

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: P331450-830

Luminaire Tested: **SA2XXDIP-C1005D925U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331450-830
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-C1005D925U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

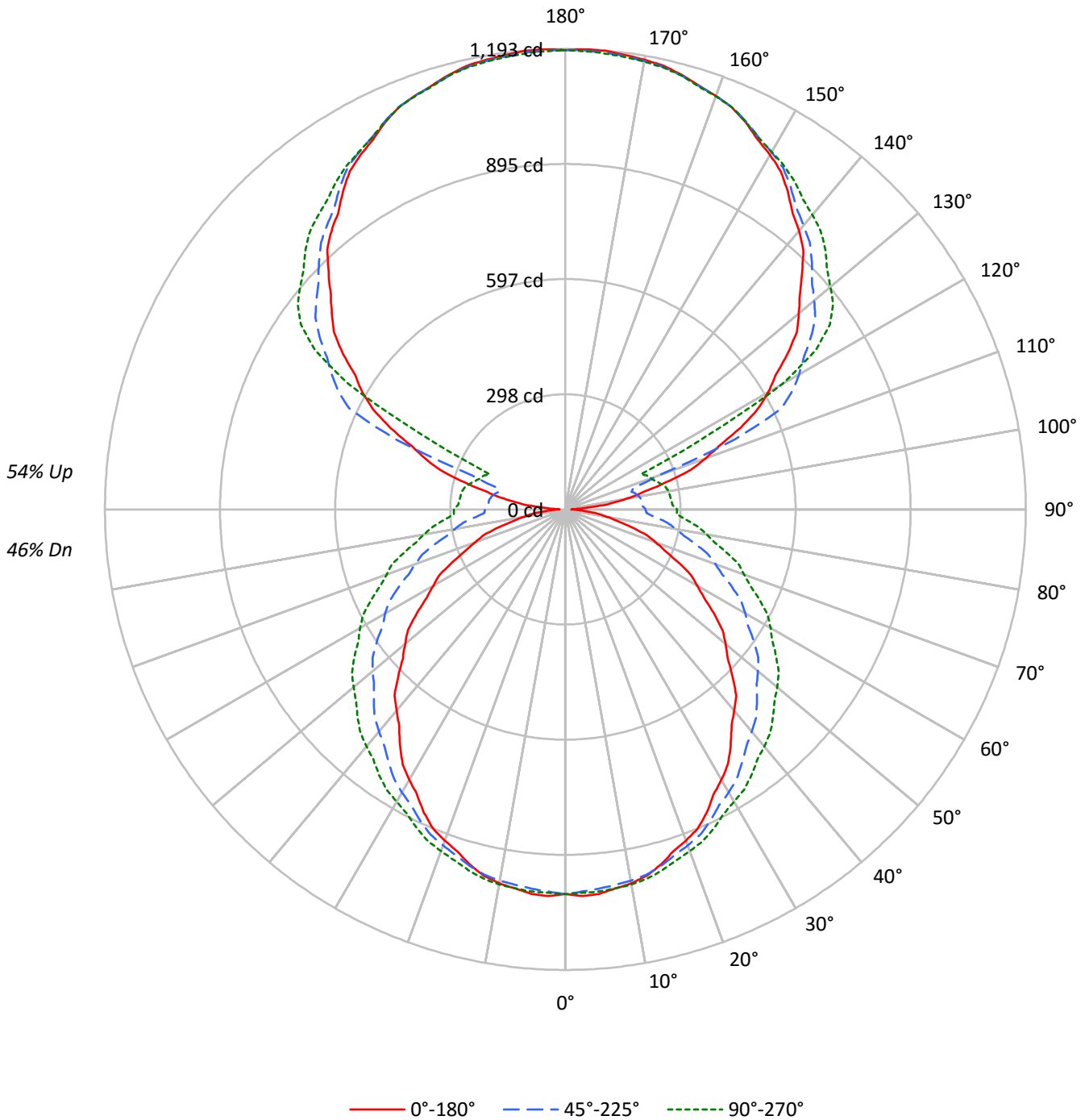
Lumens per Lamp: N/A
Luminaire Lumens: 7291.7 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 66.8
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	50	30	10	0	
RCR																						
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46				
1	96	91	86	82	87	83	79	76	69	66	64	56	54	52	44	43	42	36				
2	86	78	72	66	79	72	66	61	60	55	52	49	45	43	38	36	34	29				
3	79	68	61	54	72	63	56	50	52	47	43	43	39	36	33	31	28	24				
4	72	60	52	46	65	55	48	42	46	41	36	38	33	30	30	27	24	20				
5	66	53	45	39	60	49	42	36	41	35	31	34	29	26	27	23	21	17				
6	60	48	39	33	55	44	37	31	37	31	27	30	26	22	24	21	18	15				
7	56	43	35	29	51	40	32	27	33	28	23	27	23	20	22	18	16	13				
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	20	17	14	12				
9	48	35	28	23	44	33	26	21	28	22	18	23	19	16	18	15	13	11				
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16091	16091	16091
5°	16172	15491	15432
10°	16069	15033	14865
15°	15848	14548	14266
20°	15567	14030	13691
25°	15292	13528	13167
30°	14902	13015	12643
35°	14508	12517	12274
40°	14092	12094	11903
45°	13700	11715	11587
50°	13277	11373	11276
55°	12834	11004	10959
60°	12292	10623	10624
65°	11728	10173	10227
70°	11096	9693	9797
75°	10286	9222	9401
80°	9006	8739	9001
85°	7780	8321	8687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.4	1.3
10°-20°	270.8	3.7
20°-30°	410.4	5.6
30°-40°	499.9	6.9
40°-50°	537.8	7.4
50°-60°	522.2	7.2
60°-70°	456.0	6.3
70°-80°	351.0	4.8
80°-90°	238.5	3.3
90°-100°	202.0	2.8
100°-110°	264.0	3.6
110°-120°	467.3	6.4
120°-130°	685.8	9.4
130°-140°	701.2	9.6
140°-150°	637.9	8.7
150°-160°	510.3	7.0
160°-170°	328.8	4.5
170°-180°	113.2	1.6
0°-30°	775.7	10.6
0°-40°	1275.5	17.5
0°-60°	2335.5	32.0
0°-90°	3381.1	46.4
90°-120°	933.3	12.8
90°-150°	2958.3	40.6
90°-180°	3911.0	53.6
0°-180°	7291.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	1000	995	987	995	994	95
15°	953	956	956	968	968	268
25°	867	877	890	906	911	398
35°	747	772	799	829	841	467
45°	612	652	702	745	761	473
55°	470	523	596	647	667	420
65°	321	392	477	534	555	318
75°	178	259	351	411	432	188
85°	52	142	234	292	315	56
90°	15	109	208	268	289	12
95°	68	110	200	256	275	78
105°	269	324	177	234	256	288
115°	501	534	618	280	216	492
125°	703	717	776	820	837	627
135°	867	882	903	941	952	670
145°	1005	1005	1018	1032	1036	628
155°	1106	1099	1109	1113	1107	509
165°	1166	1161	1163	1168	1163	329
175°	1192	1187	1188	1193	1185	113
180°	1190	1190	1190	1190	1190	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	1002.5	1001.7	1000.9	1000.1	999.4	998.1	996.3	994.5	992.7	990.9	992.2
5°	999.6	998.6	997.7	996.6	995.7	994.3	992.4	990.4	988.5	986.6	988.5
7.5°	990.6	990.0	989.3	988.7	988.1	987.0	985.5	984.0	982.6	981.1	983.4
10°	983.7	983.1	982.4	981.8	981.1	980.3	979.4	978.4	977.4	976.5	979.0
12.5°	972.1	972.2	972.4	972.5	972.6	972.3	971.7	970.9	970.3	969.5	972.1
15°	953.4	954.0	954.6	955.3	955.9	956.2	956.2	956.2	956.2	956.2	959.1
17.5°	929.1	930.5	931.8	933.1	934.4	935.7	936.7	937.7	938.8	939.8	942.8
20°	912.9	914.5	916.2	917.8	919.4	920.8	922.1	923.3	924.6	926.0	929.4
22.5°	895.6	897.4	899.3	901.2	903.1	904.8	906.6	908.4	910.2	912.0	915.6
25°	866.7	868.9	871.2	873.5	875.7	878.3	881.1	884.0	886.9	889.8	893.6
27.5°	832.0	835.7	839.3	843.0	846.7	850.2	853.6	857.0	860.4	863.8	868.6
30°	808.9	813.0	817.3	821.4	825.6	829.8	834.0	838.1	842.3	846.5	851.6
32.5°	783.4	788.2	792.9	797.6	802.2	807.0	812.0	816.9	821.9	826.8	832.7
35°	746.8	752.2	757.7	763.2	768.6	774.4	780.5	786.6	792.7	798.8	805.9
37.5°	706.9	713.2	719.5	725.8	732.1	739.1	747.1	755.0	762.9	770.8	778.6
40°	680.3	687.4	694.5	701.5	708.6	716.4	725.1	733.8	742.4	751.1	759.5
42.5°	655.0	661.9	669.0	676.1	683.2	691.6	701.6	711.6	721.5	731.5	740.6
45°	612.5	621.1	629.8	638.5	647.1	657.0	668.4	679.6	690.8	702.0	712.0
47.5°	570.6	580.0	589.5	598.9	608.3	619.6	632.8	645.9	659.1	672.2	682.7
50°	541.7	551.7	561.6	571.6	581.5	593.7	608.1	622.5	637.0	651.5	662.4
52.5°	514.0	524.4	534.9	545.4	555.8	568.6	583.8	599.1	614.3	629.5	640.6
55°	469.5	481.0	492.6	504.2	515.7	529.8	546.5	563.2	579.9	596.5	608.1
57.5°	425.6	438.6	451.6	464.7	477.7	492.7	509.7	526.7	543.8	560.7	573.2
60°	394.4	408.1	422.0	435.7	449.6	465.6	483.9	502.2	520.5	538.8	551.0
62.5°	366.6	380.9	395.2	409.5	423.9	440.2	458.5	476.7	495.1	513.4	526.3
65°	320.7	336.4	352.1	367.9	383.6	401.0	419.9	438.8	457.7	476.6	489.8
67.5°	278.5	294.9	311.3	327.8	344.2	362.1	381.5	401.0	420.3	439.7	453.0
70°	248.5	265.1	281.8	298.5	315.2	333.5	353.5	373.3	393.2	413.1	426.9
72.5°	220.7	237.9	255.1	272.3	289.5	308.2	328.4	348.6	368.7	388.9	402.4
75°	177.7	195.7	213.6	231.6	249.6	268.8	289.4	309.9	330.5	351.0	364.8
77.5°	136.1	154.9	173.7	192.5	211.3	231.1	252.0	272.9	293.7	314.6	328.4
80°	108.3	127.9	147.5	167.1	186.6	206.9	227.7	248.6	269.5	290.3	303.8
82.5°	85.2	104.5	123.9	143.2	162.5	182.8	203.9	225.0	246.1	267.2	280.7
85°	52.0	71.9	91.8	111.7	131.6	151.8	172.4	192.9	213.5	234.0	247.5
87.5°	28.5	48.1	67.6	87.2	106.7	126.9	147.7	168.6	189.5	210.3	223.6
90°	15.3	36.0	56.7	77.5	98.2	119.6	141.7	163.7	185.8	207.9	221.7
92.5°	30.6	47.8	64.9	82.1	99.2	118.1	138.6	159.2	179.7	200.2	213.3
95°	67.5	76.3	85.0	93.9	102.6	117.3	137.9	158.5	179.1	199.7	212.8
97.5°	121.1	116.8	112.4	108.0	103.7	112.3	133.8	155.4	177.0	198.6	211.2
100°	162.5	148.2	133.8	119.5	105.2	108.6	129.8	151.1	172.3	193.5	206.9
102.5°	206.8	212.1	217.4	222.7	228.0	225.7	216.0	206.3	196.5	186.8	200.4
105°	268.9	284.0	299.0	314.1	329.1	318.9	283.3	247.8	212.3	176.7	190.1
107.5°	341.5	353.5	365.6	377.7	389.7	372.5	325.8	279.2	232.5	185.9	194.5
110°	387.1	397.6	408.0	418.4	428.9	414.3	374.8	335.2	295.7	256.1	247.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	431.2	440.2	449.1	458.1	467.0	472.1	473.4	474.8	476.0	477.3	417.8
115°	500.8	507.6	514.3	521.1	527.9	540.9	560.2	579.4	598.6	617.8	538.9
117.5°	561.5	567.4	573.3	579.3	585.2	596.5	613.2	629.8	646.5	663.1	651.2
120°	606.9	611.1	615.2	619.3	623.5	633.8	650.0	666.3	682.6	698.9	710.1
122.5°	645.5	649.0	652.5	656.1	659.6	669.3	685.1	701.0	716.7	732.5	742.6
125°	702.8	705.2	707.7	710.2	712.7	720.9	734.8	748.7	762.6	776.5	786.6
127.5°	755.9	758.4	760.8	763.3	765.6	772.4	783.3	794.4	805.4	816.3	826.3
130°	789.7	792.4	795.1	797.9	800.6	806.4	815.3	824.2	832.9	841.8	851.6
132.5°	824.1	826.4	828.7	830.9	833.2	838.0	845.4	852.6	860.0	867.2	876.5
135°	867.4	870.5	873.5	876.6	879.7	883.6	888.6	893.5	898.4	903.4	912.0
137.5°	912.7	914.8	916.9	919.0	921.1	923.8	927.1	930.5	933.9	937.2	945.0
140°	942.4	943.5	944.7	945.9	947.2	949.1	951.9	954.6	957.3	960.1	967.0
142.5°	967.1	968.2	969.2	970.3	971.3	973.2	975.6	978.2	980.7	983.3	989.0
145°	1004.6	1004.4	1004.2	1004.0	1003.8	1005.3	1008.6	1011.8	1015.1	1018.3	1021.6
147.5°	1038.5	1037.7	1037.1	1036.3	1035.6	1036.8	1040.0	1043.3	1046.5	1049.7	1050.9
150°	1060.5	1059.2	1057.8	1056.5	1055.2	1056.0	1059.1	1062.2	1065.3	1068.3	1069.4
152.5°	1079.1	1077.6	1076.1	1074.7	1073.2	1073.8	1076.8	1079.7	1082.6	1085.5	1086.7
155°	1106.2	1104.5	1102.7	1101.0	1099.3	1099.6	1101.8	1104.2	1106.5	1108.7	1109.8
157.5°	1127.3	1125.9	1124.5	1122.9	1121.5	1121.6	1123.2	1124.8	1126.4	1128.0	1129.4
160°	1139.7	1138.6	1137.5	1136.2	1135.1	1135.1	1136.2	1137.5	1138.6	1139.7	1140.9
162.5°	1150.8	1149.6	1148.5	1147.3	1146.1	1146.0	1147.1	1148.0	1149.1	1150.1	1151.3
165°	1165.5	1164.4	1163.3	1162.1	1160.9	1160.6	1161.2	1161.8	1162.4	1163.0	1164.3
167.5°	1176.6	1175.4	1174.3	1173.1	1172.0	1171.7	1172.2	1172.7	1173.3	1173.8	1175.2
170°	1182.8	1181.6	1180.4	1179.3	1178.2	1177.8	1178.2	1178.6	1178.9	1179.3	1180.6
172.5°	1186.8	1185.7	1184.6	1183.5	1182.3	1181.9	1182.3	1182.7	1183.1	1183.5	1184.8
175°	1192.2	1190.9	1189.6	1188.2	1186.8	1186.4	1186.8	1187.1	1187.5	1187.9	1189.3
177.5°	1193.1	1192.0	1191.0	1189.9	1188.8	1188.4	1188.5	1188.6	1188.8	1188.9	1190.1
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	993.4	994.8	996.1	996.5	995.9	995.4	994.9	994.4
5°	990.4	992.4	994.3	995.0	994.8	994.5	994.1	993.8
7.5°	985.7	988.1	990.3	991.4	991.0	990.7	990.3	990.0
10°	981.6	984.2	986.7	987.9	987.5	987.2	986.9	986.6
12.5°	974.7	977.2	979.8	980.9	980.6	980.2	980.0	979.7
15°	962.1	964.9	967.8	969.1	968.7	968.5	968.1	967.8
17.5°	945.8	948.9	951.9	953.4	953.4	953.4	953.4	953.4
20°	932.9	936.5	940.0	941.8	941.8	941.8	941.8	941.8
22.5°	919.1	922.7	926.1	928.2	928.7	929.3	929.7	930.3
25°	897.5	901.4	905.2	907.6	908.6	909.6	910.5	911.4
27.5°	873.5	878.4	883.4	886.1	886.8	887.5	888.3	888.9
30°	856.8	861.9	867.0	870.1	871.0	871.9	873.0	873.9
32.5°	838.7	844.5	850.5	854.2	856.0	857.7	859.5	861.2
35°	812.9	820.0	827.1	831.7	834.0	836.2	838.5	840.7
37.5°	786.5	794.3	802.1	807.2	809.5	812.0	814.4	816.7
40°	767.8	776.2	784.5	790.1	793.1	795.9	798.8	801.7
42.5°	749.7	758.8	768.0	773.9	776.8	779.8	782.6	785.5
45°	721.9	731.9	741.8	748.4	751.6	754.8	758.0	761.2
47.5°	693.1	703.4	713.9	720.9	724.3	727.9	731.4	735.0
50°	673.3	684.2	695.1	702.4	705.9	709.4	712.9	716.4
52.5°	651.9	663.0	674.2	681.6	685.4	689.3	693.1	696.8
55°	619.7	631.2	642.8	650.6	654.8	659.0	663.2	667.3
57.5°	585.7	598.1	610.6	618.9	623.1	627.4	631.6	635.8
60°	563.2	575.4	587.6	596.0	600.4	604.9	609.4	613.9
62.5°	539.3	552.2	565.2	573.8	578.1	582.3	586.5	590.8
65°	503.0	516.1	529.3	538.0	542.2	546.3	550.5	554.7
67.5°	466.3	479.6	492.9	501.7	506.1	510.4	514.8	519.2
70°	440.7	454.5	468.3	477.1	481.0	484.8	488.7	492.6
72.5°	415.9	429.5	443.0	452.1	456.8	461.4	466.0	470.6
75°	378.6	392.4	406.2	415.2	419.3	423.6	427.7	431.9
77.5°	342.0	355.8	369.6	378.7	383.1	387.7	392.2	396.6
80°	317.3	330.8	344.3	353.3	357.8	362.2	366.7	371.3
82.5°	294.2	307.6	321.1	330.0	334.2	338.5	342.7	346.9
85°	261.0	274.5	287.9	296.9	301.4	305.9	310.4	314.9
87.5°	236.9	250.2	263.4	272.2	276.4	280.6	284.7	288.9
90°	235.4	249.3	263.1	272.1	276.4	280.6	284.8	289.0
92.5°	226.4	239.5	252.6	261.2	265.2	269.3	273.4	277.5
95°	226.0	239.1	252.3	260.7	264.4	268.1	271.7	275.3
97.5°	223.9	236.6	249.2	257.5	261.6	265.5	269.6	273.6
100°	220.4	233.8	247.1	255.8	259.7	263.6	267.6	271.5
102.5°	214.1	227.6	241.2	250.1	254.1	258.3	262.3	266.4
105°	203.4	216.8	230.1	238.9	243.2	247.5	251.8	256.1
107.5°	203.2	211.8	220.5	227.0	231.2	235.5	239.8	244.1
110°	238.4	229.5	220.6	218.4	222.6	227.0	231.3	235.5



TEST NUMBER: P331450-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	358.3	298.8	239.3	211.6	215.7	219.9	224.0	228.2
115°	460.0	381.0	302.1	257.4	247.2	237.0	226.7	216.5
117.5°	639.2	627.4	615.4	588.4	546.5	504.4	462.5	420.6
120°	721.4	732.7	744.0	738.5	716.2	693.9	671.7	649.3
122.5°	752.8	762.9	773.0	777.0	775.1	773.1	771.1	769.1
125°	796.5	806.5	816.5	823.2	826.7	830.2	833.7	837.1
127.5°	836.2	846.1	856.0	862.4	865.3	868.4	871.3	874.2
130°	861.4	871.2	881.0	887.1	889.5	891.9	894.3	896.6
132.5°	885.7	894.9	904.2	910.0	912.4	914.8	917.2	919.5
135°	920.7	929.3	938.0	943.4	945.7	947.8	950.0	952.2
137.5°	952.7	960.5	968.3	973.0	974.5	976.0	977.6	979.1
140°	973.8	980.7	987.6	991.5	992.4	993.4	994.4	995.3
142.5°	994.7	1000.3	1006.0	1009.2	1009.9	1010.6	1011.3	1012.0
145°	1024.9	1028.1	1031.4	1033.4	1034.0	1034.6	1035.3	1035.9
147.5°	1052.2	1053.5	1054.7	1055.3	1055.3	1055.3	1055.2	1055.2
150°	1070.5	1071.8	1072.9	1073.0	1072.0	1071.0	1070.1	1069.1
152.5°	1087.8	1088.9	1090.1	1090.1	1088.7	1087.5	1086.3	1085.0
155°	1111.1	1112.2	1113.3	1113.1	1111.6	1110.0	1108.5	1107.0
157.5°	1130.6	1131.9	1133.2	1133.1	1131.6	1130.1	1128.6	1127.2
160°	1142.0	1143.2	1144.3	1144.2	1142.8	1141.5	1140.2	1138.9
162.5°	1152.6	1154.0	1155.3	1155.1	1153.5	1151.8	1150.2	1148.5
165°	1165.6	1167.0	1168.3	1168.3	1167.0	1165.6	1164.3	1163.0
167.5°	1176.5	1177.8	1179.2	1178.9	1177.2	1175.5	1173.8	1172.1
170°	1182.0	1183.4	1184.7	1184.5	1182.8	1181.0	1179.3	1177.6
172.5°	1186.1	1187.5	1188.8	1188.6	1186.8	1185.2	1183.5	1181.8
175°	1190.6	1191.9	1193.3	1193.0	1191.1	1189.2	1187.2	1185.3
177.5°	1191.1	1192.2	1193.3	1193.1	1191.8	1190.3	1188.9	1187.6
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7

(END OF REPORT)