

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: P331436-935

Luminaire Tested: **SA2XXDIP-C1005D530U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331436-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D530U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

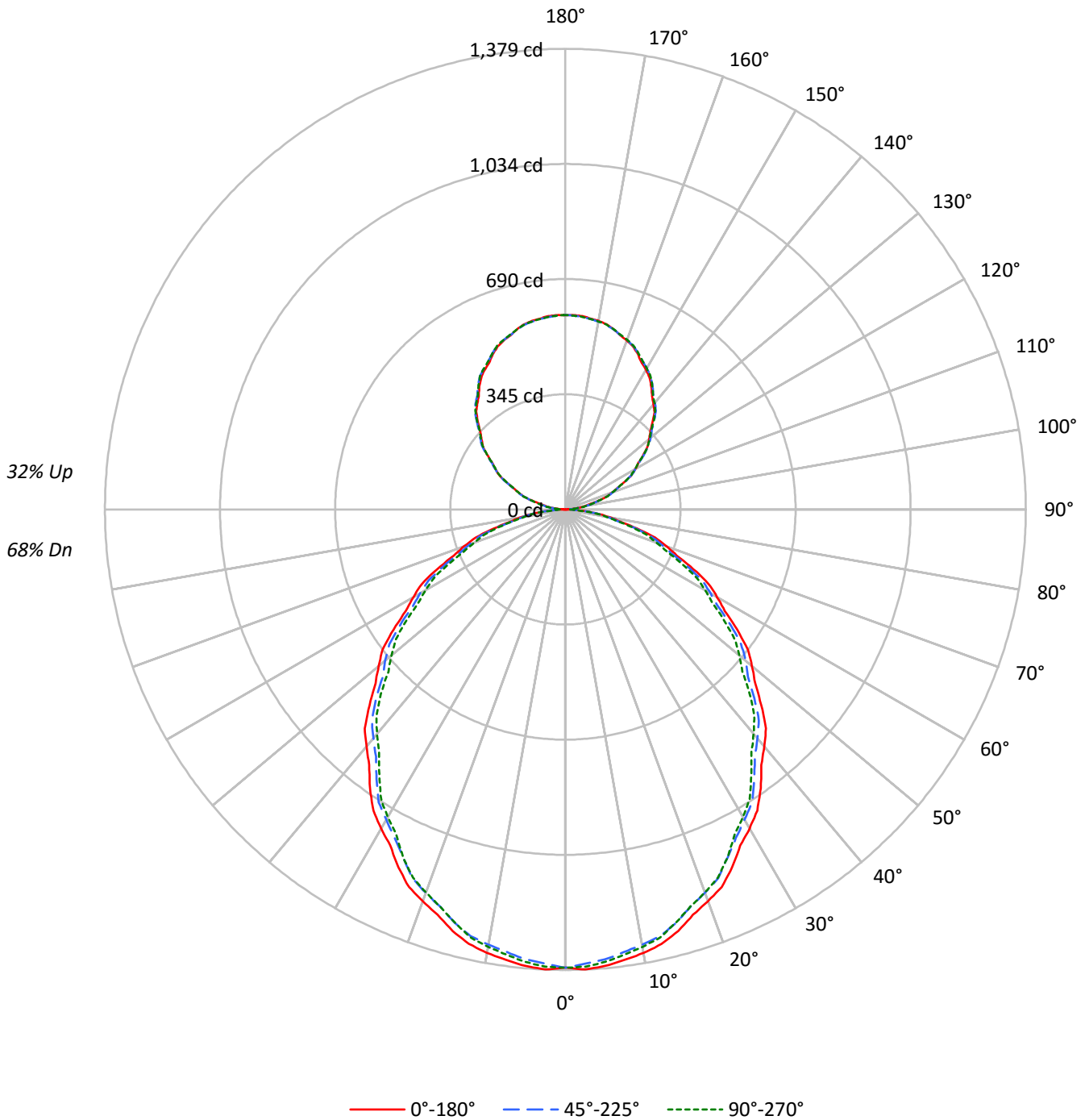
Lumens per Lamp: N/A
Luminaire Lumens: 5120.5 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 55.1
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	83	83	83	73	73	73	68
1	102	97	93	90	96	92	89	85	82	79	77	73	71	69	64	63	62	57
2	93	85	79	73	87	81	75	70	72	68	64	64	61	58	57	54	52	48
3	85	75	67	61	80	71	64	59	64	58	54	57	52	49	50	47	44	41
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	41	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29	27
7	61	48	40	34	57	46	38	33	42	35	31	37	32	28	34	29	26	24
8	57	44	36	30	53	42	35	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	29	24	21	19
10	49	37	30	25	47	35	28	24	32	26	22	29	24	21	27	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22157	22157	22157
5°	22242	21921	22049
10°	22109	21697	21807
15°	21835	21417	21396
20°	21448	20993	20972
25°	21063	20475	20475
30°	20566	19999	19827
35°	20103	19429	19141
40°	19524	18858	18493
45°	18952	18287	17838
50°	18329	17698	17071
55°	17681	17011	16380
60°	16956	16191	15594
65°	16180	15373	14670
70°	15196	14389	13704
75°	13830	13250	12926
80°	12273	11901	11288
85°	10022	9541	8540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.0	2.5
10°-20°	363.1	7.1
20°-30°	533.7	10.4
30°-40°	619.9	12.1
40°-50°	619.3	12.1
50°-60°	540.0	10.5
60°-70°	399.3	7.8
70°-80°	226.2	4.4
80°-90°	63.2	1.2
90°-100°	36.9	0.7
100°-110°	114.5	2.2
110°-120°	195.7	3.8
120°-130°	257.4	5.0
130°-140°	288.9	5.6
140°-150°	283.3	5.5
150°-160°	237.6	4.6
160°-170°	157.6	3.1
170°-180°	55.1	1.1
0°-30°	1025.8	20.0
0°-40°	1645.7	32.1
0°-60°	2805.0	54.8
0°-90°	3493.6	68.2
90°-120°	347.1	6.8
90°-150°	1176.6	23.0
90°-180°	1627.0	31.8
0°-180°	5120.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1366	1352	1362	1360	130
15°	1306	1298	1281	1286	1280	368
25°	1182	1171	1149	1152	1149	544
35°	1020	1006	986	978	971	637
45°	830	820	801	787	781	640
55°	628	620	604	589	582	561
65°	424	415	402	391	384	419
75°	222	219	212	205	207	237
85°	54	53	52	48	46	62
90°	0	7	17	16	17	4
95°	26	30	31	31	30	29
105°	106	107	108	109	109	112
115°	196	199	198	198	196	194
125°	286	290	289	287	287	255
135°	370	375	376	376	374	285
145°	449	452	455	456	454	280
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1378.6	1377.4	1376.3	1375.1	1373.9	1372.1	1369.5	1366.9	1364.3	1361.8	1364.1
5°	1372.3	1371.1	1369.9	1368.7	1367.6	1365.4	1362.2	1358.9	1355.7	1352.5	1354.9
7.5°	1360.1	1358.3	1356.5	1354.7	1352.9	1350.3	1347.0	1343.8	1340.5	1337.2	1339.5
10°	1348.5	1346.5	1344.5	1342.4	1340.3	1337.6	1334.0	1330.5	1327.0	1323.4	1325.9
12.5°	1332.7	1330.8	1329.0	1327.2	1325.4	1322.8	1319.2	1315.7	1312.3	1308.7	1310.4
15°	1306.3	1304.6	1302.8	1301.1	1299.2	1296.5	1292.7	1288.8	1285.0	1281.3	1282.5
17.5°	1272.6	1270.7	1269.0	1267.2	1265.5	1262.7	1258.8	1254.9	1251.0	1247.2	1248.5
20°	1248.3	1246.5	1244.7	1242.9	1241.2	1238.3	1234.2	1230.1	1226.0	1221.8	1222.7
22.5°	1224.0	1221.5	1219.1	1216.6	1214.1	1211.0	1207.1	1203.2	1199.4	1195.5	1195.7
25°	1182.3	1179.9	1177.6	1175.3	1172.9	1169.2	1164.2	1159.3	1154.3	1149.3	1149.9
27.5°	1134.8	1132.6	1130.6	1128.4	1126.4	1123.3	1119.4	1115.4	1111.6	1107.6	1106.7
30°	1103.1	1100.8	1098.4	1096.1	1093.7	1090.4	1086.0	1081.6	1077.2	1072.7	1071.9
32.5°	1069.4	1067.5	1065.6	1063.7	1061.8	1058.6	1054.0	1049.3	1044.7	1040.0	1038.5
35°	1019.9	1017.0	1014.1	1011.2	1008.2	1004.4	999.7	995.1	990.4	985.7	984.0
37.5°	964.3	961.7	959.2	956.6	954.0	950.4	945.6	941.0	936.3	931.6	929.4
40°	926.3	923.9	921.6	919.3	916.9	913.4	908.7	904.0	899.3	894.7	892.0
42.5°	889.3	887.0	884.7	882.4	879.9	876.4	871.8	867.0	862.4	857.6	854.8
45°	830.0	827.9	825.9	823.8	821.7	818.6	814.2	809.8	805.4	800.9	797.7
47.5°	770.9	769.0	767.0	765.1	763.1	759.8	755.3	750.7	746.1	741.6	738.1
50°	729.7	728.2	726.8	725.3	723.8	721.0	717.0	712.8	708.7	704.6	700.5
52.5°	689.6	687.7	685.7	683.8	681.8	678.9	675.0	671.1	667.4	663.5	660.0
55°	628.1	626.3	624.6	622.8	621.0	618.4	614.9	611.4	607.9	604.3	600.8
57.5°	566.4	564.9	563.5	562.1	560.7	558.1	554.2	550.4	546.5	542.6	539.2
60°	525.1	524.0	522.8	521.7	520.5	517.8	513.8	509.6	505.5	501.4	498.2
62.5°	485.1	483.2	481.3	479.4	477.5	475.0	471.8	468.7	465.5	462.4	459.3
65°	423.5	421.8	420.1	418.3	416.6	414.1	411.2	408.3	405.4	402.4	399.8
67.5°	361.0	359.6	358.2	356.8	355.4	353.4	350.7	348.1	345.4	342.9	340.8
70°	321.9	320.8	319.6	318.5	317.3	315.4	312.7	310.0	307.5	304.8	302.7
72.5°	281.8	280.7	279.5	278.4	277.2	275.7	274.1	272.3	270.6	268.9	266.8
75°	221.7	221.1	220.5	219.9	219.3	218.3	216.8	215.3	213.9	212.4	210.7
77.5°	167.8	166.9	165.8	164.9	163.8	163.1	162.5	161.9	161.3	160.7	159.8
80°	132.0	131.6	131.4	131.0	130.8	130.4	129.8	129.2	128.5	128.0	127.1
82.5°	98.2	98.2	98.1	98.0	97.9	97.7	97.4	97.0	96.7	96.3	95.2
85°	54.1	53.8	53.6	53.2	53.0	52.6	52.3	52.0	51.7	51.5	50.5
87.5°	19.1	18.9	18.7	18.5	18.3	18.2	18.2	18.2	18.2	18.3	17.5
90°	0.5	1.8	3.1	4.4	5.8	7.6	10.0	12.4	14.8	17.2	17.0
92.5°	8.8	9.7	10.7	11.6	12.6	13.3	13.9	14.5	15.1	15.6	15.7
95°	25.6	26.6	27.7	28.8	29.9	30.6	30.7	31.0	31.2	31.4	31.4
97.5°	46.7	47.6	48.6	49.5	50.5	51.1	51.6	52.0	52.4	52.9	52.9
100°	62.3	63.2	64.1	65.0	65.9	66.5	66.8	67.1	67.4	67.8	67.8
102.5°	78.9	79.6	80.2	80.9	81.6	82.2	82.7	83.0	83.4	83.9	83.9
105°	105.6	105.9	106.2	106.5	106.9	107.1	107.4	107.5	107.8	108.1	108.2
107.5°	132.5	132.9	133.5	133.9	134.4	134.7	134.7	134.7	134.7	134.7	134.7
110°	149.7	150.4	151.0	151.7	152.4	152.7	152.7	152.7	152.7	152.7	152.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	169.3	169.9	170.6	171.3	171.5	171.4	171.3	171.3	171.2	170.9
115°	196.4	197.1	197.7	198.4	199.0	199.2	199.0	198.8	198.5	198.4	198.3
117.5°	224.1	225.0	225.8	226.7	227.6	227.7	227.1	226.4	225.8	225.2	225.0
120°	242.5	243.4	244.3	245.1	246.1	246.1	245.1	244.3	243.4	242.5	242.5
122.5°	259.4	260.5	261.6	262.6	263.6	263.8	263.2	262.6	262.0	261.4	261.1
125°	285.8	286.7	287.7	288.7	289.6	290.0	289.6	289.4	289.0	288.7	288.3
127.5°	311.3	312.6	313.8	315.1	316.3	316.8	316.4	316.0	315.6	315.2	314.8
130°	327.5	328.9	330.3	331.7	333.1	333.7	333.6	333.3	333.1	332.9	332.7
132.5°	345.5	346.7	347.8	349.0	350.2	350.8	350.9	350.9	350.9	350.9	350.5
135°	369.7	370.9	372.1	373.3	374.5	375.2	375.4	375.7	375.9	376.1	376.0
137.5°	395.1	396.1	397.1	398.1	399.1	399.7	400.0	400.3	400.5	400.8	400.7
140°	410.4	411.5	412.4	413.4	414.4	415.2	415.7	416.2	416.8	417.3	417.3
142.5°	426.2	427.1	428.2	429.1	430.1	430.8	431.2	431.5	431.9	432.2	432.3
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.2
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.2
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1366.4	1368.7	1371.1	1372.1	1371.6	1371.1	1370.6	1370.2
5°	1357.2	1359.5	1361.8	1362.8	1362.2	1361.6	1361.0	1360.4
7.5°	1341.9	1344.2	1346.6	1347.5	1346.8	1346.2	1345.5	1344.9
10°	1328.2	1330.5	1332.8	1333.6	1332.7	1331.8	1330.9	1330.1
12.5°	1312.0	1313.6	1315.3	1315.8	1315.1	1314.5	1313.8	1313.2
15°	1283.6	1284.8	1285.9	1285.8	1284.4	1282.9	1281.4	1280.0
17.5°	1249.9	1251.3	1252.6	1252.6	1251.1	1249.7	1248.4	1246.9
20°	1223.7	1224.5	1225.4	1225.2	1224.1	1222.9	1221.8	1220.6
22.5°	1195.8	1196.0	1196.2	1195.9	1195.2	1194.6	1193.8	1193.1
25°	1150.5	1151.1	1151.7	1151.7	1151.1	1150.5	1149.9	1149.3
27.5°	1105.9	1104.9	1104.1	1102.9	1101.6	1100.1	1098.7	1097.3
30°	1071.0	1070.1	1069.3	1068.2	1067.0	1065.8	1064.7	1063.5
32.5°	1036.9	1035.3	1033.7	1032.3	1031.1	1030.0	1028.8	1027.6
35°	982.1	980.4	978.6	977.1	975.6	974.1	972.6	971.1
37.5°	927.2	925.1	922.9	921.1	919.7	918.3	916.9	915.5
40°	889.3	886.7	884.1	882.2	881.0	879.9	878.7	877.4
42.5°	852.0	849.0	846.2	844.0	842.3	840.7	839.0	837.3
45°	794.5	791.3	788.1	785.8	784.6	783.5	782.3	781.2
47.5°	734.8	731.3	728.0	725.4	723.7	722.0	720.3	718.6
50°	696.4	692.3	688.2	685.4	684.0	682.5	681.1	679.6
52.5°	656.7	653.2	649.9	647.2	645.2	643.3	641.4	639.5
55°	597.3	593.7	590.3	587.8	586.3	584.9	583.4	581.9
57.5°	535.6	532.2	528.7	526.4	525.4	524.3	523.1	522.0
60°	495.0	491.7	488.5	486.5	485.6	484.7	483.8	482.9
62.5°	456.4	453.4	450.4	448.3	447.2	446.1	445.0	443.8
65°	397.2	394.5	391.9	389.9	388.4	386.9	385.5	384.0
67.5°	338.7	336.7	334.6	332.9	331.8	330.6	329.5	328.3
70°	300.7	298.7	296.6	295.0	293.8	292.7	291.4	290.3
72.5°	264.8	262.8	260.7	259.2	258.3	257.4	256.4	255.5
75°	209.0	207.2	205.4	204.8	205.4	206.0	206.6	207.2
77.5°	158.9	158.1	157.2	156.4	155.5	154.7	153.9	153.1
80°	126.2	125.4	124.5	123.7	123.1	122.6	122.0	121.4
82.5°	94.1	93.0	91.9	91.3	91.1	91.0	90.9	90.7
85°	49.7	48.8	48.0	47.4	47.1	46.8	46.5	46.1
87.5°	16.7	16.0	15.2	14.7	14.6	14.3	14.1	13.9
90°	16.8	16.5	16.3	16.3	16.4	16.4	16.6	16.7
92.5°	15.7	15.8	15.8	15.8	15.8	15.8	15.9	15.9
95°	31.4	31.4	31.4	31.3	31.1	30.9	30.7	30.5
97.5°	52.9	52.9	52.9	52.8	52.8	52.8	52.8	52.7
100°	67.8	67.8	67.8	67.7	67.6	67.5	67.4	67.2
102.5°	84.0	84.1	84.2	84.2	84.1	83.9	83.9	83.8
105°	108.5	108.7	108.9	109.0	109.0	109.0	109.0	109.0
107.5°	134.8	134.9	135.0	134.7	134.2	133.8	133.3	132.8
110°	152.7	152.7	152.7	152.6	152.2	151.9	151.5	151.2



TEST NUMBER: P331436-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	170.7	170.4	170.1	169.9	169.6	169.4	169.1	168.9
115°	198.1	198.0	197.9	197.7	197.3	197.1	196.7	196.4
117.5°	224.7	224.5	224.2	223.9	223.6	223.3	222.9	222.6
120°	242.5	242.5	242.5	242.4	242.0	241.8	241.4	241.1
122.5°	260.9	260.6	260.4	260.1	259.8	259.6	259.4	259.2
125°	288.0	287.7	287.4	287.1	287.1	287.0	286.8	286.7
127.5°	314.4	314.0	313.7	313.2	312.9	312.5	312.2	311.9
130°	332.4	332.3	332.0	331.7	331.2	330.8	330.4	329.9
132.5°	350.0	349.5	349.0	348.6	348.3	347.9	347.6	347.2
135°	375.9	375.7	375.7	375.4	375.1	374.8	374.4	374.1
137.5°	400.6	400.5	400.5	400.2	399.8	399.3	398.9	398.5
140°	417.3	417.3	417.3	417.2	416.6	416.2	415.8	415.3
142.5°	432.4	432.5	432.6	432.4	432.0	431.5	431.1	430.7
145°	455.4	455.5	455.6	455.4	455.0	454.5	454.1	453.7
147.5°	475.4	475.7	476.0	475.9	475.4	475.0	474.6	474.2
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)