

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: P332534-930

Luminaire Tested: **SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332534-930  
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-C350D1205U930-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4745.7 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

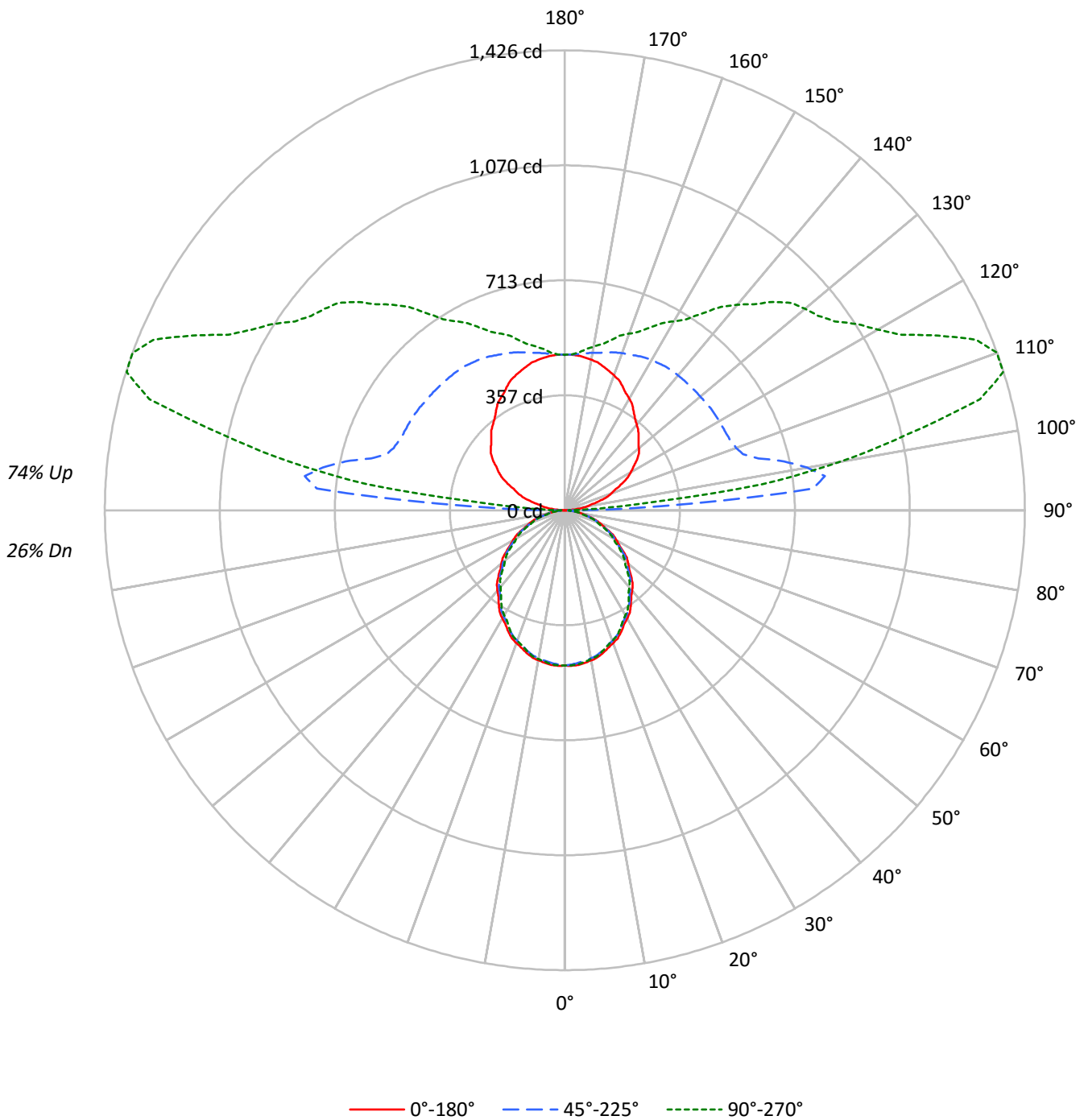
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332534-930

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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26				
1	92	88	84	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22				
2	84	77	71	66	75	69	64	60	54	50	47	39	37	35	26	25	24	18				
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16				
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18	13				
5	64	53	45	39	57	48	41	36	37	33	29	28	25	22	19	17	15	12				
6	59	47	40	34	52	43	36	31	33	29	25	25	22	19	17	15	13	10				
7	54	43	35	30	48	38	32	27	30	25	22	23	19	17	16	13	12	9				
8	50	39	31	26	45	35	28	24	27	23	19	21	17	15	14	12	11	8				
9	47	35	28	23	42	32	25	21	25	20	17	19	16	13	13	11	10	7				
10	44	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	7				

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

	0°	45°	90°
0°	3888	3888	3888
5°	3900	3853	3881
10°	3875	3822	3841
15°	3828	3768	3777
20°	3766	3699	3703
25°	3695	3624	3613
30°	3608	3533	3500
35°	3517	3438	3392
40°	3424	3331	3270
45°	3327	3225	3164
50°	3218	3131	3034
55°	3102	3009	2911
60°	2984	2872	2785
65°	2854	2743	2632
70°	2705	2568	2469
75°	2480	2361	2299
80°	2208	2120	2064
85°	1936	1862	1815



TEST NUMBER: P332534-930

CATALOG NUMBER: SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.4	1.0
10°-20°	127.8	2.7
20°-30°	188.1	4.0
30°-40°	218.7	4.6
40°-50°	218.7	4.6
50°-60°	191.3	4.0
60°-70°	142.1	3.0
70°-80°	80.7	1.7
80°-90°	26.0	0.5
90°-100°	348.3	7.3
100°-110°	724.9	15.3
110°-120°	649.3	13.7
120°-130°	546.2	11.5
130°-140°	455.4	9.6
140°-150°	347.9	7.3
150°-160°	244.5	5.2
160°-170°	143.8	3.0
170°-180°	46.8	1.0
0°-30°	361.2	7.6
0°-40°	579.9	12.2
0°-60°	989.8	20.9
0°-90°	1238.6	26.1
90°-120°	1722.5	36.3
90°-150°	3071.9	64.7
90°-180°	3507.0	73.9
0°-180°	4745.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	481	480	475	479	479	46
15°	458	456	451	453	452	129
25°	415	412	407	407	406	191
35°	357	354	349	346	344	223
45°	291	288	282	278	277	225
55°	220	219	214	209	207	197
65°	149	147	144	140	138	148
75°	80	78	76	74	74	84
85°	21	21	20	20	20	23
90°	1	8	17	19	20	3
95°	31	99	772	382	231	35
105°	111	161	622	1338	1333	118
115°	195	245	554	1065	1280	193
125°	272	323	551	906	1021	242
135°	323	385	547	804	913	250
145°	372	426	544	678	746	234
155°	424	457	529	599	624	195
165°	461	476	507	537	545	130
175°	481	482	486	493	491	46
180°	482	482	482	482	482	



TEST NUMBER: P332534-930

CATALOG NUMBER: SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	482.8	482.7	482.4	482.2	482.0	481.5	480.8	480.0	479.3	478.5	479.2
5°	481.2	480.9	480.5	480.2	479.9	479.2	478.3	477.4	476.4	475.4	476.4
7.5°	476.8	476.4	476.1	475.7	475.4	474.7	473.6	472.6	471.6	470.5	471.2
10°	472.7	472.4	472.1	471.7	471.4	470.7	469.5	468.4	467.3	466.2	466.8
12.5°	467.5	467.2	466.8	466.4	466.1	465.4	464.1	463.0	461.8	460.6	461.4
15°	458.0	457.7	457.4	457.1	456.7	455.9	454.6	453.3	452.0	450.8	451.3
17.5°	446.7	446.3	445.9	445.5	445.0	444.2	443.0	441.7	440.5	439.3	439.6
20°	438.4	438.0	437.6	437.1	436.7	435.9	434.6	433.3	431.9	430.6	431.0
22.5°	429.4	428.8	428.3	427.7	427.1	426.2	424.9	423.7	422.4	421.1	421.6
25°	414.8	414.3	413.7	413.0	412.5	411.6	410.3	409.1	408.0	406.8	406.8
27.5°	398.2	397.5	397.0	396.3	395.7	394.8	393.7	392.6	391.5	390.4	390.2
30°	387.1	386.4	385.7	385.0	384.3	383.4	382.3	381.2	380.1	379.0	378.6
32.5°	375.4	374.7	374.1	373.5	372.8	371.9	370.8	369.6	368.4	367.2	366.8
35°	356.9	356.4	355.8	355.1	354.6	353.7	352.5	351.2	350.1	348.9	348.3
37.5°	337.6	337.0	336.5	336.0	335.4	334.5	333.2	331.9	330.6	329.3	328.6
40°	324.9	324.2	323.6	322.9	322.2	321.2	319.9	318.6	317.3	316.1	315.2
42.5°	311.4	311.0	310.5	310.1	309.7	308.8	307.4	305.9	304.5	303.1	302.1
45°	291.4	290.7	290.2	289.6	288.9	288.0	286.6	285.2	283.9	282.5	281.5
47.5°	270.4	270.0	269.6	269.2	268.8	268.0	266.7	265.4	264.2	262.9	261.8
50°	256.2	255.9	255.6	255.2	254.9	254.1	252.9	251.7	250.5	249.3	248.1
52.5°	242.4	241.9	241.5	241.1	240.7	239.9	238.6	237.3	236.0	234.8	233.7
55°	220.4	220.1	219.8	219.6	219.3	218.6	217.4	216.2	215.0	213.8	212.8
57.5°	199.3	199.1	198.8	198.5	198.2	197.5	196.2	195.1	193.9	192.7	191.8
60°	184.8	184.4	184.0	183.5	183.1	182.4	181.2	180.1	179.0	177.9	177.2
62.5°	170.6	170.3	169.9	169.6	169.2	168.4	167.2	166.1	164.9	163.7	163.0
65°	149.4	149.0	148.5	148.1	147.7	147.0	146.1	145.3	144.4	143.6	142.7
67.5°	127.9	127.5	127.1	126.7	126.3	125.7	124.9	124.1	123.3	122.4	121.6
70°	114.6	114.0	113.4	112.8	112.2	111.5	110.9	110.2	109.5	108.8	108.1
72.5°	100.4	99.8	99.2	98.7	98.0	97.4	96.9	96.4	95.8	95.2	94.7
75°	79.5	79.1	78.7	78.2	77.8	77.4	77.0	76.5	76.1	75.7	75.3
77.5°	59.5	59.4	59.1	58.9	58.8	58.5	58.1	57.7	57.3	57.0	56.8
80°	47.5	47.2	47.0	46.7	46.5	46.2	46.1	45.9	45.7	45.6	45.3
82.5°	35.7	35.6	35.5	35.4	35.2	35.1	35.1	35.1	35.1	35.1	35.0
85°	20.9	20.9	20.9	20.9	20.9	20.8	20.5	20.4	20.2	20.1	20.1
87.5°	8.2	8.6	9.0	9.1	9.3	9.2	10.3	10.2	10.5	10.8	10.6
90°	1.0	2.9	5.7	6.6	7.6	7.6	13.3	13.3	15.2	17.0	16.1
92.5°	10.8	15.7	24.6	36.2	50.1	69.7	117.9	191.4	263.0	300.5	250.3
95°	31.2	34.1	43.6	55.9	78.6	118.5	200.8	356.2	582.6	772.1	793.9
97.5°	56.1	56.1	64.2	75.6	95.1	128.5	191.9	320.2	545.3	813.3	997.4
100°	72.0	72.0	78.6	90.0	108.0	138.4	194.2	301.3	494.6	761.7	1004.2
102.5°	87.2	88.7	94.6	105.2	122.4	151.2	201.8	296.0	460.4	697.2	947.4
105°	110.9	113.7	118.5	129.8	146.8	174.3	219.8	298.4	431.0	621.5	844.1
107.5°	137.0	138.8	143.7	155.7	172.0	199.2	240.8	312.4	425.7	579.0	760.8
110°	154.4	156.3	161.0	172.4	189.5	215.1	256.7	323.0	427.3	564.7	719.1



TEST NUMBER: P332534-930

CATALOG NUMBER: SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.1	173.0	178.5	189.1	206.2	231.7	271.9	334.4	431.8	557.8	695.5
115°	195.2	198.0	204.6	214.1	232.1	257.7	295.5	352.5	440.5	554.2	673.6
117.5°	220.1	222.8	228.7	239.1	256.0	282.5	318.5	370.8	449.8	553.3	663.7
120°	236.8	238.7	245.4	255.8	271.9	298.4	334.4	383.7	456.6	553.3	658.4
122.5°	252.0	253.9	260.6	270.2	287.8	313.6	349.6	395.8	463.5	552.5	652.4
125°	271.9	275.7	281.4	291.8	309.8	336.3	370.4	414.0	473.7	551.4	642.3
127.5°	289.5	292.5	299.4	311.3	330.0	356.8	389.7	429.7	481.8	549.3	628.8
130°	299.4	303.1	310.7	325.0	342.9	370.4	402.7	439.6	487.9	548.5	620.5
132.5°	309.2	312.3	322.1	335.6	355.1	381.1	413.3	449.5	493.2	547.8	612.9
135°	323.0	326.9	336.3	352.5	372.3	397.0	428.2	462.4	501.2	546.7	601.6
137.5°	336.9	340.5	350.9	366.2	386.9	410.4	439.6	471.4	505.9	546.4	591.7
140°	346.7	349.6	360.0	376.1	396.0	418.7	447.2	477.4	509.7	545.7	586.4
142.5°	357.3	360.2	369.8	385.2	404.3	426.3	454.0	482.0	512.7	545.7	581.9
145°	372.3	375.2	384.7	397.9	415.9	436.8	461.4	487.0	514.5	543.8	574.1
147.5°	389.1	390.1	398.4	412.1	427.1	445.8	469.0	491.3	515.4	540.4	567.1
150°	399.8	400.7	408.3	419.7	433.9	451.9	472.7	493.6	515.4	538.1	561.8
152.5°	409.6	409.9	417.4	428.0	440.8	457.2	475.8	495.1	513.9	534.3	555.7
155°	423.5	424.4	430.1	439.6	450.0	464.2	480.3	496.4	511.6	528.6	546.7
157.5°	436.9	436.9	442.2	449.6	458.7	469.9	483.6	496.4	509.2	522.8	537.4
160°	445.2	445.2	449.1	455.7	463.3	473.7	485.0	496.4	506.9	518.2	530.5
162.5°	452.8	452.1	455.1	461.0	467.8	476.0	486.6	496.4	504.6	513.6	524.5
165°	461.4	461.4	463.3	468.0	472.7	478.4	487.0	494.6	500.2	506.9	514.5
167.5°	469.9	469.0	469.9	473.5	476.1	480.5	486.7	492.3	495.7	500.0	505.3
170°	473.7	472.7	473.7	476.5	478.4	481.3	486.0	490.7	492.6	495.5	499.3
172.5°	477.4	476.5	476.7	478.8	480.0	482.0	485.3	489.3	489.6	490.9	494.0
175°	481.3	480.3	480.3	481.3	482.2	482.2	484.1	487.0	486.0	486.0	487.9
177.5°	483.0	482.2	481.4	482.2	482.2	482.2	483.0	484.5	483.0	483.0	483.7
180°	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2



TEST NUMBER: P332534-930

CATALOG NUMBER: SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	479.9	480.6	481.3	481.6	481.5	481.4	481.4	481.3
5°	477.4	478.3	479.2	479.6	479.4	479.2	479.1	478.9
7.5°	472.0	472.8	473.5	473.9	473.8	473.6	473.5	473.4
10°	467.6	468.2	469.0	469.2	469.0	468.8	468.6	468.5
12.5°	462.1	462.8	463.7	463.9	463.7	463.4	463.2	462.9
15°	451.8	452.2	452.8	452.9	452.7	452.4	452.2	451.9
17.5°	439.9	440.3	440.6	440.7	440.5	440.3	440.2	440.0
20°	431.2	431.5	431.7	431.8	431.5	431.4	431.2	431.0
22.5°	422.0	422.5	423.0	423.1	422.7	422.4	422.1	421.8
25°	406.9	407.0	407.1	407.0	406.6	406.3	405.9	405.6
27.5°	390.0	389.8	389.6	389.2	388.8	388.4	387.9	387.5
30°	378.3	378.0	377.6	377.2	376.7	376.3	375.9	375.5
32.5°	366.4	366.0	365.6	365.2	364.8	364.3	363.9	363.5
35°	347.6	347.1	346.4	345.9	345.5	345.1	344.6	344.2
37.5°	328.0	327.3	326.7	326.1	325.5	325.0	324.4	323.8
40°	314.4	313.5	312.7	312.0	311.5	311.1	310.7	310.3
42.5°	301.1	300.1	299.1	298.5	298.2	297.9	297.6	297.3
45°	280.6	279.6	278.8	278.1	277.9	277.6	277.4	277.1
47.5°	260.7	259.7	258.6	257.8	257.1	256.5	255.8	255.2
50°	246.9	245.7	244.5	243.6	243.1	242.6	242.1	241.6
52.5°	232.7	231.6	230.6	229.7	229.0	228.4	227.7	227.1
55°	211.7	210.7	209.7	208.9	208.4	207.9	207.3	206.8
57.5°	190.8	189.8	188.8	188.1	187.6	187.1	186.6	186.1
60°	176.3	175.6	174.8	174.2	173.8	173.3	172.9	172.5
62.5°	162.3	161.6	160.9	160.3	159.9	159.5	159.1	158.6
65°	141.9	141.0	140.1	139.5	139.1	138.6	138.2	137.8
67.5°	120.7	119.9	119.1	118.6	118.5	118.4	118.3	118.1
70°	107.5	106.8	106.1	105.6	105.3	105.1	104.8	104.6
72.5°	94.2	93.6	93.0	92.6	92.4	92.1	91.9	91.6
75°	74.9	74.6	74.3	74.0	73.9	73.9	73.8	73.7
77.5°	56.7	56.7	56.6	56.4	56.2	55.9	55.7	55.5
80°	45.2	45.0	44.8	44.8	44.6	44.5	44.4	44.4
82.5°	34.8	34.7	34.7	34.6	34.5	34.3	34.2	34.2
85°	20.1	20.1	20.1	20.1	20.0	19.9	19.7	19.6
87.5°	10.8	11.0	11.2	11.2	11.4	11.6	11.4	11.4
90°	17.0	18.0	18.9	18.9	19.9	20.9	19.9	19.9
92.5°	186.1	140.0	111.5	92.5	81.3	76.1	73.0	73.0
95°	702.0	555.1	428.2	336.3	289.9	260.6	243.4	231.1
97.5°	1037.2	982.6	890.0	791.1	723.0	666.0	637.6	617.9
100°	1142.6	1161.5	1115.1	1045.0	962.5	904.7	876.4	868.8
102.5°	1137.3	1231.2	1244.6	1215.4	1164.9	1123.0	1093.1	1087.0
105°	1061.0	1225.0	1318.7	1357.6	1359.5	1351.9	1338.6	1332.9
107.5°	952.8	1127.4	1259.5	1343.9	1390.7	1412.3	1421.8	1424.3
110°	887.7	1051.6	1189.0	1293.1	1360.4	1400.2	1417.3	1425.8





TEST NUMBER: P332534-930

CATALOG NUMBER: SA4XXDIP-C350D1205U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	839.9	984.9	1114.7	1218.9	1295.3	1343.4	1367.3	1381.1
115°	792.0	908.6	1019.4	1110.4	1185.2	1242.0	1272.4	1279.9
117.5°	768.5	865.0	952.1	1029.2	1093.1	1140.8	1171.5	1177.4
120°	757.9	846.0	921.8	989.0	1043.1	1084.8	1109.4	1119.8
122.5°	748.8	833.9	902.9	961.8	1007.5	1043.1	1063.9	1074.3
125°	733.3	814.7	880.1	932.2	970.1	997.6	1015.6	1021.2
127.5°	714.3	792.2	857.4	906.9	944.9	969.4	984.6	990.2
130°	699.2	774.0	838.5	888.7	927.5	951.1	966.3	972.0
132.5°	683.2	753.6	816.4	866.7	904.7	931.5	945.8	951.5
135°	661.3	722.8	780.6	828.0	865.9	892.4	907.6	913.3
137.5°	641.4	693.5	742.2	785.0	820.4	846.6	859.1	865.9
140°	630.0	674.5	717.1	756.9	790.1	811.0	824.2	831.8
142.5°	619.4	658.6	695.2	729.7	759.0	778.4	790.1	795.4
145°	604.5	636.7	665.0	691.6	715.3	731.4	740.9	745.6
147.5°	592.2	617.7	640.4	661.3	678.7	692.5	699.8	701.4
150°	584.6	606.3	625.3	642.3	657.5	669.8	675.5	676.5
152.5°	576.2	594.9	612.4	626.4	639.3	649.3	652.7	653.7
155°	563.7	578.9	593.0	604.5	613.9	621.5	624.4	624.4
157.5°	550.2	563.0	574.9	584.0	591.2	596.9	598.6	598.6
160°	541.9	552.3	562.7	570.3	576.0	581.7	582.6	582.6
162.5°	533.5	542.5	550.7	557.4	561.6	567.3	568.3	567.4
165°	522.0	527.7	534.3	539.1	542.8	546.7	545.7	544.8
167.5°	510.9	515.2	520.5	523.3	525.2	527.7	527.5	526.8
170°	504.0	506.9	510.6	513.5	515.4	516.3	515.4	515.4
172.5°	497.9	500.0	502.3	504.3	505.5	506.5	505.5	504.0
175°	489.8	490.7	492.6	492.6	492.6	494.6	492.6	490.7
177.5°	484.5	485.3	485.3	486.0	485.3	486.0	484.5	483.0
180°	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2

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