36
105°	121	122	127	127	128	130
115°	228	230	229	230	229	226
125°	334	336	335	333	331	298
135°	434	437	437	434	433	334
145°	526	527	529	528	526	329
155°	603	603	603	605	602	277
165°	656	655	655	658	654	185
175°	683	681	681	683	680	65
180°	684	684	684	684	684	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0
2.5°	1497.0	1496.2	1495.2	1494.3	1493.5	1491.7	1489.2	1486.7	1484.2	1481.7	1483.9
5°	1493.2	1491.8	1490.3	1488.9	1487.5	1485.3	1482.1	1478.9	1475.8	1472.7	1475.6
7.5°	1478.6	1477.2	1475.7	1474.3	1472.9	1470.6	1467.4	1464.1	1460.8	1457.5	1460.1
10°	1466.3	1464.9	1463.4	1462.0	1460.6	1458.0	1454.3	1450.6	1446.9	1443.2	1445.8
12.5°	1449.8	1448.7	1447.5	1446.2	1445.1	1442.7	1439.3	1435.8	1432.3	1428.8	1430.7
15°	1421.4	1420.2	1419.1	1418.0	1416.8	1414.4	1410.7	1407.0	1403.3	1399.6	1401.8
17.5°	1388.3	1386.8	1385.3	1383.8	1382.3	1379.8	1376.0	1372.3	1368.7	1364.9	1366.5
20°	1363.7	1362.0	1360.3	1358.5	1356.8	1354.1	1350.4	1346.7	1343.0	1339.3	1340.4
22.5°	1336.0	1334.3	1332.6	1330.8	1329.1	1326.4	1322.7	1319.0	1315.3	1311.5	1312.5
25°	1290.5	1288.8	1287.1	1285.4	1283.6	1281.0	1277.2	1273.6	1269.9	1266.1	1266.4
27.5°	1242.1	1240.4	1238.7	1237.1	1235.4	1232.6	1228.6	1224.6	1220.6	1216.6	1216.8
30°	1207.1	1205.7	1204.3	1202.9	1201.5	1198.7	1194.8	1190.7	1186.8	1182.8	1182.8
32.5°	1172.2	1170.4	1168.5	1166.6	1164.7	1162.2	1159.1	1156.1	1153.0	1149.9	1148.3
35°	1116.1	1114.4	1112.7	1111.0	1109.2	1106.5	1102.8	1099.1	1095.4	1091.7	1090.0
37.5°	1058.6	1056.4	1054.2	1052.1	1049.9	1047.0	1043.2	1039.4	1035.7	1031.9	1029.8
40°	1018.6	1016.8	1015.1	1013.4	1011.7	1008.9	1004.8	1000.9	996.9	992.9	990.6
42.5°	978.5	976.6	974.7	972.7	970.8	967.8	963.8	959.9	955.8	951.9	949.6
45°	914.6	913.5	912.4	911.3	910.1	907.7	904.0	900.2	896.5	892.9	889.5
47.5°	851.3	849.6	848.0	846.3	844.7	842.1	838.7	835.2	831.7	828.2	824.8
50°	808.2	806.7	805.3	803.9	802.5	799.9	796.2	792.5	788.8	785.1	781.9
52.5°	763.0	762.0	761.1	760.2	759.1	756.7	752.8	748.9	744.9	740.9	738.3
55°	694.0	693.7	693.4	693.1	692.9	690.9	687.2	683.4	679.8	676.1	672.9
57.5°	628.3	627.4	626.4	625.5	624.4	622.5	619.5	616.5	613.6	610.7	607.8
60°	581.1	580.8	580.5	580.2	579.9	578.2	574.7	571.3	567.9	564.5	561.8
62.5°	539.0	538.3	537.5	536.8	536.1	534.0	530.6	527.2	523.8	520.3	517.7
65°	473.3	471.9	470.5	469.1	467.7	465.5	462.7	459.9	456.9	454.1	451.9
67.5°	403.9	402.6	401.3	400.1	398.8	397.1	394.9	392.8	390.6	388.4	386.4
70°	361.7	360.1	358.4	356.7	355.0	353.2	351.5	349.8	348.1	346.4	344.4
72.5°	317.6	316.4	315.1	313.9	312.6	311.0	309.1	307.2	305.2	303.2	301.5
75°	250.2	249.0	247.9	246.8	245.6	244.6	243.7	242.9	242.0	241.2	239.8
77.5°	190.4	189.7	189.1	188.5	187.8	187.0	186.1	185.0	184.0	182.9	182.0
80°	151.4	150.5	149.7	148.8	148.0	147.2	146.7	146.1	145.5	145.0	144.7
82.5°	113.4	113.2	113.1	112.9	112.7	112.5	112.4	112.4	112.3	112.2	111.6
85°	66.7	66.2	65.6	65.0	64.5	64.2	64.2	64.2	64.2	64.2	63.5
87.5°	26.8	26.4	25.9	25.4	25.0	24.8	24.9	25.0	25.1	25.2	25.1
90°	0.6	1.7	2.9	4.1	5.3	6.7	8.2	9.8	11.3	12.9	13.4
92.5°	13.0	13.9	14.6	15.5	16.3	17.2	18.0	18.9	19.8	20.6	21.0
95°	31.8	32.5	33.4	34.2	35.1	36.0	36.9	37.9	38.8	39.8	40.2
97.5°	56.4	56.9	57.6	58.2	58.8	59.5	60.1	60.9	61.5	62.3	62.8
100°	73.1	73.8	74.6	75.3	76.0	76.6	77.2	77.9	78.4	79.0	79.4
102.5°	92.5	92.9	93.3	93.8	94.2	94.8	95.6	96.4	97.2	97.9	98.3
105°	120.9	121.2	121.4	121.7	122.0	122.5	123.7	124.7	125.8	126.9	126.9
107.5°	154.1	154.2	154.4	154.5	154.7	155.0	155.3	155.8	156.3	156.7	157.0
110°	174.7	174.9	175.2	175.4	175.7	175.9	176.2	176.4	176.6	176.9	177.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	196.2	196.3	196.5	196.6	196.8	196.9	197.0	197.0	197.1	197.1	197.7
115°	228.5	228.8	229.2	229.6	229.9	230.0	229.7	229.5	229.2	229.0	229.1
117.5°	261.0	261.2	261.5	261.6	261.9	261.8	261.6	261.3	261.0	260.6	260.6
120°	281.2	281.9	282.6	283.3	284.1	284.1	283.5	283.0	282.3	281.7	281.6
122.5°	302.3	302.7	303.3	303.8	304.3	304.4	304.2	303.9	303.5	303.2	302.9
125°	334.4	334.8	335.1	335.5	335.8	335.9	335.6	335.5	335.2	335.0	334.4
127.5°	364.1	364.9	365.6	366.4	367.1	367.4	367.1	366.8	366.6	366.4	365.7
130°	383.9	384.8	385.8	386.7	387.7	388.0	387.7	387.3	386.9	386.5	386.1
132.5°	403.6	404.6	405.6	406.5	407.5	407.8	407.6	407.3	407.0	406.8	406.1
135°	433.9	434.6	435.3	436.0	436.7	437.1	436.9	436.8	436.7	436.6	436.1
137.5°	461.8	462.4	463.0	463.6	464.2	464.7	465.0	465.2	465.6	465.9	465.4
140°	481.2	481.7	482.4	483.0	483.5	483.9	484.0	484.2	484.3	484.4	484.3
142.5°	498.8	499.4	500.0	500.6	501.1	501.6	501.8	502.0	502.3	502.5	502.4
145°	526.3	526.6	526.8	527.1	527.3	527.5	527.9	528.3	528.7	529.0	528.9
147.5°	550.4	550.8	551.3	551.7	552.1	552.5	552.9	553.2	553.6	553.8	553.8
150°	567.2	567.4	567.7	567.9	568.2	568.4	568.6	568.8	569.1	569.3	569.3
152.5°	581.0	581.3	581.6	581.9	582.3	582.5	582.7	582.8	583.0	583.1	583.2
155°	602.7	602.7	602.7	602.7	602.7	602.8	602.9	602.9	603.1	603.2	603.7
157.5°	621.1	621.0	620.9	620.8	620.6	620.6	620.7	620.8	620.9	620.9	621.4
160°	632.7	632.5	632.3	632.1	631.8	631.7	631.7	631.7	631.7	631.7	632.3
162.5°	643.1	642.7	642.4	642.1	641.8	641.7	641.8	641.9	642.0	642.1	642.6
165°	656.4	656.1	655.7	655.3	655.0	654.8	654.8	654.8	654.8	654.8	655.5
167.5°	667.0	666.6	666.1	665.6	665.2	665.0	665.1	665.2	665.2	665.3	666.1
170°	673.1	672.6	672.1	671.7	671.2	670.9	670.9	670.9	670.9	670.9	671.8
172.5°	677.8	677.3	676.8	676.4	675.9	675.7	675.7	675.7	675.7	675.7	676.5
175°	682.8	682.3	681.8	681.4	680.9	680.6	680.6	680.6	680.6	680.6	681.4
177.5°	684.9	684.5	684.1	683.6	683.2	683.1	683.1	683.1	683.1	683.1	683.6
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0
2.5°	1486.2	1488.6	1490.8	1491.9	1491.6	1491.4	1491.1	1490.9
5°	1478.4	1481.2	1484.1	1485.3	1484.7	1484.1	1483.6	1483.0
7.5°	1462.7	1465.3	1467.8	1469.0	1468.6	1468.3	1467.9	1467.5
10°	1448.3	1450.9	1453.5	1454.4	1453.9	1453.3	1452.7	1452.2
12.5°	1432.6	1434.5	1436.3	1437.1	1436.8	1436.4	1436.1	1435.8
15°	1404.1	1406.4	1408.7	1409.0	1407.3	1405.5	1403.8	1402.1
17.5°	1368.1	1369.7	1371.3	1371.8	1371.2	1370.6	1369.9	1369.3
20°	1341.5	1342.7	1343.9	1344.0	1343.1	1342.3	1341.4	1340.6
22.5°	1313.4	1314.3	1315.2	1315.1	1314.1	1313.0	1311.9	1310.8
25°	1266.7	1267.1	1267.3	1267.1	1266.1	1265.3	1264.4	1263.6
27.5°	1217.1	1217.3	1217.6	1217.1	1216.1	1214.9	1213.9	1212.8
30°	1182.8	1182.8	1182.8	1181.8	1179.8	1177.8	1175.8	1173.7
32.5°	1146.7	1145.2	1143.6	1142.2	1141.1	1140.0	1139.0	1137.8
35°	1088.3	1086.6	1084.9	1083.3	1081.9	1080.4	1079.0	1077.6
37.5°	1027.8	1025.8	1023.7	1022.2	1021.3	1020.4	1019.5	1018.6
40°	988.4	986.1	983.8	982.0	980.9	979.8	978.6	977.5
42.5°	947.3	945.0	942.7	941.0	939.9	938.8	937.6	936.5
45°	886.0	882.6	879.2	876.8	875.3	873.9	872.5	871.0
47.5°	821.4	818.1	814.7	812.5	811.2	809.9	808.7	807.4
50°	778.8	775.7	772.5	770.2	768.5	766.7	765.0	763.3
52.5°	735.6	732.9	730.3	728.0	726.3	724.6	722.9	721.2
55°	669.8	666.7	663.5	661.2	659.8	658.4	657.0	655.5
57.5°	605.0	602.3	599.5	597.2	595.6	593.9	592.3	590.6
60°	559.3	556.8	554.2	552.2	550.7	549.3	547.9	546.5
62.5°	515.2	512.6	510.0	508.3	507.3	506.3	505.4	504.4
65°	449.6	447.2	445.0	443.5	442.6	441.8	440.8	440.0
67.5°	384.5	382.5	380.5	378.9	377.7	376.5	375.2	374.1
70°	342.3	340.4	338.4	336.7	335.3	333.8	332.4	330.9
72.5°	299.7	297.9	296.1	294.9	294.2	293.4	292.8	292.0
75°	238.4	236.9	235.4	234.3	233.5	232.6	231.8	230.9
77.5°	181.0	180.0	179.1	178.6	178.6	178.6	178.6	178.6
80°	144.4	144.1	143.8	143.6	143.6	143.6	143.6	143.6
82.5°	111.1	110.6	110.1	109.7	109.4	109.2	109.1	108.8
85°	63.0	62.4	61.8	61.5	61.5	61.5	61.5	61.5
87.5°	24.9	24.8	24.6	24.6	24.6	24.7	24.7	24.8
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	21.4	21.8	22.1	22.3	22.1	22.0	21.9	21.7
95°	40.7	41.2	41.7	41.9	41.9	41.9	41.9	41.9
97.5°	63.3	63.9	64.5	64.7	64.7	64.6	64.6	64.5
100°	79.7	80.1	80.5	80.8	81.0	81.2	81.4	81.7
102.5°	98.7	99.1	99.3	99.5	99.5	99.4	99.4	99.3
105°	126.9	126.9	126.9	127.0	127.2	127.4	127.7	128.0
107.5°	157.4	157.8	158.2	158.3	158.2	158.1	157.9	157.8
110°	177.9	178.3	178.8	178.9	178.7	178.4	178.2	178.0



TEST NUMBER: P332016-830

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.2	198.8	199.3	199.6	199.6	199.5	199.5	199.4
115°	229.2	229.4	229.5	229.5	229.4	229.2	229.1	229.0
117.5°	260.6	260.5	260.5	260.3	260.0	259.7	259.4	259.0
120°	281.4	281.3	281.3	281.1	280.8	280.6	280.3	280.1
122.5°	302.6	302.3	302.0	301.6	301.3	301.0	300.7	300.3
125°	333.9	333.5	333.0	332.5	332.1	331.6	331.1	330.6
127.5°	365.0	364.3	363.6	363.1	362.5	361.9	361.4	360.8
130°	385.6	385.1	384.7	384.0	383.1	382.3	381.4	380.6
132.5°	405.6	405.0	404.4	403.9	403.2	402.6	401.9	401.2
135°	435.5	435.1	434.6	434.2	434.0	433.8	433.6	433.3
137.5°	464.9	464.4	463.9	463.4	463.0	462.5	462.0	461.6
140°	484.2	484.0	483.9	483.4	482.6	481.7	480.9	480.1
142.5°	502.2	502.1	502.0	501.6	501.0	500.3	499.6	499.0
145°	528.8	528.7	528.6	528.2	527.7	527.3	526.8	526.3
147.5°	553.8	553.8	553.8	553.5	552.8	552.0	551.4	550.6
150°	569.3	569.3	569.3	569.0	568.3	567.5	566.8	566.1
152.5°	583.5	583.7	583.9	583.6	583.1	582.4	581.8	581.2
155°	604.2	604.6	605.1	604.9	604.1	603.2	602.5	601.6
157.5°	622.0	622.5	622.9	622.8	622.2	621.5	620.9	620.2
160°	632.9	633.5	634.0	634.1	633.7	633.2	632.7	632.3
162.5°	643.2	643.9	644.4	644.3	643.6	642.8	642.1	641.3
165°	656.3	657.0	657.7	657.6	656.8	655.9	655.2	654.3
167.5°	666.8	667.6	668.4	668.4	667.6	666.8	666.1	665.3
170°	672.6	673.4	674.3	674.3	673.4	672.6	671.8	670.9
172.5°	677.1	677.9	678.6	678.6	677.8	676.9	676.1	675.2
175°	682.0	682.8	683.5	683.4	682.6	681.7	680.9	680.0
177.5°	684.3	684.9	685.4	685.3	684.7	684.0	683.3	682.7
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4

(END OF REPORT)