

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: P332531

Luminaire Tested: **SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332531  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

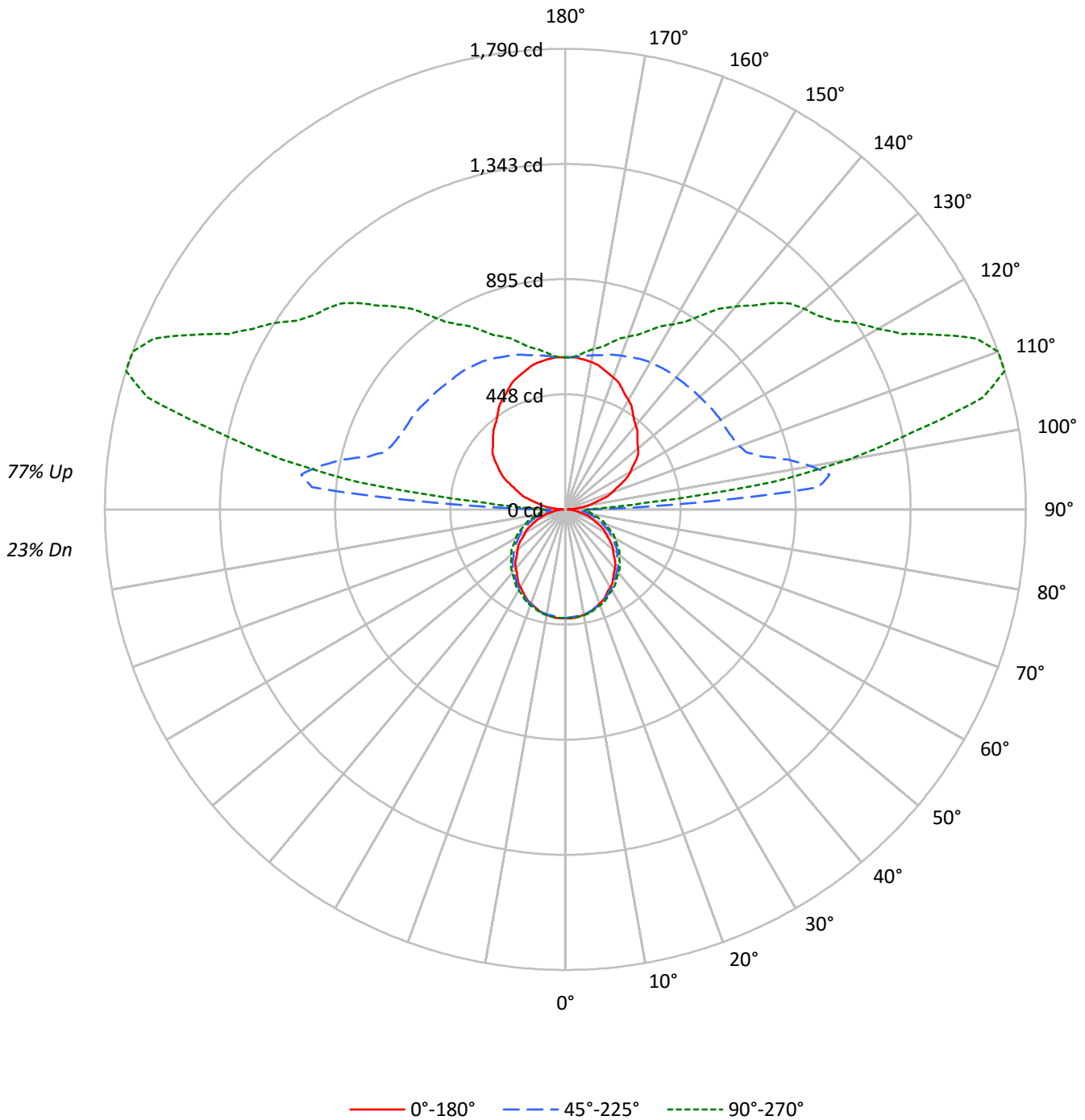
Lumens per Lamp: N/A  
Luminaire Lumens: 5745.7 lumens  
Efficiency: N/A  
Efficacy: 136.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 42.2  
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	101	101	101	101	90	90	90	90	68	68	68	49	49	49	32	32	32	23
1	91	87	83	80	81	77	74	71	59	57	55	42	41	40	27	26	26	19
2	83	76	70	64	73	67	62	58	51	48	45	37	35	33	24	22	21	15
3	75	66	59	53	67	59	53	48	45	41	38	32	30	27	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	18	17	15	11
5	63	52	44	38	56	46	39	34	35	31	27	26	22	20	16	15	13	9
6	58	46	38	33	51	41	34	30	32	27	23	23	20	17	15	13	11	8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	13	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	12	10	9	6
9	46	34	27	22	40	30	24	20	24	19	16	17	14	12	11	9	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	10	9	7	5

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

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



TEST NUMBER: P332531

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	0.7
10°-20°	114.7	2.0
20°-30°	173.4	3.0
30°-40°	209.8	3.7
40°-50°	221.8	3.9
50°-60°	208.8	3.6
60°-70°	173.2	3.0
70°-80°	121.7	2.1
80°-90°	72.0	1.3
90°-100°	468.0	8.1
100°-110°	919.3	16.0
110°-120°	816.7	14.2
120°-130°	681.3	11.9
130°-140°	563.5	9.8
140°-150°	427.7	7.4
150°-160°	299.9	5.2
160°-170°	176.4	3.1
170°-180°	57.4	1.0
0°-30°	328.1	5.7
0°-40°	537.9	9.4
0°-60°	968.5	16.9
0°-90°	1335.4	23.2
90°-120°	2204.0	38.4
90°-150°	3876.6	67.5
90°-180°	4410.0	76.8
0°-180°	5745.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	9	36	68	83	89	7
95°	44	143	988	522	342	48
105°	140	211	794	1684	1682	150
115°	242	308	702	1338	1606	240
125°	335	398	690	1133	1278	299
135°	397	473	675	998	1135	307
145°	457	523	667	835	919	287
155°	519	561	648	734	766	239
165°	566	583	622	658	668	160
175°	590	592	596	604	602	56
180°	592	592	592	592	592	



TEST NUMBER: P332531

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.2	19.0	24.0	28.5	33.0	37.5	43.5	48.1	53.2	58.2	61.1
90°	8.7	15.3	23.0	28.3	33.7	38.1	49.6	54.1	60.9	67.8	69.7
92.5°	20.4	30.3	45.0	62.9	83.7	112.0	175.6	270.3	362.6	413.2	354.6
95°	44.5	51.5	66.5	85.1	116.5	169.2	274.6	469.5	751.5	988.2	1017.8
97.5°	74.4	77.4	90.3	107.3	134.2	178.7	260.9	422.5	702.8	1035.7	1264.4
100°	93.5	96.3	107.1	123.8	148.6	189.2	261.9	397.3	638.4	970.2	1270.5
102.5°	112.1	116.4	126.0	141.4	164.9	203.5	269.5	389.1	594.8	889.3	1198.8
105°	140.2	145.8	153.7	169.8	192.8	229.5	289.1	389.5	556.1	793.5	1069.2
107.5°	172.2	176.2	183.8	200.4	222.1	258.0	312.8	404.4	547.0	738.7	964.2
110°	193.2	197.0	204.3	219.7	242.1	276.0	330.8	415.9	547.4	719.5	911.4



TEST NUMBER: P332531

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	213.3	216.9	224.9	239.3	261.5	295.3	348.0	428.2	551.2	709.3	880.6
115°	242.2	246.6	255.7	268.3	291.3	324.8	374.7	447.8	559.2	702.0	850.7
117.5°	272.8	276.6	284.4	297.7	319.0	353.4	400.7	467.9	568.0	698.0	835.7
120°	292.9	295.5	304.0	317.1	337.1	371.3	418.5	482.0	574.5	696.1	827.2
122.5°	311.5	313.8	322.0	334.0	355.6	388.7	435.8	495.3	581.2	693.3	817.9
125°	335.4	339.9	346.8	359.5	381.4	415.2	459.7	515.8	591.6	689.5	803.1
127.5°	356.9	360.5	368.8	383.3	406.2	439.9	482.4	533.5	599.4	684.1	783.6
130°	368.6	373.2	382.3	399.7	421.6	456.1	497.3	544.3	605.3	681.3	771.5
132.5°	380.7	384.3	396.3	412.7	436.5	469.0	509.8	555.6	610.6	678.9	760.6
135°	397.2	401.8	413.5	433.2	457.6	488.2	527.3	569.8	618.2	674.7	743.8
137.5°	414.2	418.5	431.1	449.9	475.1	504.0	540.2	579.6	622.2	672.3	729.4
140°	426.2	429.6	442.3	461.9	486.2	514.1	549.1	586.4	626.0	670.3	721.6
142.5°	438.9	442.3	454.2	473.0	496.4	523.3	557.2	591.5	629.1	669.5	715.1
145°	457.1	460.5	472.0	488.2	510.2	535.7	565.9	597.3	631.0	667.0	704.8
147.5°	477.8	478.9	489.0	505.6	523.9	546.8	575.2	602.6	632.1	662.8	695.7
150°	490.8	491.9	501.1	514.9	532.2	554.3	579.8	605.4	632.1	660.0	689.1
152.5°	502.5	502.8	512.0	525.0	540.6	560.8	583.6	607.3	630.3	655.4	681.6
155°	519.4	520.6	527.5	539.2	552.0	569.4	589.1	608.9	627.5	648.4	670.5
157.5°	535.9	535.9	542.4	551.5	562.6	576.4	593.1	608.9	624.5	641.2	659.1
160°	546.1	546.1	550.8	558.9	568.2	581.0	594.9	608.9	621.7	635.6	650.7
162.5°	555.4	554.5	558.2	565.4	573.8	583.8	596.8	608.9	618.9	630.0	643.3
165°	565.9	565.9	568.2	574.0	579.8	586.8	597.3	606.6	613.5	621.7	631.0
167.5°	576.4	575.2	576.4	580.8	584.0	589.4	597.0	603.8	608.0	613.3	619.8
170°	581.0	579.8	581.0	584.5	586.8	590.3	596.1	601.9	604.2	607.7	612.4
172.5°	585.6	584.5	584.7	587.3	588.7	591.2	595.2	600.1	600.5	602.1	605.9
175°	590.3	589.1	589.1	590.3	591.5	591.5	593.8	597.3	596.1	596.1	598.4
177.5°	592.4	591.5	590.5	591.5	591.5	591.5	592.4	594.2	592.4	592.4	593.3
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5



TEST NUMBER: P332531  
 CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	64.3	67.6	70.9	72.9	74.0	75.2	75.9	76.8
90°	73.9	78.1	82.3	84.2	86.3	88.3	87.9	88.8
92.5°	278.7	225.2	193.1	171.8	158.9	153.5	150.4	151.2
95°	907.9	730.6	577.8	466.9	411.0	375.9	355.9	341.7
97.5°	1315.9	1251.7	1140.9	1021.4	938.8	869.8	835.8	812.6
100°	1443.0	1469.1	1415.0	1330.8	1230.4	1160.3	1126.2	1117.6
102.5°	1434.5	1552.5	1571.7	1537.7	1476.5	1426.0	1390.1	1383.5
105°	1337.9	1541.6	1659.3	1708.6	1711.8	1703.4	1687.9	1681.8
107.5°	1202.4	1419.0	1583.6	1688.9	1747.1	1774.3	1786.7	1790.5
110°	1120.6	1324.1	1495.0	1624.4	1707.8	1757.4	1779.2	1790.5





TEST NUMBER: P332531

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1060.0	1240.1	1401.6	1531.0	1625.5	1685.4	1715.5	1733.3
115°	998.3	1143.5	1281.8	1394.9	1487.4	1557.9	1595.8	1605.8
117.5°	966.4	1086.9	1196.0	1292.1	1371.2	1430.6	1469.1	1477.2
120°	951.3	1061.5	1156.6	1240.5	1307.6	1359.6	1390.6	1404.3
122.5°	938.3	1044.7	1131.4	1205.1	1261.9	1306.3	1332.7	1346.2
125°	916.6	1018.6	1100.7	1166.0	1213.1	1247.4	1270.1	1277.7
127.5°	890.3	987.8	1069.6	1131.6	1179.0	1209.7	1229.0	1236.7
130°	869.9	963.6	1044.5	1107.3	1155.6	1185.3	1204.5	1212.1
132.5°	848.7	936.7	1015.7	1078.5	1125.8	1159.2	1177.5	1185.1
135°	818.7	895.9	968.5	1027.7	1074.8	1108.0	1127.2	1134.8
137.5°	791.8	857.3	918.5	972.1	1016.1	1048.7	1064.5	1073.4
140°	776.4	832.4	886.1	935.8	977.0	1003.1	1019.9	1029.7
142.5°	762.3	811.6	857.7	900.8	937.2	961.4	976.2	983.2
145°	742.6	782.8	818.2	851.3	880.8	901.0	913.0	919.2
147.5°	726.4	757.9	785.8	811.6	833.3	850.6	859.8	862.2
150°	717.0	743.7	766.9	787.8	806.4	821.5	828.5	829.7
152.5°	706.7	729.7	751.1	768.3	784.1	796.4	800.6	801.8
155°	691.4	710.0	727.4	741.4	753.0	762.3	765.8	765.8
157.5°	674.9	690.5	705.1	716.3	725.1	732.1	734.2	734.2
160°	664.7	677.4	690.2	699.5	706.5	713.5	714.6	714.6
162.5°	654.4	665.4	675.4	683.7	688.8	695.8	697.0	696.0
165°	640.3	647.2	655.4	661.2	665.8	670.5	669.3	668.2
167.5°	626.6	631.9	638.4	641.9	644.2	647.2	647.0	646.1
170°	618.2	621.7	626.3	629.8	632.1	633.3	632.1	632.1
172.5°	610.7	613.3	616.1	618.6	620.0	621.2	620.0	618.2
175°	600.8	601.9	604.2	604.2	604.2	606.6	604.2	601.9
177.5°	594.2	595.2	595.2	596.1	595.2	596.1	594.2	592.4
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5

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