

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: P331435-935

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

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331435-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
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-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

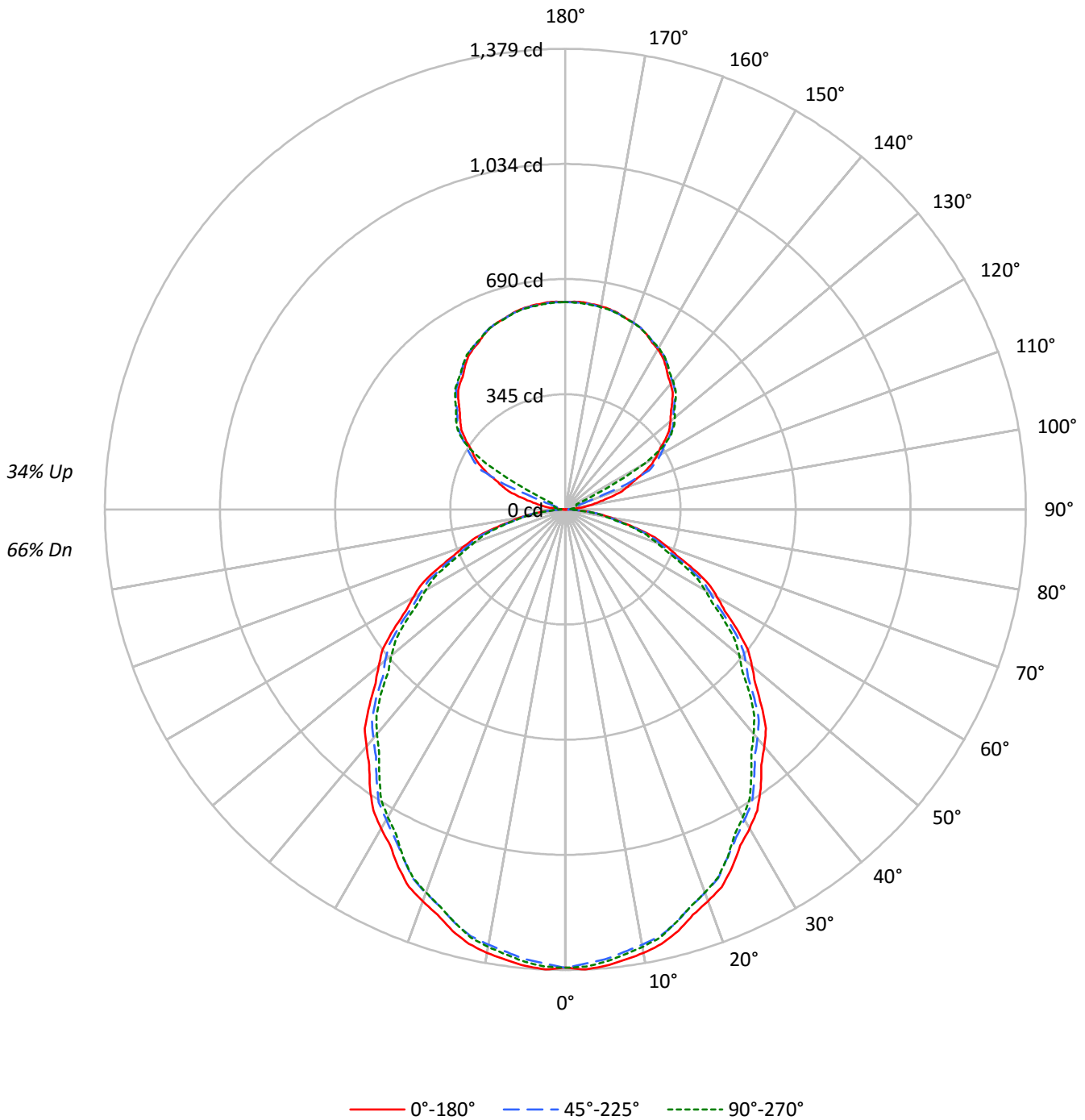
Lumens per Lamp: N/A
Luminaire Lumens: 5312.6 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	101	97	93	89	95	91	88	85	81	78	76	71	69	67	62	61	60	55
2	92	85	78	73	87	80	74	70	71	67	63	63	59	56	55	52	50	46
3	84	74	67	61	79	70	64	58	63	57	53	55	51	48	49	46	43	39
4	77	66	58	52	72	62	55	49	56	50	45	49	45	41	44	40	37	34
5	71	59	51	44	66	56	48	43	50	44	39	44	39	36	39	35	32	29
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	36	32	28	26
7	61	48	40	34	57	45	38	33	41	35	30	37	32	28	33	28	25	23
8	56	44	36	30	53	41	34	29	37	31	27	34	28	25	30	26	23	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	20	18
10	49	37	29	24	46	35	28	24	32	26	22	29	24	20	26	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	2.4
10°-20°	363.1	6.8
20°-30°	533.7	10.0
30°-40°	619.9	11.7
40°-50°	619.3	11.7
50°-60°	540.0	10.2
60°-70°	399.3	7.5
70°-80°	226.2	4.3
80°-90°	62.4	1.2
90°-100°	20.7	0.4
100°-110°	76.0	1.4
110°-120°	203.0	3.8
120°-130°	335.2	6.3
130°-140°	356.5	6.7
140°-150°	331.3	6.2
150°-160°	266.4	5.0
160°-170°	171.7	3.2
170°-180°	59.1	1.1
0°-30°	1025.8	19.3
0°-40°	1645.7	31.0
0°-60°	2805.0	52.8
0°-90°	3492.8	65.7
90°-120°	299.7	5.6
90°-150°	1322.7	24.9
90°-180°	1820.0	34.3
0°-180°	5312.6	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	5	9	11	12	4
95°	29	15	18	20	19	36
105°	137	143	27	32	34	146
115°	258	266	277	79	37	254
125°	365	371	380	383	384	326
135°	452	459	463	468	467	349
145°	524	524	532	534	532	328
155°	577	574	579	581	578	266
165°	608	606	607	610	607	172
175°	622	619	620	623	619	59
180°	621	621	621	621	621	



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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	18.6	18.3	18.1	17.8	17.5	17.2	16.9	16.6	16.0
90°	0.4	1.5	2.7	3.7	4.8	5.8	6.6	7.4	8.2	9.0	9.5
92.5°	9.0	9.0	8.9	8.8	8.7	8.9	9.2	9.6	10.0	10.4	10.7
95°	29.2	25.9	22.6	19.3	16.0	14.7	15.4	16.1	16.8	17.6	18.0
97.5°	57.9	48.6	39.4	30.1	20.8	17.0	18.6	20.2	21.9	23.4	23.8
100°	79.6	65.9	52.2	38.5	24.8	18.9	20.5	22.2	23.9	25.6	26.4
102.5°	103.2	100.4	97.5	94.5	91.7	83.1	69.0	54.8	40.6	26.3	27.4
105°	136.6	139.6	142.6	145.6	148.6	136.5	109.2	82.0	54.7	27.4	28.5
107.5°	174.6	177.0	179.4	181.8	184.3	169.1	136.5	103.8	71.0	38.4	37.3
110°	199.1	201.1	203.3	205.3	207.4	194.1	165.2	136.4	107.5	78.6	68.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	222.1	223.9	225.8	227.6	229.5	226.9	219.7	212.6	205.4	198.4	161.9
115°	258.4	260.0	261.7	263.5	265.2	267.3	269.8	272.2	274.7	277.2	231.0
117.5°	290.8	292.7	294.6	296.5	298.4	300.2	302.0	303.7	305.4	307.0	295.9
120°	314.5	316.0	317.5	319.0	320.6	322.2	324.0	325.8	327.5	329.3	330.5
122.5°	334.7	336.2	337.9	339.4	341.0	342.8	344.7	346.6	348.6	350.6	351.3
125°	365.3	366.6	367.9	369.2	370.5	372.1	374.0	375.9	377.8	379.7	380.4
127.5°	393.0	394.5	396.0	397.4	398.8	400.3	401.7	403.1	404.5	406.0	406.9
130°	410.7	412.2	413.9	415.5	417.1	418.4	419.6	420.6	421.7	422.8	424.0
132.5°	428.7	430.0	431.4	432.7	434.1	435.3	436.4	437.6	438.6	439.7	440.7
135°	452.0	453.7	455.2	456.8	458.4	459.7	460.5	461.5	462.4	463.2	464.3
137.5°	475.7	476.7	477.9	479.0	480.1	481.2	482.2	483.3	484.2	485.3	486.3
140°	491.1	491.9	492.8	493.5	494.3	495.2	496.4	497.5	498.5	499.6	500.6
142.5°	504.0	504.8	505.5	506.2	507.0	507.9	509.2	510.4	511.7	513.0	513.8
145°	524.3	524.3	524.2	524.1	524.0	524.8	526.5	528.1	529.9	531.6	532.3
147.5°	542.1	541.7	541.3	541.0	540.5	541.2	542.9	544.6	546.2	547.9	548.5
150°	553.5	552.8	552.2	551.5	550.8	551.2	552.8	554.4	556.0	557.6	558.2
152.5°	563.3	562.5	561.7	560.9	560.2	560.5	562.1	563.6	565.1	566.6	567.2
155°	577.4	576.5	575.6	574.7	573.8	573.9	575.1	576.4	577.6	578.8	579.4
157.5°	588.4	587.7	586.9	586.2	585.4	585.5	586.3	587.1	588.0	588.8	589.4
160°	595.0	594.3	593.7	593.1	592.5	592.5	593.1	593.7	594.3	595.0	595.6
162.5°	600.6	600.0	599.4	598.8	598.3	598.2	598.7	599.3	599.8	600.3	601.0
165°	608.4	607.8	607.2	606.6	606.0	605.9	606.1	606.4	606.7	607.0	607.8
167.5°	614.2	613.5	612.9	612.3	611.7	611.6	611.8	612.2	612.4	612.7	613.4
170°	617.3	616.8	616.2	615.6	615.0	614.8	615.0	615.2	615.4	615.6	616.3
172.5°	619.6	619.0	618.4	617.8	617.2	616.9	617.2	617.3	617.5	617.8	618.5
175°	622.3	621.6	621.0	620.3	619.5	619.3	619.5	619.7	619.8	620.1	620.8
177.5°	622.8	622.2	621.6	621.1	620.5	620.3	620.4	620.4	620.5	620.6	621.2
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0



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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°	15.3	14.7	14.1	13.8	13.6	13.3	13.2	13.0
90°	10.0	10.5	11.0	11.4	11.5	11.7	12.0	12.1
92.5°	10.9	11.2	11.5	11.6	11.8	11.9	12.1	12.1
95°	18.5	19.0	19.5	19.7	19.6	19.5	19.5	19.3
97.5°	24.3	24.6	25.1	25.3	25.4	25.6	25.7	25.8
100°	27.2	28.0	28.8	29.3	29.5	29.7	29.9	30.1
102.5°	28.4	29.4	30.5	31.2	31.4	31.7	31.9	32.3
105°	29.6	30.7	31.8	32.5	33.0	33.3	33.8	34.2
107.5°	36.2	35.0	33.9	33.6	33.9	34.4	34.7	35.1
110°	58.6	48.6	38.7	33.9	34.3	34.7	35.1	35.5



TEST NUMBER: P331435-935

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	125.4	89.0	52.6	34.6	34.9	35.2	35.6	35.8
115°	184.8	138.5	92.3	65.6	58.4	51.2	44.0	36.9
117.5°	284.7	273.5	262.3	245.0	221.3	197.7	174.1	150.4
120°	331.7	332.9	334.2	328.0	314.5	301.1	287.6	274.1
122.5°	352.0	352.8	353.4	352.5	349.9	347.2	344.7	342.0
125°	381.1	381.8	382.5	383.0	383.3	383.6	383.9	384.2
127.5°	407.9	409.0	410.0	410.5	410.6	410.7	410.7	410.8
130°	425.0	426.1	427.2	427.7	427.6	427.5	427.4	427.3
132.5°	441.6	442.6	443.5	443.8	443.8	443.7	443.6	443.5
135°	465.3	466.2	467.3	467.7	467.4	467.3	467.1	466.8
137.5°	487.2	488.2	489.2	489.5	489.1	488.8	488.5	488.2
140°	501.4	502.3	503.3	503.4	502.9	502.5	502.0	501.4
142.5°	514.6	515.4	516.3	516.4	515.9	515.4	514.9	514.4
145°	533.0	533.6	534.3	534.4	534.0	533.5	533.0	532.4
147.5°	549.0	549.5	550.0	550.0	549.7	549.2	548.8	548.4
150°	558.8	559.4	560.0	560.1	559.6	559.0	558.5	558.1
152.5°	567.8	568.4	569.0	568.9	568.3	567.7	567.0	566.4
155°	580.0	580.6	581.2	581.0	580.2	579.5	578.7	577.8
157.5°	590.1	590.8	591.5	591.5	590.6	589.9	589.1	588.3
160°	596.1	596.7	597.3	597.3	596.6	595.9	595.1	594.4
162.5°	601.7	602.4	603.0	603.0	602.1	601.2	600.4	599.5
165°	608.5	609.2	609.8	609.8	609.2	608.5	607.8	607.0
167.5°	614.1	614.8	615.5	615.4	614.5	613.6	612.7	611.8
170°	617.0	617.7	618.4	618.3	617.3	616.5	615.6	614.7
172.5°	619.1	619.8	620.5	620.4	619.6	618.6	617.8	616.8
175°	621.5	622.2	622.8	622.8	621.7	620.7	619.7	618.7
177.5°	621.7	622.3	622.8	622.8	622.1	621.3	620.6	619.9
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0

(END OF REPORT)