

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: P331666-840

Luminaire Tested: **SA2XXRDIP-C485D925U840-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331666-840  
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: SA2XXRDIP-C485D925U840-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

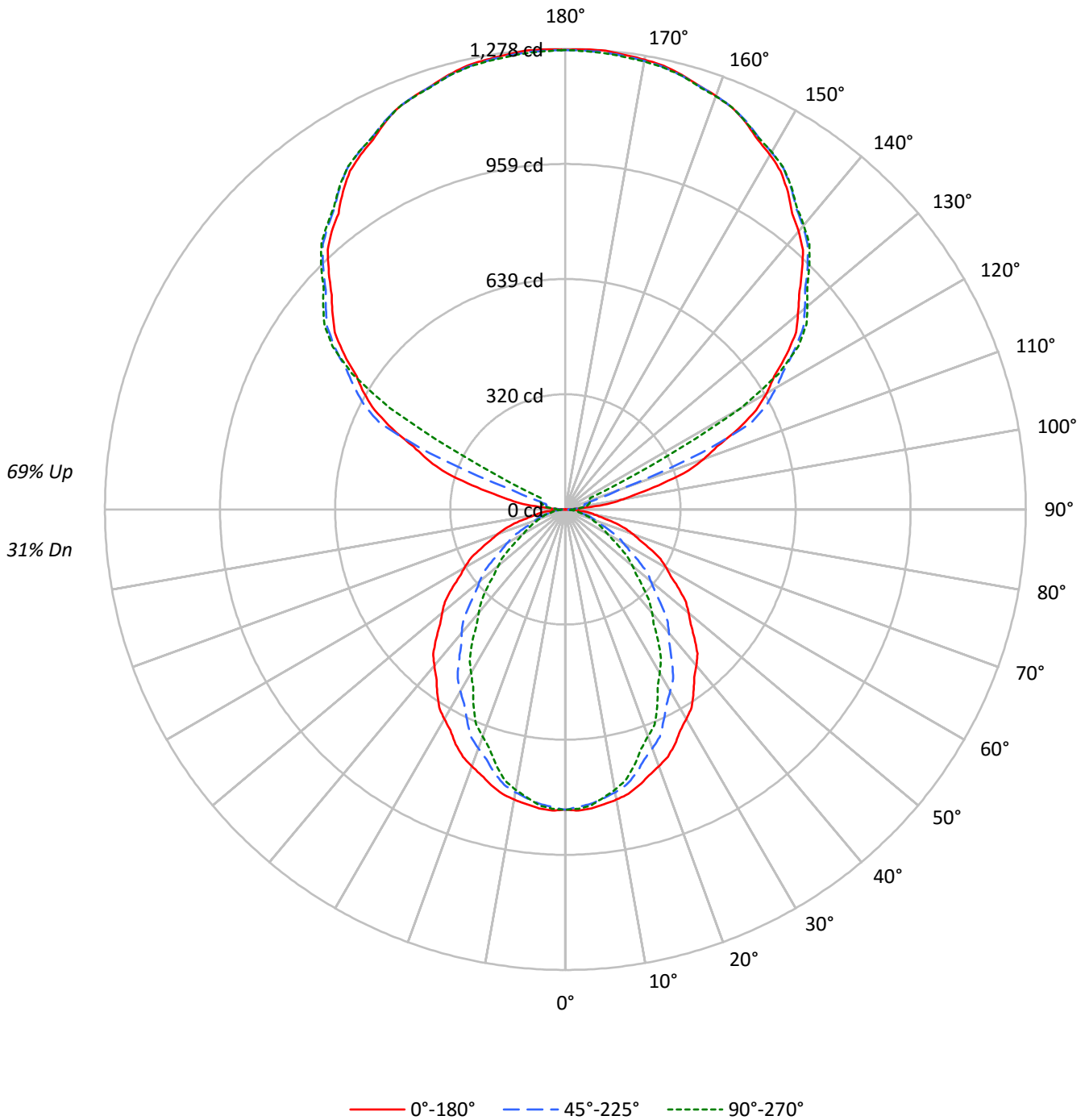
Lumens per Lamp: N/A  
Luminaire Lumens: 5452.5 lumens  
Efficiency: N/A  
Efficacy: 122.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31	31	31	31	
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	27	27	27	27	
2	86	79	73	68	77	71	66	62	57	53	50	43	41	39	31	30	29	23	23	23	23	
3	78	69	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20	20	20	20	
4	72	62	54	48	64	56	49	44	45	40	37	35	31	29	25	23	22	17	17	17	17	
5	66	55	47	41	59	50	43	38	40	35	32	31	28	25	23	21	19	15	15	15	15	
6	61	49	42	36	54	45	38	33	36	31	28	28	25	22	21	19	17	14	14	14	14	
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12	12	12	12	
8	52	40	33	28	47	37	30	26	30	25	22	23	20	18	17	15	14	11	11	11	11	
9	48	37	30	25	44	33	27	23	27	23	19	22	18	16	16	14	12	10	10	10	10	
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9	9	9	9	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.0	1.4
10°-20°	214.2	3.9
20°-30°	300.8	5.5
30°-40°	328.0	6.0
40°-50°	301.6	5.5
50°-60°	236.8	4.3
60°-70°	154.4	2.8
70°-80°	79.6	1.5
80°-90°	23.8	0.4
90°-100°	42.5	0.8
100°-110°	155.9	2.9
110°-120°	416.8	7.6
120°-130°	688.0	12.6
130°-140°	731.7	13.4
140°-150°	680.1	12.5
150°-160°	546.8	10.0
160°-170°	352.3	6.5
170°-180°	121.3	2.2
0°-30°	593.0	10.9
0°-40°	921.0	16.9
0°-60°	1459.4	26.8
0°-90°	1717.2	31.5
90°-120°	615.2	11.3
90°-150°	2714.9	49.8
90°-180°	3735.0	68.5
0°-180°	5452.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	11	18	23	25	4
95°	60	32	36	40	40	73
105°	280	292	56	66	70	300
115°	530	546	569	162	76	522
125°	750	762	779	786	789	668
135°	928	942	951	960	958	716
145°	1076	1076	1091	1097	1093	673
155°	1185	1178	1188	1193	1186	546
165°	1249	1244	1246	1252	1246	353
175°	1277	1271	1273	1278	1270	122
180°	1275	1275	1275	1275	1275	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.8	9.2	8.6	8.0	7.4	7.2	7.6	7.9	8.2	8.5	8.6
90°	0.9	3.1	5.5	7.7	9.9	11.9	13.5	15.1	16.8	18.5	19.5
92.5°	18.6	18.4	18.2	18.0	17.8	18.1	19.0	19.8	20.6	21.4	21.9
95°	60.0	53.2	46.5	39.7	32.9	30.2	31.7	33.1	34.5	36.0	37.0
97.5°	119.0	99.9	80.9	61.8	42.7	34.8	38.2	41.5	44.8	48.2	49.0
100°	163.3	135.1	107.0	79.0	50.9	38.7	42.1	45.6	49.1	52.6	54.2
102.5°	212.0	206.0	200.1	194.1	188.1	170.7	141.5	112.3	83.2	54.0	56.1
105°	280.3	286.5	292.7	298.8	305.0	280.0	224.1	168.1	112.2	56.2	58.5
107.5°	358.4	363.3	368.3	373.2	378.3	347.2	280.0	213.0	145.8	78.8	76.4
110°	408.6	412.9	417.2	421.5	425.8	398.3	339.1	279.8	220.7	161.4	140.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	455.8	459.6	463.4	467.3	471.0	465.6	451.0	436.4	421.7	407.1	332.3
115°	530.3	533.8	537.2	540.8	544.2	548.6	553.7	558.9	563.9	569.1	474.1
117.5°	596.9	600.8	604.7	608.6	612.5	616.2	619.8	623.3	626.8	630.3	607.3
120°	645.6	648.6	651.8	654.8	657.9	661.3	665.0	668.6	672.4	676.0	678.5
122.5°	686.9	690.1	693.4	696.6	699.8	703.5	707.5	711.6	715.6	719.6	721.0
125°	749.8	752.5	755.2	757.8	760.5	763.8	767.7	771.5	775.5	779.3	780.8
127.5°	806.8	809.8	812.7	815.7	818.6	821.5	824.5	827.4	830.3	833.2	835.3
130°	843.0	846.3	849.5	852.8	856.1	858.9	861.1	863.3	865.7	867.9	870.1
132.5°	879.9	882.6	885.4	888.3	891.0	893.5	895.9	898.1	900.3	902.5	904.5
135°	927.9	931.1	934.4	937.7	941.0	943.5	945.3	947.3	949.1	950.9	952.9
137.5°	976.3	978.7	981.0	983.2	985.5	987.7	989.8	991.9	994.0	996.1	998.0
140°	1008.0	1009.8	1011.4	1013.0	1014.6	1016.6	1018.9	1021.1	1023.4	1025.6	1027.4
142.5°	1034.6	1036.1	1037.6	1039.1	1040.6	1042.6	1045.1	1047.7	1050.4	1052.9	1054.6
145°	1076.3	1076.1	1075.9	1075.7	1075.5	1077.1	1080.7	1084.1	1087.6	1091.1	1092.5
147.5°	1112.7	1111.9	1111.2	1110.3	1109.5	1110.9	1114.3	1117.8	1121.3	1124.7	1125.7
150°	1136.3	1134.9	1133.4	1132.0	1130.5	1131.5	1134.8	1138.0	1141.3	1144.6	1145.8
152.5°	1156.2	1154.6	1153.0	1151.4	1149.8	1150.5	1153.7	1156.8	1159.9	1163.1	1164.3
155°	1185.2	1183.4	1181.4	1179.6	1177.8	1178.1	1180.5	1183.1	1185.5	1187.9	1189.1
157.5°	1207.8	1206.3	1204.8	1203.2	1201.6	1201.7	1203.5	1205.2	1206.9	1208.6	1210.0
160°	1221.1	1219.9	1218.7	1217.4	1216.2	1216.2	1217.4	1218.7	1219.9	1221.1	1222.3
162.5°	1232.9	1231.7	1230.5	1229.2	1228.0	1227.9	1229.0	1230.0	1231.1	1232.2	1233.6
165°	1248.8	1247.6	1246.4	1245.1	1243.9	1243.5	1244.2	1244.8	1245.5	1246.1	1247.5
167.5°	1260.6	1259.4	1258.2	1256.9	1255.7	1255.4	1256.0	1256.5	1257.1	1257.7	1259.1
170°	1267.3	1266.0	1264.8	1263.5	1262.3	1261.9	1262.3	1262.7	1263.1	1263.5	1265.0
172.5°	1271.6	1270.4	1269.2	1268.0	1266.8	1266.4	1266.8	1267.2	1267.6	1268.0	1269.4
175°	1277.4	1276.0	1274.6	1273.0	1271.6	1271.1	1271.5	1271.9	1272.3	1272.7	1274.2
177.5°	1278.3	1277.2	1276.1	1274.9	1273.7	1273.2	1273.4	1273.5	1273.7	1273.8	1275.1
180°	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	8.7	8.7	8.8	8.9	9.0	9.1	9.1	9.2
90°	20.5	21.5	22.5	23.2	23.6	24.0	24.5	24.9
92.5°	22.4	23.0	23.5	23.9	24.1	24.4	24.6	24.9
95°	38.0	39.1	40.1	40.5	40.3	40.1	39.9	39.7
97.5°	49.8	50.6	51.4	51.9	52.2	52.4	52.7	52.9
100°	55.8	57.5	59.2	60.2	60.6	61.0	61.4	61.8
102.5°	58.3	60.5	62.6	63.9	64.5	65.0	65.6	66.2
105°	60.8	63.0	65.2	66.9	67.7	68.5	69.3	70.1
107.5°	74.1	71.9	69.6	68.9	69.7	70.5	71.3	72.1
110°	120.4	99.9	79.4	69.6	70.4	71.2	72.0	72.9





TEST NUMBER: P331666-840

CATALOG NUMBER: SA2XXRDIP-C485D925U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.6	182.8	108.1	71.0	71.6	72.3	72.9	73.6
115°	379.3	284.4	189.5	134.6	119.9	105.1	90.4	75.6
117.5°	584.4	561.5	538.5	502.7	454.2	405.8	357.3	308.8
120°	681.0	683.5	685.9	673.3	645.6	617.9	590.3	562.6
122.5°	722.6	724.0	725.5	723.6	718.2	712.8	707.4	702.1
125°	782.2	783.7	785.1	786.1	786.7	787.3	788.0	788.6
127.5°	837.4	839.5	841.6	842.6	842.8	842.9	843.0	843.1
130°	872.4	874.6	876.9	878.0	877.8	877.5	877.3	877.1
132.5°	906.5	908.4	910.3	911.1	910.9	910.7	910.5	910.3
135°	955.0	957.0	959.1	959.9	959.5	959.1	958.7	958.3
137.5°	1000.1	1002.1	1004.1	1004.8	1004.1	1003.4	1002.7	1002.0
140°	1029.3	1031.2	1033.0	1033.4	1032.4	1031.4	1030.4	1029.3
142.5°	1056.2	1057.9	1059.7	1060.0	1058.9	1057.9	1056.9	1055.8
145°	1094.0	1095.4	1096.8	1097.0	1096.0	1095.0	1094.0	1093.0
147.5°	1126.8	1127.8	1128.9	1129.0	1128.1	1127.3	1126.4	1125.6
150°	1147.0	1148.3	1149.5	1149.6	1148.6	1147.5	1146.5	1145.5
152.5°	1165.5	1166.7	1167.9	1167.9	1166.5	1165.2	1163.9	1162.5
155°	1190.4	1191.6	1192.9	1192.7	1191.0	1189.3	1187.7	1186.1
157.5°	1211.3	1212.7	1214.2	1214.1	1212.4	1210.8	1209.2	1207.7
160°	1223.6	1224.9	1226.1	1226.0	1224.5	1223.0	1221.6	1220.2
162.5°	1235.0	1236.4	1237.8	1237.6	1235.9	1234.1	1232.3	1230.5
165°	1248.9	1250.3	1251.7	1251.7	1250.3	1248.9	1247.5	1246.1
167.5°	1260.5	1261.9	1263.4	1263.1	1261.3	1259.5	1257.7	1255.8
170°	1266.5	1267.9	1269.3	1269.1	1267.3	1265.4	1263.5	1261.7
172.5°	1270.8	1272.3	1273.7	1273.5	1271.6	1269.8	1268.0	1266.2
175°	1275.7	1277.1	1278.5	1278.2	1276.2	1274.1	1272.0	1270.0
177.5°	1276.2	1277.4	1278.5	1278.3	1276.9	1275.4	1273.8	1272.4
180°	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7

(END OF REPORT)