

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: P332886-940

Luminaire Tested: **SA4XXRDIP-C350D1035U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332886-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C350D1035U940-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

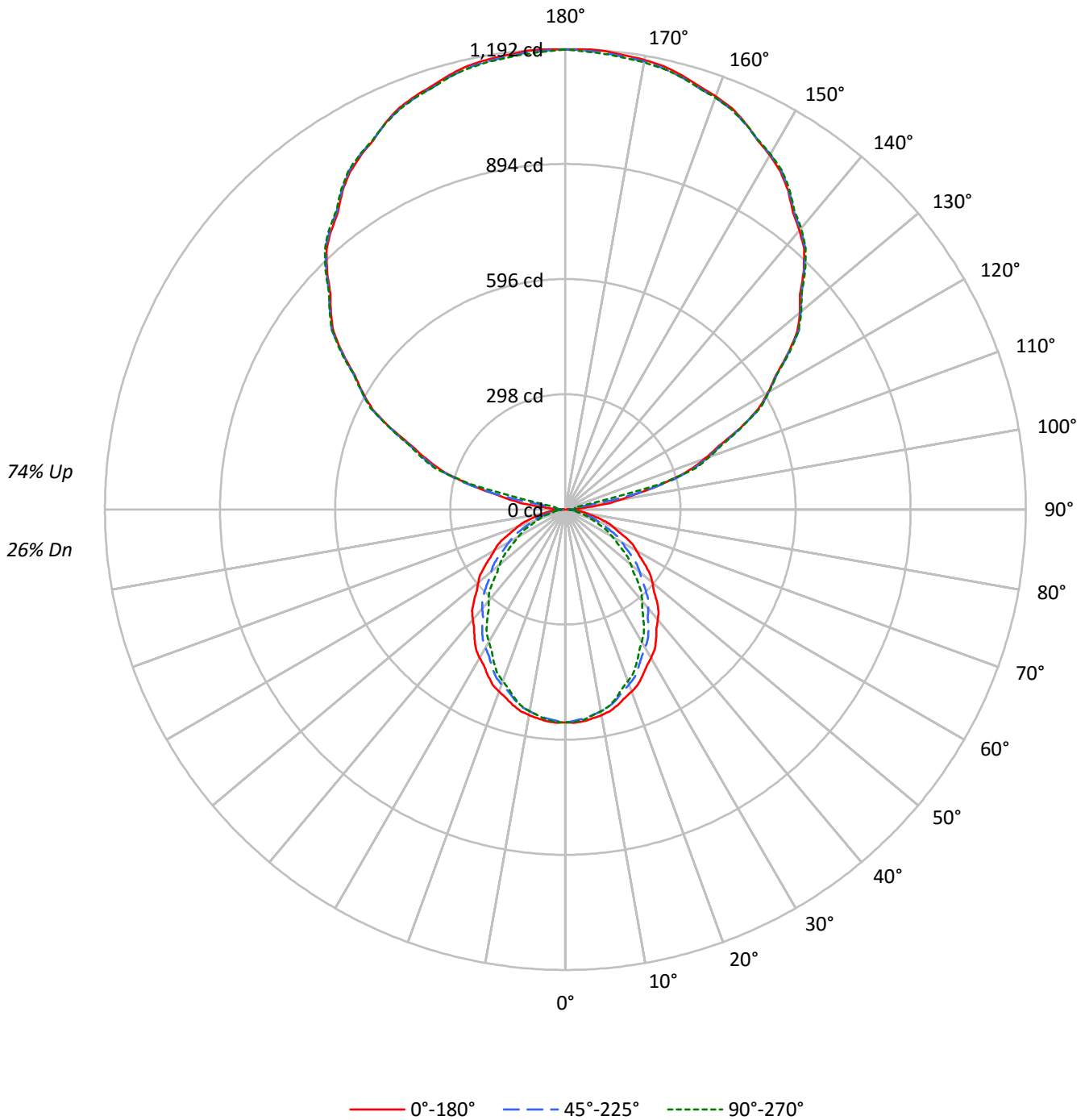
Lumens per Lamp: N/A  
Luminaire Lumens: 4958.5 lumens  
Efficiency: N/A  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 37.3  
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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26				
1	92	88	85	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22				
2	84	77	71	67	75	69	64	60	54	50	48	40	38	36	27	25	24	19				
3	77	68	61	55	68	61	55	50	47	43	40	35	33	30	24	22	21	16				
4	70	60	53	47	62	54	48	43	42	38	34	31	28	26	21	19	18	14				
5	64	53	46	40	57	48	41	36	38	33	29	28	25	23	19	17	16	12				
6	59	48	40	35	53	43	36	32	34	29	26	25	22	20	17	15	14	11				
7	55	43	35	30	49	39	32	28	31	26	22	23	20	17	16	14	12	9				
8	51	39	32	26	45	35	29	24	28	23	20	21	18	15	15	13	11	8				
9	47	35	28	23	42	32	26	21	25	21	18	19	16	14	13	11	10	8				
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7				

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

	0°	45°	90°
0°	4451	4451	4451
5°	4460	4406	4433
10°	4432	4353	4353
15°	4381	4262	4229
20°	4312	4141	4064
25°	4222	4000	3899
30°	4135	3852	3691
35°	4039	3698	3482
40°	3923	3523	3256
45°	3817	3350	3027
50°	3695	3149	2783
55°	3564	2940	2519
60°	3421	2713	2249
65°	3289	2428	1983
70°	3099	2110	1683
75°	2857	1753	1369
80°	2492	1334	1255
85°	2112	1213	1130



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	1.0
10°-20°	144.4	2.9
20°-30°	208.5	4.2
30°-40°	236.4	4.8
40°-50°	228.2	4.6
50°-60°	189.8	3.8
60°-70°	131.1	2.6
70°-80°	66.4	1.3
80°-90°	20.5	0.4
90°-100°	40.7	0.8
100°-110°	259.5	5.2
110°-120°	496.5	10.0
120°-130°	630.3	12.7
130°-140°	674.3	13.6
140°-150°	630.6	12.7
150°-160°	508.5	10.3
160°-170°	328.0	6.6
170°-180°	113.0	2.3
0°-30°	404.7	8.2
0°-40°	641.0	12.9
0°-60°	1059.1	21.4
0°-90°	1277.0	25.8
90°-120°	796.7	16.1
90°-150°	2731.9	55.1
90°-180°	3681.0	74.2
0°-180°	4958.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	550	548	544	548	547	52
15°	524	520	510	509	506	148
25°	474	466	449	442	438	218
35°	410	396	375	361	353	256
45°	334	318	293	273	265	258
55°	253	236	209	188	179	226
65°	172	154	127	110	104	170
75°	92	76	56	47	44	97
85°	23	15	13	12	12	26
90°	3	12	20	25	27	3
95°	49	20	20	25	26	63
105°	268	273	278	284	254	280
115°	500	503	502	504	504	492
125°	703	706	705	708	709	628
135°	872	872	875	877	879	672
145°	1006	1008	1008	1010	1011	628
155°	1103	1104	1101	1104	1102	508
165°	1163	1159	1159	1165	1158	329
175°	1190	1185	1186	1193	1183	113
180°	1190	1190	1190	1190	1190	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	552.6	552.2	552.0	551.7	551.3	550.8	550.0	549.2	548.3	547.5	548.3
5°	550.4	550.0	549.7	549.3	548.8	548.1	547.0	545.9	544.7	543.7	544.6
7.5°	545.4	545.0	544.7	544.2	543.9	542.9	541.4	539.9	538.5	537.1	537.6
10°	540.6	540.2	539.8	539.3	538.8	537.7	536.0	534.3	532.6	531.0	531.4
12.5°	534.6	534.0	533.5	533.0	532.4	531.2	529.1	527.2	525.2	523.2	523.4
15°	524.2	523.3	522.5	521.7	520.8	519.2	516.9	514.5	512.2	509.9	509.7
17.5°	511.7	510.4	509.2	508.0	506.8	504.7	501.9	499.1	496.3	493.5	492.9
20°	501.9	500.6	499.4	498.2	497.0	494.8	491.6	488.4	485.2	482.0	481.3
22.5°	491.1	489.6	488.3	487.0	485.5	483.1	479.7	476.4	473.0	469.5	468.4
25°	474.0	472.3	470.6	469.0	467.3	464.5	460.7	456.8	452.9	449.1	447.5
27.5°	456.1	454.0	451.8	449.8	447.6	444.5	440.4	436.3	432.2	428.1	426.1
30°	443.6	441.2	438.9	436.6	434.3	430.9	426.4	422.0	417.6	413.2	410.9
32.5°	430.4	427.8	425.2	422.5	419.8	416.3	411.7	407.2	402.6	398.1	395.3
35°	409.8	406.8	403.9	400.8	397.8	394.0	389.3	384.6	380.0	375.2	372.0
37.5°	387.8	384.7	381.7	378.5	375.4	371.3	366.0	360.9	355.7	350.5	347.0
40°	372.3	369.2	366.0	363.0	359.9	355.7	350.4	345.0	339.7	334.3	330.4
42.5°	357.4	354.2	350.9	347.7	344.5	340.0	334.5	328.9	323.3	317.7	313.7
45°	334.3	330.8	327.3	323.9	320.4	315.8	310.2	304.6	299.0	293.4	288.7
47.5°	310.4	306.8	303.3	299.6	296.0	291.3	285.5	279.6	273.8	268.0	263.1
50°	294.2	290.5	286.9	283.2	279.6	274.7	268.8	262.7	256.7	250.7	246.0
52.5°	277.7	274.0	270.5	266.9	263.3	258.4	252.3	246.1	240.0	233.8	229.1
55°	253.2	249.5	245.8	242.0	238.3	233.3	227.2	221.1	215.0	208.9	204.0
57.5°	229.1	225.2	221.3	217.4	213.5	208.6	202.5	196.5	190.6	184.5	179.6
60°	211.9	208.1	204.4	200.6	196.9	192.0	186.0	179.9	174.0	168.0	163.1
62.5°	196.4	192.4	188.5	184.7	180.7	175.8	169.6	163.5	157.3	151.1	146.6
65°	172.2	168.2	164.2	160.2	156.0	151.1	145.1	139.0	133.0	127.1	123.1
67.5°	147.1	143.3	139.4	135.5	131.7	127.0	121.4	115.8	110.2	104.7	101.2
70°	131.3	127.3	123.4	119.5	115.5	110.8	105.5	100.1	94.8	89.4	86.4
72.5°	114.4	110.8	107.3	103.7	100.1	95.9	90.8	85.7	80.7	75.6	73.0
75°	91.6	88.1	84.6	81.1	77.7	73.7	69.4	64.9	60.5	56.2	53.9
77.5°	68.5	65.5	62.6	59.7	56.7	53.4	49.8	46.3	42.7	39.1	37.9
80°	53.6	50.9	48.2	45.5	42.7	39.9	37.2	34.3	31.5	28.7	28.4
82.5°	40.8	38.3	35.8	33.3	30.8	28.7	27.1	25.5	23.9	22.3	22.1
85°	22.8	21.0	19.1	17.1	15.2	14.2	13.9	13.6	13.4	13.1	12.9
87.5°	8.3	8.1	7.9	7.8	7.7	7.7	7.9	8.2	8.4	8.6	8.8
90°	2.7	4.8	7.0	9.2	11.4	13.3	14.8	16.4	18.0	19.6	20.8
92.5°	11.2	11.3	11.4	11.6	11.7	12.6	14.1	15.7	17.3	18.9	20.1
95°	49.0	42.3	35.5	28.8	22.0	18.8	19.0	19.2	19.4	19.6	20.8
97.5°	104.0	108.2	112.4	116.5	120.7	111.8	89.7	67.7	45.6	23.5	23.6
100°	146.0	149.5	153.1	156.7	160.2	148.4	121.1	93.8	66.4	39.1	35.8
102.5°	193.0	195.6	198.2	200.8	203.4	203.0	199.4	195.8	192.3	188.7	152.4
105°	268.0	269.1	270.3	271.5	272.7	273.8	274.7	275.7	276.8	277.8	279.6
107.5°	337.5	338.1	338.8	339.3	339.9	340.9	342.2	343.6	344.9	346.3	347.1
110°	384.6	385.1	385.8	386.3	386.9	387.8	389.0	390.2	391.4	392.5	393.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	430.2	431.2	432.3	433.4	434.4	435.2	435.8	436.3	436.8	437.4	437.4
115°	500.2	500.9	501.5	502.0	502.7	502.8	502.7	502.5	502.2	502.0	502.5
117.5°	563.5	564.3	565.1	565.9	566.7	567.2	567.7	568.1	568.6	569.0	568.9
120°	606.2	607.0	607.8	608.6	609.4	609.7	609.5	609.3	609.0	608.9	609.3
122.5°	646.0	646.6	647.0	647.5	648.0	648.4	648.6	648.9	649.2	649.4	649.7
125°	703.2	704.0	704.8	705.6	706.4	706.6	706.2	705.8	705.4	705.0	705.6
127.5°	757.3	757.5	757.8	758.0	758.1	758.7	759.6	760.5	761.4	762.3	762.2
130°	792.3	792.5	792.6	792.8	793.0	793.4	794.1	794.6	795.2	795.9	796.0
132.5°	824.3	824.7	825.0	825.4	825.7	826.3	827.1	827.8	828.5	829.3	829.5
135°	872.4	872.2	872.0	871.7	871.6	871.8	872.6	873.4	874.2	875.0	875.4
137.5°	914.9	915.0	915.1	915.2	915.3	915.7	916.6	917.5	918.3	919.2	919.6
140°	942.7	943.1	943.5	943.9	944.2	944.7	945.0	945.5	945.8	946.3	946.8
142.5°	967.6	968.3	969.0	969.7	970.4	970.9	971.2	971.4	971.6	971.9	972.3
145°	1005.8	1006.5	1007.1	1007.6	1008.3	1008.5	1008.5	1008.5	1008.5	1008.5	1008.8
147.5°	1036.3	1037.4	1038.6	1039.6	1040.8	1041.3	1041.0	1040.8	1040.6	1040.4	1040.6
150°	1058.4	1059.2	1060.0	1060.8	1061.6	1061.8	1061.7	1061.5	1061.3	1061.0	1061.0
152.5°	1076.9	1077.5	1078.2	1078.8	1079.4	1079.6	1079.2	1078.9	1078.5	1078.2	1078.5
155°	1103.0	1103.1	1103.3	1103.5	1103.7	1103.5	1103.0	1102.3	1101.7	1101.2	1101.9
157.5°	1124.8	1124.7	1124.5	1124.4	1124.4	1123.9	1123.3	1122.6	1122.0	1121.2	1122.3
160°	1137.6	1137.0	1136.5	1135.9	1135.2	1134.9	1134.7	1134.4	1134.3	1134.1	1135.2
162.5°	1149.1	1148.3	1147.5	1146.7	1146.0	1145.6	1145.3	1145.1	1145.0	1144.8	1145.9
165°	1163.4	1162.4	1161.5	1160.5	1159.5	1159.0	1159.0	1159.0	1159.0	1159.0	1160.6
167.5°	1174.8	1173.8	1172.8	1171.8	1170.7	1170.2	1170.0	1169.9	1169.8	1169.7	1171.4
170°	1181.2	1180.1	1178.8	1177.7	1176.5	1176.0	1176.2	1176.4	1176.6	1176.8	1178.4
172.5°	1185.5	1184.4	1183.1	1182.0	1180.8	1180.3	1180.4	1180.7	1180.9	1181.1	1182.7
175°	1190.2	1189.0	1187.8	1186.6	1185.4	1184.9	1185.1	1185.4	1185.5	1185.7	1187.5
177.5°	1192.3	1191.1	1190.1	1189.0	1187.8	1187.5	1187.8	1188.1	1188.4	1188.7	1190.0
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	549.2	550.0	550.8	551.2	551.1	551.1	551.0	550.9
5°	545.5	546.4	547.4	547.8	547.6	547.4	547.2	547.0
7.5°	538.2	538.9	539.5	539.6	539.3	539.0	538.7	538.4
10°	531.7	532.1	532.4	532.4	532.1	531.7	531.4	531.0
12.5°	523.6	523.9	524.1	524.0	523.4	522.9	522.4	521.8
15°	509.5	509.3	509.1	508.7	508.0	507.4	506.8	506.0
17.5°	492.4	492.0	491.4	490.6	489.6	488.7	487.7	486.7
20°	480.5	479.7	479.0	478.0	476.8	475.5	474.4	473.1
22.5°	467.3	466.1	465.0	464.0	463.0	462.0	461.0	459.9
25°	445.9	444.3	442.7	441.5	440.5	439.5	438.6	437.7
27.5°	424.1	422.1	420.2	418.6	417.1	415.8	414.5	413.1
30°	408.5	406.2	403.9	401.9	400.4	399.0	397.4	395.9
32.5°	392.6	389.9	387.2	385.0	383.6	382.2	380.8	379.3
35°	368.8	365.7	362.5	360.1	358.4	356.7	355.0	353.3
37.5°	343.4	339.8	336.3	333.6	331.9	330.2	328.5	326.8
40°	326.4	322.4	318.5	315.8	314.1	312.4	310.7	309.0
42.5°	309.7	305.7	301.7	298.8	297.0	295.2	293.5	291.8
45°	284.2	279.6	274.9	271.8	270.1	268.4	266.7	265.1
47.5°	258.4	253.6	248.9	245.6	243.7	241.8	240.0	238.2
50°	241.3	236.7	231.9	228.7	226.9	225.2	223.4	221.6
52.5°	224.3	219.5	214.8	211.4	209.6	207.8	205.9	204.0
55°	199.2	194.3	189.4	186.1	184.3	182.5	180.7	179.0
57.5°	174.6	169.7	164.7	161.6	160.2	158.9	157.5	156.1
60°	158.2	153.4	148.5	145.3	143.7	142.3	140.8	139.3
62.5°	142.1	137.6	133.1	130.3	129.0	127.9	126.6	125.5
65°	119.0	114.9	110.9	108.3	107.2	106.1	105.0	103.8
67.5°	97.7	94.3	90.8	88.5	87.2	86.0	84.7	83.5
70°	83.3	80.2	77.1	75.1	74.1	73.2	72.2	71.3
72.5°	70.4	67.7	65.1	63.3	62.4	61.6	60.7	59.8
75°	51.8	49.7	47.5	46.2	45.6	45.0	44.5	43.9
77.5°	36.6	35.4	34.2	33.4	33.3	33.1	32.9	32.7
80°	28.2	27.8	27.6	27.4	27.3	27.2	27.1	27.0
82.5°	21.8	21.7	21.5	21.3	21.2	21.1	21.0	21.0
85°	12.8	12.5	12.3	12.2	12.2	12.2	12.2	12.2
87.5°	9.0	9.1	9.3	9.5	9.6	9.7	9.9	10.1
90°	21.9	23.2	24.3	25.1	25.5	25.9	26.3	26.7
92.5°	21.2	22.5	23.6	24.3	24.3	24.4	24.5	24.6
95°	21.9	23.2	24.3	25.1	25.2	25.4	25.6	25.8
97.5°	23.7	23.9	24.0	24.2	24.3	24.5	24.7	25.0
100°	32.5	29.1	25.7	24.2	24.3	24.5	24.7	25.0
102.5°	116.2	79.9	43.6	25.5	25.5	25.6	25.6	25.7
105°	281.3	283.0	284.8	282.2	275.1	268.0	260.8	253.7
107.5°	348.0	348.9	349.7	350.5	351.3	352.0	352.8	353.6
110°	393.3	393.8	394.1	394.7	395.2	395.8	396.5	397.0





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CATALOG NUMBER: SA4XXRDIP-C350D1035U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	437.3	437.2	437.1	437.5	438.2	439.0	439.7	440.4
115°	502.8	503.3	503.6	503.8	503.8	503.8	503.8	503.8
117.5°	568.8	568.7	568.6	568.6	568.6	568.5	568.4	568.3
120°	609.7	610.0	610.5	610.5	610.0	609.7	609.3	608.9
122.5°	650.0	650.1	650.4	650.3	650.0	649.5	649.2	648.7
125°	706.2	706.8	707.4	707.8	708.0	708.2	708.4	708.6
127.5°	762.1	762.0	761.9	761.7	761.6	761.4	761.3	761.1
130°	796.2	796.4	796.6	796.7	796.7	796.7	796.7	796.7
132.5°	829.6	829.9	830.1	830.1	829.9	829.7	829.6	829.5
135°	875.8	876.2	876.6	877.0	877.4	877.8	878.2	878.6
137.5°	920.1	920.5	921.0	921.0	921.0	920.9	920.7	920.6
140°	947.4	948.1	948.6	949.0	949.2	949.4	949.6	949.9
142.5°	972.8	973.2	973.7	973.8	973.9	973.9	974.0	974.0
145°	1009.0	1009.1	1009.3	1009.7	1010.0	1010.4	1010.8	1011.2
147.5°	1040.7	1040.9	1041.1	1041.3	1041.4	1041.6	1041.9	1042.1
150°	1061.0	1061.0	1061.0	1061.1	1061.4	1061.6	1061.8	1061.9
152.5°	1078.8	1079.1	1079.4	1079.5	1079.4	1079.3	1079.1	1079.1
155°	1102.7	1103.5	1104.3	1104.4	1103.8	1103.2	1102.6	1102.1
157.5°	1123.3	1124.4	1125.3	1125.3	1124.4	1123.3	1122.3	1121.2
160°	1136.5	1137.6	1138.8	1138.8	1137.6	1136.5	1135.2	1134.1
162.5°	1147.1	1148.3	1149.5	1149.4	1148.1	1146.7	1145.4	1144.1
165°	1162.2	1163.8	1165.3	1165.2	1163.4	1161.6	1159.8	1158.1
167.5°	1173.1	1174.9	1176.6	1176.5	1174.6	1172.6	1170.5	1168.6
170°	1180.0	1181.5	1183.1	1182.9	1181.0	1179.0	1177.0	1175.0
172.5°	1184.3	1185.8	1187.4	1187.1	1185.0	1182.9	1180.7	1178.6
175°	1189.3	1191.1	1192.8	1192.5	1190.2	1187.8	1185.4	1183.0
177.5°	1191.2	1192.5	1193.8	1193.5	1191.6	1189.7	1187.8	1185.9
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2

(END OF REPORT)