

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: P331423

Luminaire Tested: **SA2XXDIP-C1005D330U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331423
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-C1005D330U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

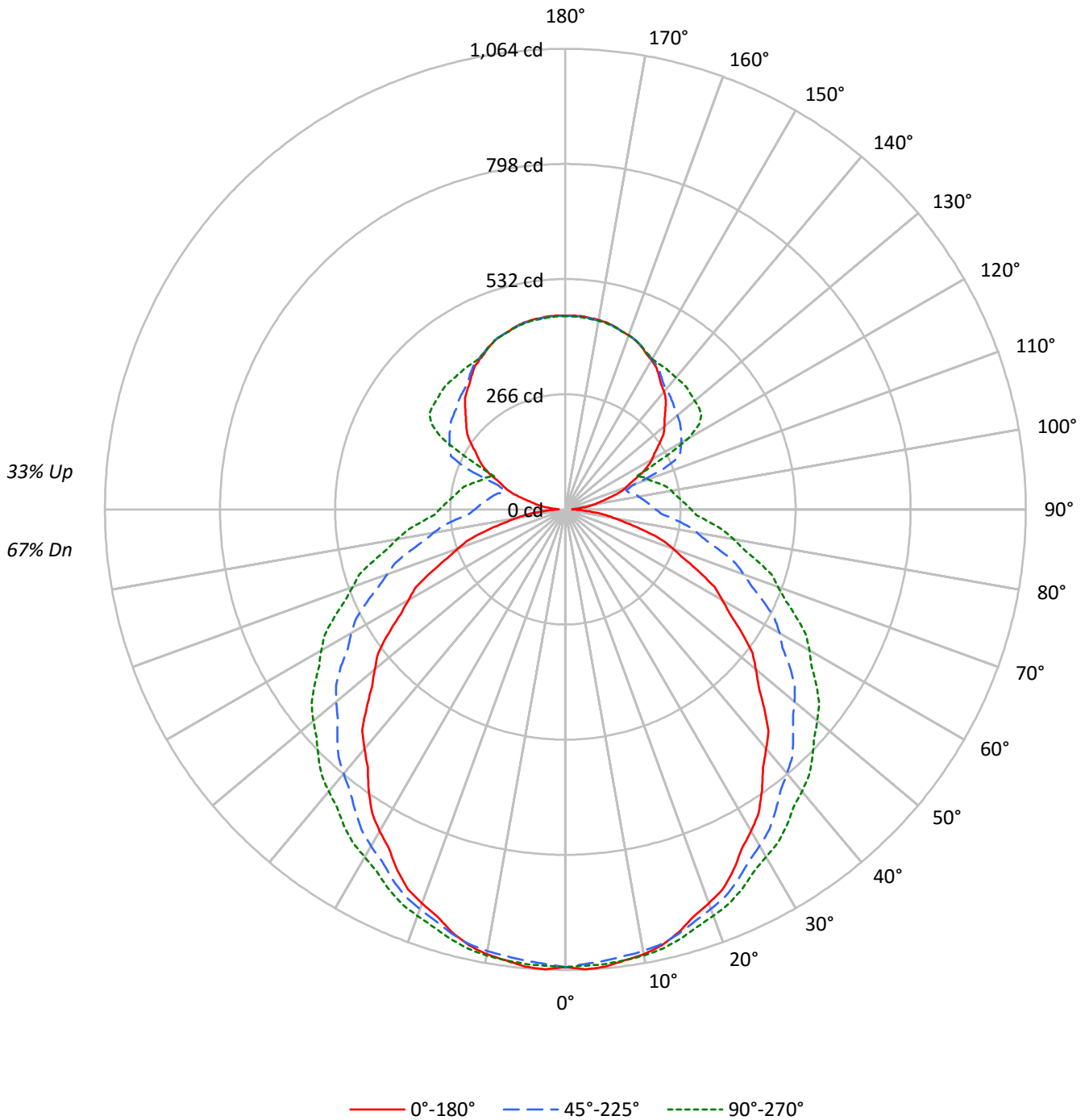
Lumens per Lamp: N/A
Luminaire Lumens: 5344.8 lumens
Efficiency: N/A
Efficacy: 107.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
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



TEST NUMBER: P331423
CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67				67
1	100	94	90	85	93	89	85	81	78	75	72	69	67	64	60	58	57				52	
2	90	81	74	68	84	77	70	65	68	63	58	59	56	52	52	49	46				42	
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	45	42	38				35	
4	74	62	53	47	70	59	51	45	52	46	40	46	41	36	40	36	33				29	
5	68	55	46	40	64	52	44	38	46	40	35	41	36	31	36	32	28				25	
6	63	50	41	34	59	47	39	33	42	35	30	37	31	27	33	28	25				22	
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22				19	
8	54	41	32	26	50	38	31	25	34	28	23	31	25	21	27	23	19				17	
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17				15	
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16				14	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



TEST NUMBER: P331423

CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	1.9
10°-20°	287.3	5.4
20°-30°	435.4	8.1
30°-40°	530.3	9.9
40°-50°	570.5	10.7
50°-60°	554.1	10.4
60°-70°	483.8	9.1
70°-80°	372.4	7.0
80°-90°	251.1	4.7
90°-100°	187.1	3.5
100°-110°	180.4	3.4
110°-120°	229.2	4.3
120°-130°	287.5	5.4
130°-140°	275.9	5.2
140°-150°	241.8	4.5
150°-160°	191.7	3.6
160°-170°	123.5	2.3
170°-180°	42.5	0.8
0°-30°	822.9	15.4
0°-40°	1353.3	25.3
0°-60°	2477.9	46.4
0°-90°	3585.2	67.1
90°-120°	596.7	11.2
90°-150°	1401.9	26.2
90°-180°	1760.0	32.9
0°-180°	5344.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	16	109	209	269	291	11
95°	33	96	189	246	267	35
105°	106	157	152	207	227	114
115°	192	217	291	193	181	189
125°	266	273	325	367	384	238
135°	327	333	350	384	397	253
145°	377	377	382	394	400	236
155°	416	413	416	418	416	191
165°	438	436	437	439	437	124
175°	448	446	446	448	445	43
180°	447	447	447	447	447	



TEST NUMBER: P331423

CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.1	50.6	71.0	91.5	111.9	133.1	155.0	176.9	198.8	220.8	234.7
90°	15.6	36.2	56.7	77.3	97.8	119.3	141.6	164.0	186.4	208.8	222.7
92.5°	20.6	38.9	57.3	75.6	93.9	113.7	135.0	156.2	177.5	198.8	212.3
95°	33.3	46.9	60.5	74.2	87.8	105.1	126.0	147.0	167.9	188.9	202.2
97.5°	52.4	60.0	67.5	75.1	82.7	96.8	117.6	138.4	159.2	179.9	192.8
100°	68.0	70.7	73.5	76.2	79.0	90.5	110.8	131.1	151.4	171.7	184.9
102.5°	83.8	93.2	102.7	112.1	121.5	130.4	138.7	147.0	155.3	163.6	176.7
105°	106.0	118.0	130.0	142.1	154.1	159.1	157.2	155.3	153.4	151.5	164.2
107.5°	133.0	142.6	152.3	161.9	171.6	173.1	166.5	160.0	153.4	146.8	157.5
110°	149.4	157.7	166.0	174.3	182.6	184.8	180.7	176.6	172.5	168.5	172.2



TEST NUMBER: P331423

CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	165.9	173.0	180.0	187.1	194.2	203.0	213.8	224.5	235.3	246.0	230.7
115°	192.0	197.0	202.0	206.9	211.9	223.0	240.1	257.2	274.3	291.4	268.4
117.5°	213.9	217.7	221.5	225.3	229.1	238.7	254.1	269.5	284.9	300.3	302.4
120°	230.9	233.4	235.8	238.2	240.7	249.4	264.3	279.2	294.1	309.0	319.4
122.5°	245.4	247.1	248.8	250.5	252.1	260.1	274.3	288.5	302.7	316.9	326.7
125°	265.9	266.9	267.8	268.7	269.7	276.3	288.5	300.8	313.1	325.3	335.0
127.5°	285.9	286.6	287.3	288.0	288.7	293.9	303.7	313.6	323.4	333.2	342.3
130°	298.6	299.4	300.2	301.0	301.8	306.2	314.1	322.1	330.0	338.0	346.9
132.5°	311.5	312.2	312.8	313.4	314.1	317.5	323.8	330.2	336.5	342.8	351.3
135°	326.8	328.0	329.1	330.3	331.4	334.0	338.1	342.1	346.2	350.2	358.1
137.5°	343.8	344.5	345.3	346.0	346.8	348.2	350.5	352.7	354.9	357.2	364.1
140°	354.9	355.2	355.4	355.6	355.9	356.7	358.2	359.7	361.1	362.6	368.7
142.5°	364.2	364.4	364.6	364.8	365.0	365.6	366.6	367.6	368.7	369.7	374.7
145°	377.3	377.3	377.2	377.1	377.0	377.6	378.8	380.1	381.3	382.5	385.0
147.5°	390.1	389.8	389.5	389.2	389.0	389.4	390.6	391.9	393.1	394.3	394.9
150°	398.3	397.8	397.3	396.8	396.3	396.7	397.8	399.0	400.1	401.3	401.7
152.5°	405.3	404.8	404.2	403.6	403.1	403.3	404.4	405.5	406.6	407.7	408.1
155°	415.5	414.8	414.2	413.5	412.9	413.0	413.9	414.7	415.6	416.4	416.9
157.5°	423.4	422.9	422.3	421.8	421.2	421.3	421.9	422.5	423.1	423.7	424.2
160°	428.1	427.7	427.2	426.8	426.4	426.4	426.8	427.2	427.7	428.1	428.5
162.5°	432.2	431.8	431.4	430.9	430.5	430.5	430.8	431.2	431.6	432.0	432.5
165°	437.8	437.4	436.9	436.5	436.1	436.0	436.2	436.4	436.6	436.8	437.3
167.5°	441.9	441.5	441.1	440.6	440.2	440.1	440.3	440.5	440.7	440.9	441.4
170°	444.3	443.8	443.4	443.0	442.5	442.4	442.5	442.7	442.8	443.0	443.5
172.5°	445.8	445.4	444.9	444.5	444.1	443.9	444.1	444.2	444.4	444.5	445.0
175°	447.8	447.3	446.8	446.3	445.8	445.6	445.8	445.9	446.1	446.2	446.7
177.5°	448.1	447.7	447.3	446.9	446.5	446.4	446.4	446.5	446.5	446.6	447.0
180°	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8



TEST NUMBER: P331423

CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	248.7	262.7	276.6	285.8	290.2	294.6	299.0	303.3
90°	236.7	250.7	264.7	273.8	278.0	282.3	286.5	290.7
92.5°	225.8	239.4	252.9	261.8	265.9	270.1	274.3	278.5
95°	215.5	228.8	242.1	250.7	254.7	258.7	262.8	266.8
97.5°	205.7	218.6	231.5	240.0	244.1	248.2	252.3	256.4
100°	198.0	211.2	224.4	232.9	236.8	240.7	244.6	248.5
102.5°	189.8	202.8	215.9	224.4	228.4	232.3	236.3	240.2
105°	176.9	189.7	202.4	210.7	214.8	218.8	222.8	226.9
107.5°	168.1	178.8	189.4	196.7	200.8	204.8	208.8	212.9
110°	175.9	179.6	183.3	187.2	191.2	195.2	199.3	203.3



TEST NUMBER: P331423

CATALOG NUMBER: SA2XXDIP-C1005D330U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.4	200.1	184.8	179.1	183.1	187.0	191.0	195.0
115°	245.3	222.3	199.2	187.0	185.6	184.2	182.7	181.3
117.5°	304.4	306.4	308.5	302.7	289.2	275.7	262.2	248.6
120°	329.8	340.2	350.6	352.8	346.9	340.9	335.0	329.0
122.5°	336.5	346.3	356.1	361.6	362.9	364.2	365.6	366.9
125°	344.7	354.4	364.1	370.6	373.9	377.2	380.4	383.7
127.5°	351.5	360.7	369.9	376.0	379.0	382.1	385.1	388.2
130°	355.9	364.9	373.8	379.6	382.3	384.9	387.6	390.2
132.5°	359.9	368.5	377.1	382.7	385.3	388.0	390.6	393.3
135°	366.0	373.8	381.7	386.9	389.5	392.1	394.7	397.2
137.5°	371.1	378.1	385.0	389.6	391.6	393.7	395.8	397.9
140°	374.8	380.9	387.0	390.9	392.6	394.2	395.9	397.6
142.5°	379.6	384.6	389.5	392.7	394.1	395.5	396.9	398.3
145°	387.6	390.1	392.7	394.6	396.0	397.3	398.7	400.0
147.5°	395.6	396.2	396.9	397.4	397.9	398.5	399.0	399.5
150°	402.1	402.5	403.0	403.0	402.7	402.3	401.9	401.6
152.5°	408.6	409.0	409.4	409.4	408.9	408.5	408.0	407.5
155°	417.3	417.7	418.2	418.1	417.5	417.0	416.4	415.8
157.5°	424.7	425.2	425.6	425.6	425.0	424.5	423.9	423.4
160°	429.0	429.4	429.8	429.8	429.3	428.8	428.3	427.8
162.5°	432.9	433.4	433.9	433.9	433.2	432.6	432.0	431.4
165°	437.8	438.3	438.8	438.8	438.3	437.8	437.3	436.8
167.5°	441.9	442.4	442.9	442.8	442.2	441.5	440.9	440.2
170°	444.0	444.5	445.0	444.9	444.3	443.6	443.0	442.3
172.5°	445.5	446.0	446.5	446.5	445.8	445.2	444.5	443.9
175°	447.2	447.7	448.2	448.1	447.4	446.7	445.9	445.2
177.5°	447.4	447.8	448.2	448.1	447.6	447.1	446.6	446.1
180°	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8

(END OF REPORT)