

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: P331459-927

Luminaire Tested: **SA2XXDIP-C1005D1080U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331459-927
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-C1005D1080U927-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6609.3 lumens
Efficiency: N/A
Efficacy: 92.2 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

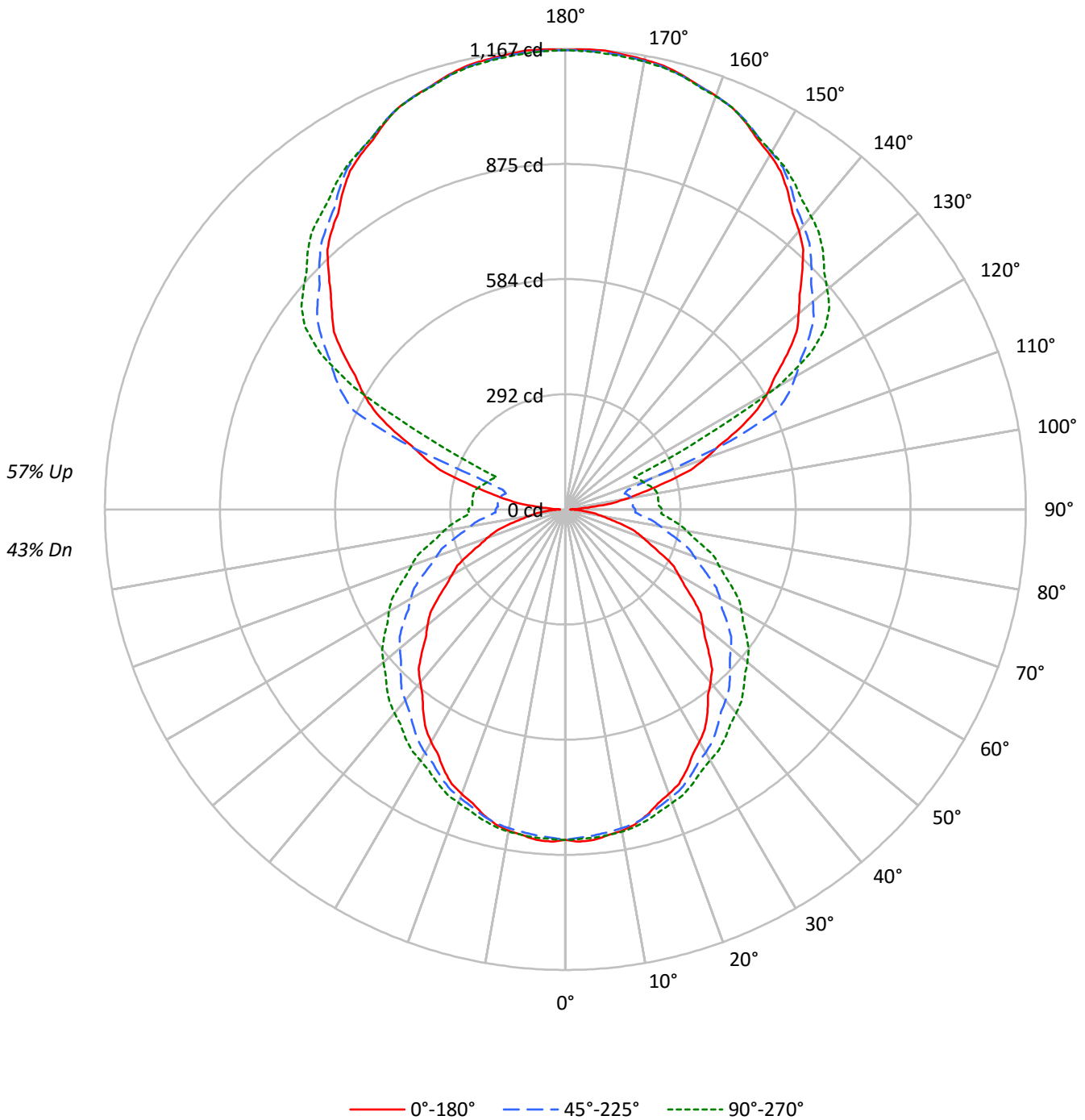
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331459-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-D

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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43				
1	95	90	86	82	86	82	79	75	68	65	62	54	52	51	42	41	39	34				
2	86	78	71	66	78	71	65	61	59	54	51	47	44	41	36	34	32	27				
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22				
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19				
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16				
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	19	17	14				
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	17	15	12				
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11				
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10				
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13525	13525	13525
5°	13591	13020	12971
10°	13506	12635	12493
15°	13320	12228	11990
20°	13085	11791	11506
25°	12852	11370	11066
30°	12525	10939	10626
35°	12192	10521	10314
40°	11845	10165	10004
45°	11515	9846	9739
50°	11159	9559	9477
55°	10787	9249	9211
60°	10329	8927	8928
65°	9856	8551	8595
70°	9323	8147	8233
75°	8642	7750	7901
80°	7567	7345	7563
85°	6539	6995	7303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	1.2
10°-20°	227.6	3.4
20°-30°	344.9	5.2
30°-40°	420.1	6.4
40°-50°	452.0	6.8
50°-60°	438.9	6.6
60°-70°	383.2	5.8
70°-80°	295.0	4.5
80°-90°	200.9	3.0
90°-100°	175.2	2.7
100°-110°	242.0	3.7
110°-120°	446.3	6.8
120°-130°	664.9	10.1
130°-140°	683.5	10.3
140°-150°	623.6	9.4
150°-160°	499.2	7.6
160°-170°	321.7	4.9
170°-180°	110.7	1.7
0°-30°	651.9	9.9
0°-40°	1072.0	16.2
0°-60°	1962.9	29.7
0°-90°	2842.1	43.0
90°-120°	863.6	13.1
90°-150°	2835.5	42.9
90°-180°	3767.0	57.0
0°-180°	6609.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	840	836	829	836	835	80
15°	801	804	804	814	813	226
25°	728	737	748	762	766	335
35°	628	648	671	697	706	392
45°	515	548	590	626	640	397
55°	395	439	501	544	561	353
65°	270	330	401	449	466	268
75°	149	218	295	345	363	158
85°	44	119	197	246	265	47
90°	13	93	177	228	246	11
95°	64	96	172	221	236	75
105°	262	310	156	206	224	281
115°	489	519	592	256	192	481
125°	687	700	753	790	805	613
135°	848	862	882	914	924	655
145°	983	983	996	1009	1011	615
155°	1082	1076	1085	1089	1083	498
165°	1140	1136	1138	1143	1138	322
175°	1166	1161	1162	1167	1160	111
180°	1164	1164	1164	1164	1164	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	842.6	841.9	841.2	840.6	840.0	838.8	837.3	835.8	834.3	832.8	833.9
5°	840.1	839.3	838.5	837.7	836.9	835.7	834.1	832.4	830.8	829.2	830.8
7.5°	832.6	832.0	831.5	831.0	830.4	829.6	828.3	827.0	825.9	824.6	826.5
10°	826.8	826.2	825.7	825.1	824.6	823.9	823.2	822.3	821.5	820.7	822.8
12.5°	817.1	817.1	817.3	817.4	817.5	817.2	816.7	816.0	815.5	814.8	817.1
15°	801.3	801.8	802.3	802.9	803.4	803.7	803.7	803.7	803.7	803.7	806.1
17.5°	780.9	782.0	783.2	784.3	785.4	786.4	787.3	788.1	789.0	789.9	792.4
20°	767.3	768.7	770.0	771.3	772.7	773.9	775.0	776.0	777.1	778.2	781.2
22.5°	752.7	754.2	755.8	757.4	759.0	760.5	762.0	763.5	765.0	766.5	769.5
25°	728.4	730.3	732.2	734.1	736.0	738.2	740.5	743.0	745.4	747.8	751.1
27.5°	699.3	702.3	705.4	708.5	711.6	714.5	717.4	720.3	723.1	726.0	730.1
30°	679.9	683.3	686.9	690.4	693.9	697.4	700.9	704.4	707.9	711.5	715.7
32.5°	658.5	662.4	666.4	670.3	674.2	678.3	682.5	686.6	690.8	694.9	699.9
35°	627.6	632.2	636.8	641.4	646.0	650.9	656.0	661.1	666.2	671.4	677.3
37.5°	594.1	599.4	604.8	610.0	615.3	621.2	627.9	634.5	641.2	647.8	654.4
40°	571.8	577.7	583.7	589.6	595.6	602.1	609.4	616.7	624.0	631.3	638.3
42.5°	550.5	556.3	562.3	568.2	574.2	581.3	589.7	598.1	606.4	614.8	622.4
45°	514.8	522.0	529.3	536.6	543.9	552.2	561.7	571.2	580.6	590.0	598.4
47.5°	479.6	487.5	495.4	503.4	511.3	520.8	531.9	542.9	554.0	565.0	573.8
50°	455.3	463.7	472.0	480.4	488.7	499.0	511.1	523.2	535.4	547.6	556.7
52.5°	432.0	440.8	449.6	458.4	467.1	477.9	490.7	503.5	516.3	529.1	538.4
55°	394.6	404.3	414.0	423.7	433.4	445.3	459.3	473.3	487.4	501.4	511.1
57.5°	357.7	368.6	379.5	390.5	401.5	414.1	428.4	442.7	457.0	471.3	481.7
60°	331.4	343.0	354.7	366.2	377.9	391.3	406.7	422.1	437.4	452.8	463.1
62.5°	308.2	320.1	332.2	344.2	356.2	369.9	385.3	400.7	416.1	431.5	442.4
65°	269.5	282.7	296.0	309.2	322.4	337.0	352.9	368.8	384.7	400.6	411.7
67.5°	234.1	247.9	261.7	275.5	289.3	304.4	320.7	337.0	353.2	369.6	380.7
70°	208.8	222.8	236.9	250.9	264.9	280.3	297.1	313.8	330.5	347.2	358.8
72.5°	185.5	199.9	214.4	228.9	243.4	259.0	276.0	292.9	309.9	326.9	338.2
75°	149.3	164.5	179.5	194.6	209.8	225.9	243.2	260.5	277.7	295.0	306.6
77.5°	114.4	130.2	146.0	161.8	177.6	194.2	211.8	229.3	246.8	264.4	276.0
80°	91.0	107.5	124.0	140.5	156.9	173.9	191.4	209.0	226.5	244.0	255.3
82.5°	71.6	87.9	104.1	120.3	136.6	153.6	171.3	189.1	206.8	224.6	235.9
85°	43.7	60.4	77.2	93.9	110.6	127.6	144.9	162.2	179.4	196.7	208.0
87.5°	24.0	40.5	57.0	73.4	89.9	106.9	124.5	142.1	159.6	177.2	188.4
90°	13.0	30.7	48.4	66.1	83.8	102.0	120.8	139.6	158.4	177.1	188.9
92.5°	28.2	42.5	57.0	71.3	85.7	101.6	119.0	136.3	153.7	171.0	182.1
95°	64.5	71.0	77.5	84.0	90.5	102.5	119.9	137.4	155.0	172.5	183.6
97.5°	117.2	111.0	104.9	98.8	92.6	98.9	117.4	136.0	154.6	173.2	183.9
100°	157.6	141.9	126.3	110.6	94.9	96.3	114.5	132.8	151.1	169.4	180.9
102.5°	201.1	204.7	208.4	212.1	215.8	211.7	199.8	187.8	175.9	164.0	175.7
105°	262.1	275.5	289.0	302.4	315.8	304.0	267.0	229.9	192.8	155.7	167.3
107.5°	333.1	343.9	354.7	365.4	376.2	357.7	309.9	262.1	214.2	166.4	173.3
110°	378.0	387.2	396.6	405.9	415.2	399.4	358.6	317.7	276.9	236.0	225.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	421.0	429.0	437.0	445.0	453.0	456.7	455.9	455.1	454.3	453.5	393.9
115°	489.1	495.2	501.4	507.6	513.7	525.1	542.0	558.8	575.6	592.5	513.9
117.5°	548.7	554.1	559.7	565.1	570.7	580.6	595.1	609.5	623.9	638.4	625.4
120°	593.1	597.0	600.9	604.8	608.7	617.7	631.8	646.0	660.2	674.3	684.1
122.5°	630.9	634.2	637.6	641.0	644.4	653.0	666.9	680.6	694.4	708.3	716.9
125°	687.1	689.5	692.0	694.3	696.8	704.1	716.3	728.5	740.7	752.9	761.4
127.5°	739.1	741.6	743.9	746.4	748.8	754.9	764.5	774.0	783.7	793.3	801.9
130°	772.1	774.8	777.6	780.3	783.0	788.2	796.0	803.7	811.4	819.1	827.7
132.5°	805.8	808.1	810.4	812.6	814.9	819.3	825.7	832.1	838.5	845.0	853.0
135°	848.4	851.4	854.4	857.4	860.4	864.0	868.5	872.8	877.2	881.6	889.1
137.5°	892.7	894.7	896.8	898.8	900.9	903.4	906.5	909.6	912.7	915.8	922.6
140°	921.6	922.9	924.1	925.3	926.5	928.5	931.1	933.7	936.3	938.9	944.8
142.5°	945.9	947.0	948.1	949.1	950.2	952.0	954.4	957.0	959.4	961.9	966.9
145°	982.8	982.5	982.4	982.2	982.0	983.5	986.7	989.8	993.1	996.2	999.2
147.5°	1016.0	1015.3	1014.5	1013.8	1013.1	1014.3	1017.5	1020.6	1023.7	1026.9	1028.1
150°	1037.5	1036.2	1034.9	1033.6	1032.3	1033.1	1036.1	1039.1	1042.1	1045.0	1046.2
152.5°	1055.7	1054.2	1052.7	1051.3	1049.9	1050.5	1053.4	1056.2	1059.1	1061.9	1063.0
155°	1082.1	1080.5	1078.8	1077.1	1075.4	1075.7	1077.9	1080.1	1082.4	1084.7	1085.8
157.5°	1102.9	1101.5	1100.0	1098.6	1097.2	1097.3	1098.8	1100.3	1101.9	1103.5	1104.8
160°	1115.0	1113.9	1112.7	1111.6	1110.5	1110.5	1111.6	1112.7	1113.9	1115.0	1116.1
162.5°	1125.8	1124.7	1123.5	1122.4	1121.3	1121.2	1122.1	1123.2	1124.1	1125.1	1126.3
165°	1140.3	1139.1	1138.0	1136.9	1135.8	1135.4	1136.0	1136.6	1137.2	1137.7	1139.0
167.5°	1151.0	1149.9	1148.7	1147.6	1146.5	1146.2	1146.8	1147.2	1147.8	1148.3	1149.6
170°	1157.1	1156.0	1154.8	1153.7	1152.6	1152.2	1152.6	1152.9	1153.3	1153.7	1155.0
172.5°	1161.1	1160.0	1158.9	1157.8	1156.7	1156.3	1156.7	1157.0	1157.4	1157.8	1159.0
175°	1166.3	1165.1	1163.7	1162.4	1161.1	1160.6	1161.0	1161.4	1161.7	1162.1	1163.5
177.5°	1167.2	1166.2	1165.1	1164.0	1163.0	1162.5	1162.7	1162.8	1163.0	1163.2	1164.2
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	835.0	836.1	837.2	837.5	837.0	836.6	836.1	835.8
5°	832.4	834.1	835.7	836.3	836.1	835.8	835.5	835.3
7.5°	828.5	830.4	832.3	833.2	832.9	832.7	832.3	832.1
10°	825.0	827.2	829.3	830.3	830.0	829.7	829.5	829.2
12.5°	819.2	821.3	823.5	824.4	824.2	823.9	823.6	823.4
15°	808.6	811.0	813.4	814.5	814.2	814.0	813.7	813.4
17.5°	795.0	797.5	800.0	801.3	801.3	801.3	801.3	801.3
20°	784.1	787.1	790.0	791.5	791.5	791.5	791.5	791.5
22.5°	772.5	775.5	778.4	780.1	780.5	781.0	781.4	781.9
25°	754.3	757.6	760.8	762.8	763.7	764.5	765.2	766.0
27.5°	734.2	738.3	742.4	744.7	745.4	745.9	746.6	747.1
30°	720.1	724.4	728.7	731.3	732.1	732.8	733.7	734.5
32.5°	704.9	709.8	714.8	718.0	719.5	720.9	722.4	723.8
35°	683.3	689.2	695.1	699.0	700.9	702.8	704.7	706.5
37.5°	661.0	667.6	674.1	678.4	680.4	682.5	684.4	686.4
40°	645.3	652.4	659.3	664.1	666.5	668.9	671.4	673.8
42.5°	630.1	637.8	645.5	650.5	652.9	655.4	657.7	660.2
45°	606.7	615.1	623.4	629.0	631.7	634.4	637.1	639.8
47.5°	582.5	591.2	600.0	605.9	608.8	611.8	614.7	617.7
50°	565.9	575.0	584.2	590.3	593.3	596.2	599.2	602.1
52.5°	547.9	557.2	566.6	572.9	576.1	579.3	582.5	585.7
55°	520.9	530.5	540.3	546.8	550.3	553.9	557.4	560.9
57.5°	492.3	502.7	513.2	520.1	523.7	527.3	530.8	534.4
60°	473.3	483.6	493.8	500.9	504.6	508.4	512.2	515.9
62.5°	453.3	464.1	475.1	482.3	485.8	489.4	493.0	496.5
65°	422.8	433.8	444.9	452.2	455.7	459.1	462.7	466.2
67.5°	391.9	403.1	414.2	421.7	425.3	429.0	432.7	436.3
70°	370.4	382.0	393.6	401.0	404.3	407.5	410.7	414.0
72.5°	349.6	361.0	372.3	380.0	383.9	387.8	391.7	395.5
75°	318.2	329.8	341.4	349.0	352.4	356.0	359.5	363.0
77.5°	287.5	299.0	310.6	318.3	322.0	325.8	329.6	333.4
80°	266.6	278.1	289.4	296.9	300.7	304.4	308.2	312.0
82.5°	247.2	258.6	269.9	277.3	280.9	284.5	288.0	291.6
85°	219.4	230.7	242.0	249.5	253.3	257.1	260.9	264.7
87.5°	199.6	210.8	222.0	229.3	232.9	236.4	240.0	243.4
90°	200.6	212.3	224.0	231.7	235.3	238.9	242.5	246.1
92.5°	193.2	204.2	215.3	222.5	226.0	229.5	233.0	236.4
95°	194.8	206.0	217.2	224.3	227.4	230.4	233.5	236.5
97.5°	194.6	205.3	216.0	223.2	226.6	230.0	233.4	236.8
100°	192.3	203.8	215.3	222.8	226.1	229.4	232.7	236.1
102.5°	187.4	199.1	210.8	218.4	221.9	225.4	228.9	232.3
105°	178.8	190.3	201.8	209.4	213.1	216.8	220.5	224.3
107.5°	180.3	187.3	194.2	199.6	203.3	207.0	210.7	214.4
110°	215.9	205.7	195.7	192.5	196.2	199.9	203.7	207.4



TEST NUMBER: P331459-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	334.3	274.6	215.0	187.0	190.5	194.1	197.6	201.2
115°	435.3	356.8	278.2	233.7	223.2	212.7	202.2	191.7
117.5°	612.4	599.4	586.5	559.3	517.7	476.2	434.7	393.2
120°	694.0	703.8	713.5	707.3	685.0	662.7	640.4	618.1
122.5°	725.6	734.4	743.0	746.2	743.8	741.4	739.0	736.7
125°	770.1	778.6	787.3	793.1	796.1	799.0	802.0	805.0
127.5°	810.5	819.1	827.7	833.2	835.8	838.2	840.7	843.2
130°	836.2	844.8	853.3	858.6	860.5	862.4	864.4	866.4
132.5°	861.0	869.0	877.0	882.0	884.0	886.0	888.0	889.9
135°	896.7	904.2	911.7	916.4	918.1	920.0	921.8	923.5
137.5°	929.4	936.2	943.0	947.0	948.2	949.4	950.6	951.8
140°	950.9	956.9	962.9	966.2	966.9	967.6	968.3	968.9
142.5°	971.8	976.8	981.8	984.5	985.0	985.5	986.0	986.4
145°	1002.1	1005.0	1008.0	1009.6	1010.0	1010.4	1010.8	1011.3
147.5°	1029.3	1030.5	1031.7	1032.1	1032.1	1031.9	1031.7	1031.6
150°	1047.3	1048.5	1049.6	1049.6	1048.7	1047.8	1046.9	1045.9
152.5°	1064.1	1065.3	1066.4	1066.4	1065.1	1063.9	1062.6	1061.4
155°	1086.9	1088.1	1089.2	1088.9	1087.4	1086.0	1084.5	1083.0
157.5°	1106.0	1107.3	1108.6	1108.5	1107.1	1105.6	1104.1	1102.6
160°	1117.2	1118.3	1119.4	1119.4	1118.1	1116.7	1115.5	1114.1
162.5°	1127.6	1128.9	1130.2	1130.0	1128.4	1126.8	1125.1	1123.6
165°	1140.3	1141.6	1143.0	1143.0	1141.6	1140.3	1139.0	1137.7
167.5°	1151.0	1152.2	1153.6	1153.3	1151.7	1150.0	1148.3	1146.6
170°	1156.3	1157.6	1159.0	1158.7	1157.1	1155.4	1153.7	1152.0
172.5°	1160.4	1161.7	1163.0	1162.8	1161.1	1159.4	1157.8	1156.0
175°	1164.7	1166.1	1167.4	1167.1	1165.2	1163.3	1161.5	1159.6
177.5°	1165.2	1166.3	1167.4	1167.2	1165.9	1164.5	1163.2	1161.8
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8

(END OF REPORT)