

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: P332894-840

Luminaire Tested: **SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332894-840
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: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

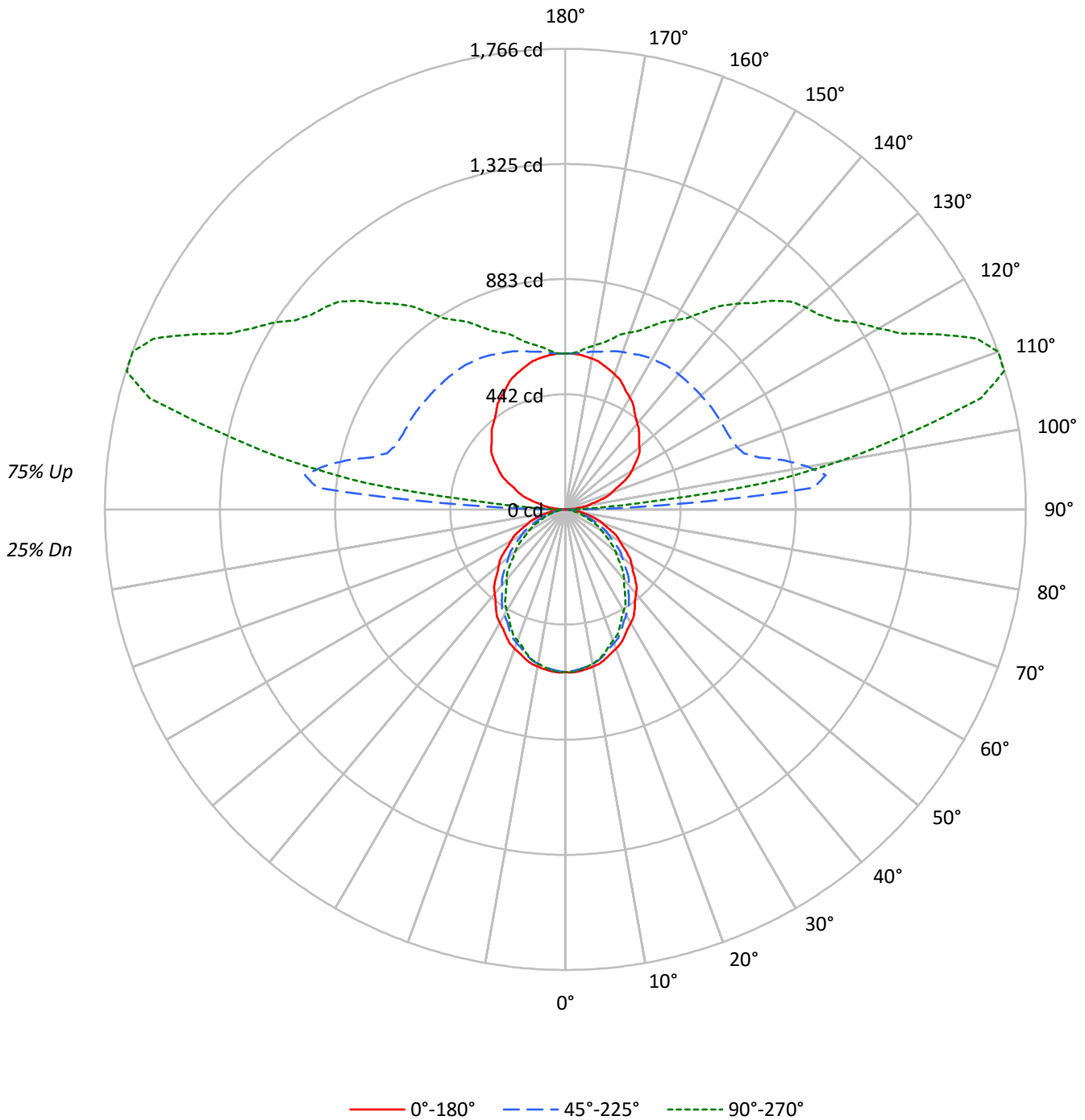
Lumens per Lamp: N/A
Luminaire Lumens: 5789.7 lumens
Efficiency: N/A
Efficacy: 137.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 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: P332894-840
CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

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	69	69	69	51	51	51	33	33	33	25				
1	92	88	85	81	82	79	76	73	61	59	57	45	43	42	29	29	28	21				
2	84	77	71	66	75	69	64	60	53	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	20	15				
4	70	60	52	47	62	54	47	42	42	37	34	31	28	26	21	19	18	13				
5	64	53	46	40	57	48	41	36	37	33	29	28	25	22	19	17	15	12				
6	59	48	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14	10				
7	55	43	35	30	48	39	32	27	30	26	22	23	20	17	15	14	12	9				
8	51	39	31	26	45	35	29	24	28	23	20	21	18	15	14	12	11	8				
9	47	35	28	23	42	32	26	21	25	21	17	19	16	14	13	11	10	7				
10	44	32	25	21	39	29	23	19	23	19	16	17	14	12	12	10	9	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5040	5040	5040
5°	5051	4989	5020
10°	5019	4930	4930
15°	4962	4826	4790
20°	4883	4689	4603
25°	4782	4530	4415
30°	4683	4363	4180
35°	4574	4188	3943
40°	4443	3990	3687
45°	4322	3793	3427
50°	4185	3567	3152
55°	4037	3330	2853
60°	3873	3073	2546
65°	3725	2749	2245
70°	3510	2391	1907
75°	3235	1984	1550
80°	2822	1511	1423
85°	2399	1371	1278



TEST NUMBER: P332894-840

CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	1.0
10°-20°	163.5	2.8
20°-30°	236.1	4.1
30°-40°	267.7	4.6
40°-50°	258.5	4.5
50°-60°	214.9	3.7
60°-70°	148.4	2.6
70°-80°	75.2	1.3
80°-90°	22.6	0.4
90°-100°	431.4	7.5
100°-110°	897.9	15.5
110°-120°	804.2	13.9
120°-130°	676.5	11.7
130°-140°	564.1	9.7
140°-150°	430.9	7.4
150°-160°	302.9	5.2
160°-170°	178.2	3.1
170°-180°	58.0	1.0
0°-30°	458.3	7.9
0°-40°	726.0	12.5
0°-60°	1199.4	20.7
0°-90°	1445.6	25.0
90°-120°	2133.5	36.9
90°-150°	3805.0	65.7
90°-180°	4344.0	75.0
0°-180°	5789.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	623	621	616	620	620	59
15°	594	589	577	576	573	167
25°	537	528	509	501	496	247
35°	464	448	425	409	400	290
45°	379	360	332	310	300	292
55°	287	267	237	213	203	256
65°	195	174	144	124	118	193
75°	104	86	64	53	50	110
85°	26	17	15	14	14	29
90°	1	9	21	23	25	3
95°	39	122	956	474	286	43
105°	137	199	770	1658	1651	146
115°	242	303	686	1319	1585	240
125°	337	400	683	1122	1265	300
135°	400	476	677	996	1131	309
145°	461	528	674	840	924	289
155°	524	566	655	742	773	242
165°	572	589	628	665	675	161
175°	596	597	602	610	608	57
180°	597	597	597	597	597	



TEST NUMBER: P332894-840

CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	624.3	624.3	624.3	624.3	624.3	624.3	624.3	624.3	624.3	624.3	624.3
2.5°	625.8	625.4	625.1	624.8	624.4	623.8	622.9	622.0	621.0	620.1	621.0
5°	623.3	622.9	622.5	622.1	621.6	620.8	619.5	618.2	616.9	615.7	616.7
7.5°	617.6	617.2	616.8	616.3	615.9	614.8	613.2	611.5	609.9	608.2	608.8
10°	612.3	611.8	611.3	610.8	610.2	608.9	607.0	605.1	603.2	601.4	601.8
12.5°	605.4	604.8	604.2	603.6	603.0	601.6	599.3	597.0	594.8	592.5	592.8
15°	593.7	592.7	591.8	590.8	589.9	588.0	585.4	582.7	580.1	577.4	577.2
17.5°	579.5	578.0	576.6	575.3	573.9	571.6	568.5	565.2	562.1	558.9	558.3
20°	568.4	566.9	565.6	564.2	562.8	560.4	556.7	553.1	549.5	545.8	545.0
22.5°	556.1	554.5	553.0	551.5	549.9	547.1	543.3	539.5	535.6	531.7	530.5
25°	536.8	534.9	533.0	531.1	529.2	526.0	521.7	517.4	512.9	508.6	506.8
27.5°	516.5	514.1	511.7	509.4	507.0	503.4	498.8	494.1	489.5	484.8	482.5
30°	502.4	499.7	497.1	494.4	491.8	488.0	482.9	478.0	472.9	468.0	465.3
32.5°	487.5	484.4	481.5	478.5	475.4	471.4	466.3	461.1	456.0	450.8	447.7
35°	464.1	460.7	457.4	453.9	450.5	446.2	440.9	435.6	430.3	425.0	421.3
37.5°	439.2	435.7	432.2	428.7	425.2	420.5	414.5	408.7	402.8	397.0	392.9
40°	421.6	418.1	414.5	411.1	407.6	402.8	396.8	390.7	384.7	378.6	374.2
42.5°	404.8	401.1	397.4	393.7	390.1	385.1	378.8	372.4	366.2	359.8	355.3
45°	378.6	374.7	370.7	366.8	362.8	357.7	351.3	345.0	338.6	332.2	327.0
47.5°	351.5	347.5	343.5	339.3	335.3	329.9	323.4	316.7	310.0	303.5	298.0
50°	333.2	329.0	324.9	320.7	316.6	311.1	304.4	297.5	290.7	284.0	278.6
52.5°	314.5	310.3	306.3	302.3	298.2	292.7	285.7	278.7	271.8	264.8	259.4
55°	286.8	282.6	278.3	274.1	269.8	264.2	257.3	250.4	243.5	236.6	231.1
57.5°	259.4	255.0	250.6	246.2	241.8	236.2	229.3	222.6	215.8	208.9	203.4
60°	239.9	235.7	231.5	227.2	223.0	217.4	210.7	203.8	197.0	190.3	184.7
62.5°	222.4	217.9	213.5	209.1	204.7	199.0	192.1	185.1	178.1	171.2	166.0
65°	195.0	190.5	185.9	181.4	176.7	171.1	164.3	157.4	150.7	143.9	139.4
67.5°	166.6	162.3	157.8	153.5	149.2	143.8	137.4	131.2	124.8	118.6	114.6
70°	148.7	144.2	139.8	135.3	130.8	125.5	119.5	113.4	107.3	101.3	97.9
72.5°	129.6	125.5	121.5	117.4	113.4	108.6	102.8	97.0	91.4	85.6	82.7
75°	103.7	99.8	95.8	91.9	88.0	83.5	78.6	73.5	68.6	63.6	61.1
77.5°	77.6	74.2	70.9	67.6	64.2	60.5	56.5	52.4	48.4	44.3	42.9
80°	60.7	57.7	54.5	51.5	48.4	45.2	42.1	38.9	35.6	32.5	32.2
82.5°	46.2	43.3	40.5	37.7	34.8	32.5	30.7	28.9	27.1	25.2	25.0
85°	25.9	23.7	21.6	19.4	17.3	16.1	15.8	15.5	15.1	14.8	14.6
87.5°	9.0	8.8	8.9	8.4	8.0	7.6	8.9	8.8	9.2	9.6	9.3
90°	1.2	3.5	7.1	8.2	9.4	9.4	16.5	16.5	18.8	21.1	20.0
92.5°	13.3	19.5	30.5	44.8	62.0	86.3	146.0	237.0	325.8	372.2	310.0
95°	38.7	42.2	54.0	69.3	97.4	146.7	248.7	441.2	721.6	956.3	983.4
97.5°	69.5	69.5	79.6	93.6	117.9	159.2	237.7	396.7	675.4	1007.3	1235.5
100°	89.2	89.2	97.4	111.5	133.8	171.4	240.5	373.1	612.6	943.4	1243.9
102.5°	108.0	109.9	117.1	130.3	151.6	187.3	249.9	366.6	570.3	863.6	1173.5
105°	137.3	140.8	146.7	160.8	181.9	215.9	272.3	369.6	533.9	769.8	1045.5
107.5°	169.7	172.0	177.9	192.9	213.1	246.7	298.3	387.0	527.4	717.2	942.3
110°	191.3	193.6	199.4	213.6	234.7	266.4	318.0	400.1	529.3	699.4	890.7



TEST NUMBER: P332894-840

CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.0	214.3	221.1	234.2	255.4	287.0	336.8	414.2	534.8	690.9	861.5
115°	241.8	245.3	253.5	265.2	287.5	319.2	366.1	436.6	545.6	686.5	834.4
117.5°	272.7	276.0	283.3	296.2	317.1	349.9	394.6	459.3	557.1	685.3	822.1
120°	293.4	295.7	304.0	316.8	336.8	369.6	414.2	475.2	565.6	685.3	815.6
122.5°	312.1	314.5	322.8	334.7	356.5	388.4	433.0	490.3	574.1	684.4	808.1
125°	336.8	341.4	348.5	361.4	383.7	416.6	458.8	512.8	586.7	683.0	795.6
127.5°	358.6	362.3	370.8	385.6	408.8	441.9	482.7	532.3	596.8	680.3	778.9
130°	370.8	375.5	384.9	402.5	424.7	458.8	498.8	544.5	604.3	679.4	768.6
132.5°	383.0	386.8	399.0	415.7	439.8	472.0	511.9	556.7	610.9	678.5	759.2
135°	400.1	404.9	416.6	436.6	461.2	491.7	530.4	572.7	620.8	677.1	745.2
137.5°	417.3	421.7	434.6	453.6	479.3	508.4	544.5	583.9	626.6	676.8	733.0
140°	429.5	433.0	446.0	465.9	490.5	518.7	553.9	591.4	631.4	675.9	726.4
142.5°	442.6	446.2	458.1	477.2	500.8	528.1	562.3	597.0	635.1	675.9	720.7
145°	461.2	464.7	476.5	492.8	515.1	541.0	571.5	603.2	637.2	673.6	711.1
147.5°	482.0	483.2	493.5	510.5	529.0	552.2	580.9	608.5	638.3	669.3	702.5
150°	495.2	496.3	505.7	519.9	537.5	559.8	585.5	611.4	638.3	666.5	695.9
152.5°	507.4	507.7	517.1	530.2	545.9	566.3	589.4	613.3	636.5	661.9	688.3
155°	524.5	525.7	532.7	544.5	557.4	575.0	594.9	614.9	633.7	654.8	677.1
157.5°	541.2	541.2	547.8	556.9	568.2	582.1	599.0	614.9	630.7	647.5	665.6
160°	551.5	551.5	556.2	564.4	573.8	586.7	600.8	614.9	627.8	641.9	657.1
162.5°	560.9	560.0	563.7	571.0	579.5	589.6	602.7	614.9	625.0	636.2	649.6
165°	571.5	571.5	573.8	579.7	585.5	592.6	603.2	612.6	619.6	627.8	637.2
167.5°	582.1	580.9	582.1	586.5	589.8	595.2	602.9	609.8	614.0	619.4	625.9
170°	586.7	585.5	586.7	590.3	592.6	596.1	602.0	607.8	610.2	613.7	618.4
172.5°	591.4	590.3	590.5	593.1	594.5	597.0	601.1	606.0	606.4	608.0	611.9
175°	596.1	594.9	594.9	596.1	597.3	597.3	599.7	603.2	602.0	602.0	604.3
177.5°	598.2	597.3	596.3	597.3	597.3	597.3	598.2	600.1	598.2	598.2	599.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3



TEST NUMBER: P332894-840

CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	624.3	624.3	624.3	624.3	624.3	624.3	624.3	624.3
2.5°	622.0	622.9	623.8	624.2	624.1	624.1	624.0	623.9
5°	617.8	618.8	620.0	620.4	620.2	620.0	619.7	619.5
7.5°	609.6	610.3	611.0	611.1	610.8	610.5	610.1	609.8
10°	602.2	602.6	603.0	603.0	602.6	602.2	601.8	601.4
12.5°	593.0	593.3	593.6	593.4	592.8	592.2	591.6	591.0
15°	577.0	576.8	576.5	576.1	575.3	574.6	573.9	573.1
17.5°	557.6	557.1	556.5	555.6	554.5	553.4	552.3	551.2
20°	544.2	543.3	542.5	541.4	540.0	538.6	537.2	535.8
22.5°	529.2	527.9	526.6	525.4	524.3	523.2	522.1	520.9
25°	504.9	503.2	501.4	500.0	498.9	497.8	496.8	495.6
27.5°	480.3	478.1	475.8	474.0	472.4	470.9	469.4	467.9
30°	462.6	460.0	457.4	455.1	453.4	451.8	450.1	448.4
32.5°	444.6	441.5	438.5	436.1	434.4	432.8	431.2	429.6
35°	417.7	414.1	410.5	407.8	405.9	403.9	402.0	400.1
37.5°	388.9	384.9	380.8	377.8	375.9	374.0	372.0	370.1
40°	369.6	365.2	360.7	357.6	355.7	353.8	351.8	349.9
42.5°	350.7	346.2	341.6	338.4	336.4	334.4	332.3	330.4
45°	321.8	316.6	311.3	307.8	305.9	304.0	302.1	300.2
47.5°	292.7	287.2	281.9	278.1	276.0	273.9	271.8	269.7
50°	273.3	268.0	262.7	259.0	257.0	255.0	253.0	251.0
52.5°	254.0	248.6	243.3	239.4	237.4	235.3	233.2	231.1
55°	225.6	220.0	214.5	210.8	208.7	206.7	204.7	202.7
57.5°	197.7	192.2	186.5	183.0	181.5	180.0	178.3	176.8
60°	179.2	173.7	168.1	164.5	162.8	161.2	159.5	157.7
62.5°	161.0	155.8	150.8	147.5	146.1	144.8	143.4	142.1
65°	134.7	130.2	125.6	122.7	121.4	120.2	118.9	117.5
67.5°	110.7	106.7	102.8	100.2	98.8	97.4	95.9	94.5
70°	94.3	90.8	87.4	85.0	83.9	82.9	81.8	80.8
72.5°	79.7	76.6	73.7	71.7	70.7	69.8	68.8	67.8
75°	58.7	56.2	53.8	52.3	51.6	51.0	50.4	49.7
77.5°	41.5	40.1	38.7	37.9	37.7	37.5	37.3	37.1
80°	31.9	31.5	31.2	31.0	30.9	30.8	30.7	30.6
82.5°	24.7	24.5	24.3	24.1	24.0	23.9	23.8	23.7
85°	14.4	14.1	13.9	13.8	13.8	13.8	13.8	13.8
87.5°	9.4	9.6	9.7	9.7	10.0	10.3	10.2	10.3
90°	21.1	22.3	23.4	23.4	24.6	25.9	24.6	24.6
92.5°	230.5	173.4	138.0	114.5	100.7	94.3	90.4	90.4
95°	869.5	687.6	530.4	416.6	359.1	322.8	301.5	286.3
97.5°	1284.8	1217.1	1102.4	979.9	895.5	825.0	789.7	765.4
100°	1415.2	1438.7	1381.2	1294.3	1192.2	1120.6	1085.5	1076.1
102.5°	1408.7	1525.0	1541.7	1505.5	1442.9	1391.0	1353.9	1346.5
105°	1314.2	1517.3	1633.5	1681.5	1683.9	1674.6	1658.1	1651.0
107.5°	1180.2	1396.4	1560.0	1664.7	1722.6	1749.4	1761.1	1764.2
110°	1099.5	1302.5	1472.7	1601.7	1685.1	1734.3	1755.5	1766.1



TEST NUMBER: P332894-840

CATALOG NUMBER: SA4XXRDIP-C350D1205U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1040.4	1219.9	1380.7	1509.7	1604.4	1664.0	1693.5	1710.7
115°	981.0	1125.4	1262.6	1375.3	1468.0	1538.4	1576.0	1585.4
117.5°	951.9	1071.4	1179.3	1274.9	1353.9	1413.1	1451.1	1458.3
120°	938.8	1047.9	1141.8	1225.1	1292.0	1343.6	1374.1	1387.0
122.5°	927.5	1032.9	1118.3	1191.3	1247.9	1292.0	1317.8	1330.7
125°	908.3	1009.2	1090.1	1154.7	1201.6	1235.7	1258.0	1265.0
127.5°	884.7	981.3	1062.0	1123.3	1170.4	1200.7	1219.5	1226.5
130°	866.1	958.8	1038.5	1100.8	1148.8	1178.1	1196.9	1204.0
132.5°	846.3	933.4	1011.3	1073.5	1120.6	1153.8	1171.5	1178.6
135°	819.1	895.3	966.9	1025.6	1072.6	1105.4	1124.2	1131.3
137.5°	794.5	859.0	919.3	972.3	1016.2	1048.6	1064.1	1072.6
140°	780.3	835.5	888.3	937.6	978.7	1004.5	1020.9	1030.3
142.5°	767.2	815.8	861.1	903.8	940.2	964.1	978.7	985.2
145°	748.7	788.6	823.7	856.7	886.0	905.9	917.7	923.5
147.5°	733.5	765.1	793.2	819.1	840.7	857.8	866.8	868.8
150°	724.1	751.0	774.5	795.6	814.4	829.6	836.7	837.9
152.5°	713.7	736.9	758.5	775.9	791.8	804.3	808.5	809.7
155°	698.2	717.0	734.6	748.7	760.4	769.8	773.4	773.4
157.5°	681.6	697.3	712.1	723.4	732.3	739.3	741.4	741.4
160°	671.3	684.1	697.0	706.4	713.5	720.5	721.6	721.6
162.5°	660.9	672.0	682.1	690.4	695.6	702.7	703.9	702.9
165°	646.6	653.6	661.9	667.7	672.4	677.1	675.9	674.8
167.5°	632.8	638.1	644.7	648.2	650.6	653.6	653.4	652.5
170°	624.3	627.8	632.5	636.0	638.3	639.5	638.3	638.3
172.5°	616.7	619.4	622.2	624.7	626.1	627.3	626.1	624.3
175°	606.7	607.8	610.2	610.2	610.2	612.6	610.2	607.8
177.5°	600.1	601.1	601.1	602.0	601.1	602.0	600.1	598.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3

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