

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: P331668-935

Luminaire Tested: **SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331668-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

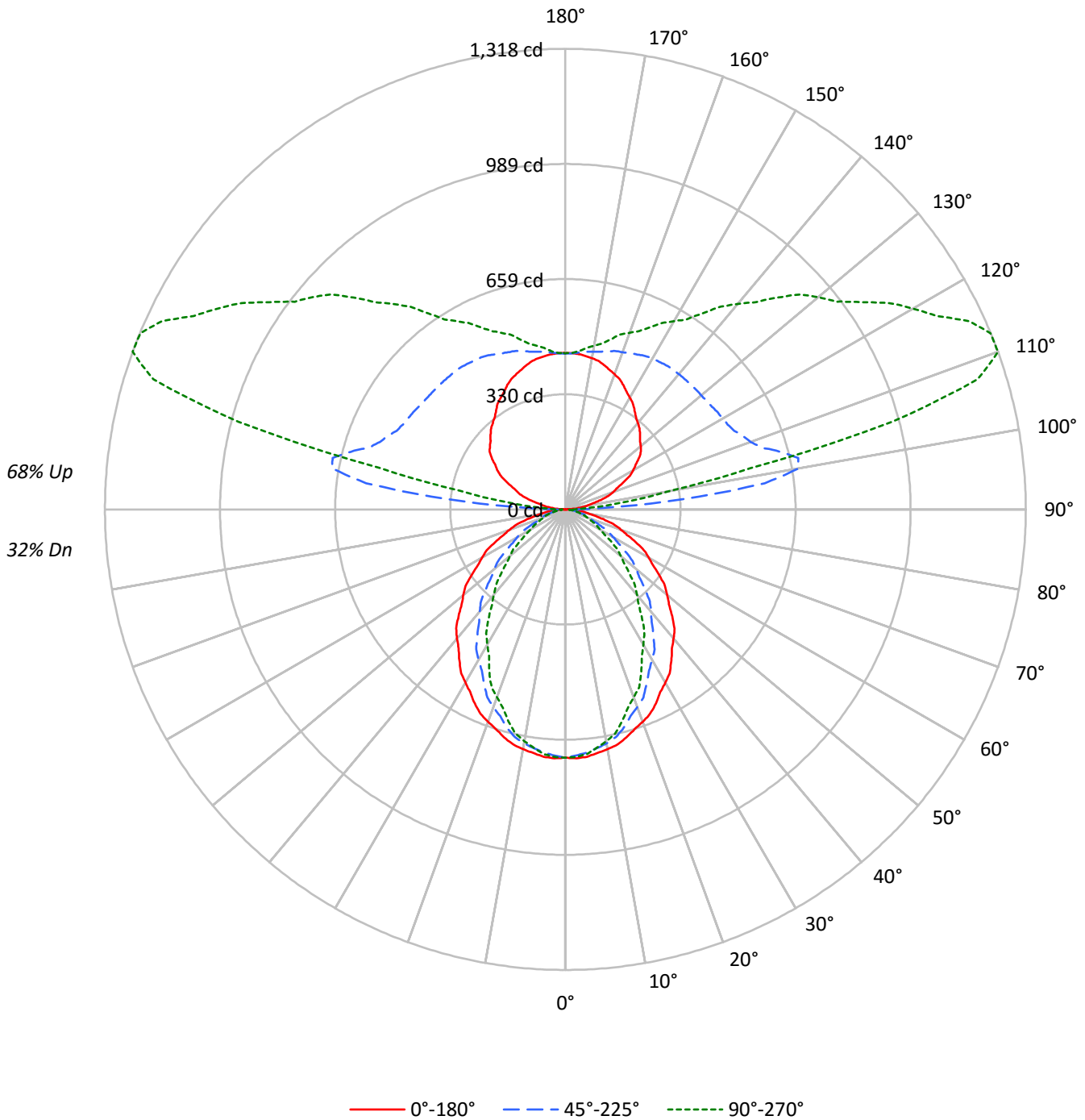
Lumens per Lamp: N/A
Luminaire Lumens: 4574.8 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): 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: P331668-935
CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





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CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

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	93	93	93	93	73	73	73	56	56	56	40	40	40	32				
1	94	90	86	83	85	81	78	75	65	63	61	49	48	47	35	35	34	28				
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	30	29	24				
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	27	25	20				
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18				
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16				
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14				
7	56	44	37	32	51	40	34	29	33	28	24	26	22	20	19	17	15	12				
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11				
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10				
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



TEST NUMBER: P331668-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.5
10°-20°	182.6	4.0
20°-30°	256.4	5.6
30°-40°	279.6	6.1
40°-50°	257.1	5.6
50°-60°	201.9	4.4
60°-70°	131.7	2.9
70°-80°	67.9	1.5
80°-90°	21.6	0.5
90°-100°	178.7	3.9
100°-110°	606.3	13.3
110°-120°	644.1	14.1
120°-130°	530.2	11.6
130°-140°	425.8	9.3
140°-150°	321.8	7.0
150°-160°	226.1	4.9
160°-170°	133.1	2.9
170°-180°	43.3	0.9
0°-30°	505.6	11.1
0°-40°	785.2	17.2
0°-60°	1244.3	27.2
0°-90°	1465.4	32.0
90°-120°	1429.1	31.2
90°-150°	2706.8	59.2
90°-180°	3109.0	68.0
0°-180°	4574.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	1	12	29	28	28	3
95°	30	74	337	127	98	32
105°	105	158	637	1138	968	111
115°	185	233	533	1100	1274	183
125°	258	305	512	891	1034	229
135°	302	361	506	748	857	234
145°	345	397	504	625	684	217
155°	393	424	489	553	575	181
165°	428	441	468	497	504	121
175°	446	446	450	456	455	42
180°	447	447	447	447	447	



TEST NUMBER: P331668-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	8.0	7.7	7.2	6.6	6.7	7.6	8.8	9.8	10.0	9.6
90°	0.9	3.4	6.9	8.6	10.3	12.9	17.2	23.2	28.3	29.2	28.3
92.5°	10.5	15.2	21.4	25.1	30.9	39.0	58.5	85.8	110.1	111.7	94.4
95°	30.0	33.5	42.1	49.9	63.6	84.2	123.7	198.5	298.2	336.8	294.7
97.5°	49.0	53.6	62.8	74.4	90.2	113.6	163.2	267.4	433.1	575.1	603.2
100°	66.1	68.7	76.5	90.2	107.5	131.5	177.0	281.9	467.4	678.8	802.6
102.5°	82.0	83.9	91.6	105.4	123.2	147.3	189.4	282.6	454.4	682.3	876.8
105°	104.9	108.3	114.3	127.2	146.1	170.1	210.5	287.0	428.8	636.7	865.3
107.5°	129.6	132.3	138.2	150.1	168.8	193.0	232.2	298.9	416.0	588.0	789.9
110°	146.1	149.6	154.6	165.8	183.9	208.8	246.6	308.5	413.4	564.6	742.4



TEST NUMBER: P331668-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.2	164.6	170.5	181.0	198.3	223.9	260.4	318.8	414.0	549.4	709.5
115°	184.8	189.1	194.2	204.5	221.7	244.9	281.9	334.2	417.6	532.8	668.6
117.5°	209.1	212.6	217.7	226.9	243.3	267.4	301.6	350.8	423.8	524.7	642.7
120°	224.3	227.7	232.9	240.6	257.8	281.9	315.4	361.8	427.9	519.9	629.0
122.5°	238.8	241.4	246.6	255.0	272.2	297.0	328.4	371.3	432.7	517.1	617.3
125°	257.8	260.4	265.5	275.9	293.0	317.1	348.0	386.7	440.0	512.1	600.6
127.5°	272.9	276.4	283.5	294.9	311.4	336.1	366.3	401.0	447.4	509.2	585.2
130°	281.9	285.2	293.9	305.9	323.1	347.2	377.2	409.9	452.9	507.8	574.9
132.5°	290.1	294.2	303.5	316.2	334.1	358.2	386.8	418.8	458.3	507.1	566.6
135°	302.5	305.9	316.2	329.1	348.9	372.9	400.5	430.5	464.9	506.1	555.1
137.5°	314.2	318.3	328.6	342.3	362.0	384.3	411.5	439.5	470.7	505.9	547.0
140°	323.1	326.6	336.8	350.6	369.5	391.8	417.6	444.3	473.5	505.2	542.3
142.5°	332.0	334.8	344.4	358.2	376.3	397.4	422.4	448.4	475.5	505.2	537.4
145°	345.4	348.9	357.5	370.4	387.5	406.5	429.6	453.7	477.8	503.5	531.1
147.5°	359.9	362.5	370.7	382.5	396.8	413.7	435.5	456.7	478.5	500.5	524.5
150°	369.5	372.0	378.9	390.1	403.0	418.4	438.2	458.0	477.8	498.4	519.0
152.5°	379.1	380.3	387.2	397.0	409.2	423.3	441.0	458.7	476.4	495.0	514.2
155°	392.7	393.6	398.7	408.2	417.6	430.5	445.1	459.7	474.3	489.0	505.2
157.5°	404.1	404.9	409.1	417.2	424.8	435.7	448.1	459.7	470.4	482.8	496.9
160°	411.6	412.5	415.9	422.8	429.6	439.1	449.4	459.7	468.3	478.6	490.7
162.5°	419.1	418.6	422.1	427.6	433.8	441.2	450.1	459.0	466.2	475.2	485.2
165°	427.9	427.1	428.8	433.9	438.2	443.4	451.2	457.2	462.3	468.3	476.0
167.5°	435.1	434.1	435.7	438.9	442.0	445.3	451.0	456.0	458.3	462.3	467.1
170°	440.0	438.2	439.1	441.7	443.4	446.0	450.3	454.6	456.3	458.8	462.3
172.5°	442.7	441.7	441.2	443.8	444.8	446.7	449.6	452.5	453.6	454.8	457.5
175°	446.0	445.1	444.3	446.0	446.0	446.9	448.6	450.3	449.4	450.3	451.2
177.5°	447.5	446.2	445.5	446.9	446.9	446.9	447.5	448.9	447.5	446.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9



TEST NUMBER: P331668-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	9.4	9.0	9.1	9.3	9.3	9.3	9.3	9.3
90°	27.5	25.7	27.5	28.3	28.3	28.3	28.3	28.3
92.5°	74.9	64.3	57.1	51.7	51.1	48.3	49.0	47.6
95°	225.2	172.7	136.6	117.7	106.6	99.7	97.1	98.0
97.5°	525.4	429.8	336.8	274.8	233.8	212.6	200.0	192.9
100°	784.5	678.0	560.3	456.3	385.0	348.0	323.1	307.6
102.5°	954.3	930.3	844.2	734.0	656.5	593.4	562.3	541.4
105°	1044.0	1141.2	1152.4	1123.9	1070.7	1017.4	980.4	968.5
107.5°	979.5	1125.7	1215.0	1256.6	1263.3	1260.4	1253.0	1237.1
110°	923.8	1077.5	1187.6	1258.0	1294.9	1311.3	1319.1	1318.2



TEST NUMBER: P331668-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.9	1020.5	1138.1	1218.8	1270.2	1297.5	1312.2	1316.8
115°	810.3	942.6	1055.2	1143.8	1204.7	1244.2	1266.6	1274.4
117.5°	763.2	879.4	981.5	1064.5	1126.7	1168.5	1192.1	1198.5
120°	739.9	846.4	937.5	1015.7	1075.8	1116.2	1141.2	1149.8
122.5°	721.3	818.9	905.2	975.9	1029.8	1069.4	1091.7	1098.9
125°	694.3	782.8	858.4	922.9	972.8	1005.4	1026.8	1033.7
127.5°	667.7	747.8	819.1	878.6	922.0	952.6	971.2	976.7
130°	650.5	724.4	792.3	849.0	891.1	920.3	937.5	944.3
132.5°	634.0	702.4	764.7	818.0	859.5	888.7	904.5	910.7
135°	611.0	667.7	724.4	772.5	809.4	837.8	853.3	856.7
137.5°	592.5	640.0	685.0	726.9	760.7	785.1	798.7	803.8
140°	580.9	622.2	661.7	699.5	726.9	749.3	762.2	767.3
142.5°	571.3	606.3	640.3	672.0	698.1	718.4	729.9	730.9
145°	557.7	586.1	612.7	637.6	658.2	672.9	681.4	684.0
147.5°	547.2	569.6	590.3	608.6	625.6	637.2	643.1	644.6
150°	539.7	558.5	576.6	592.0	604.9	615.3	620.4	621.3
152.5°	532.1	549.6	564.9	578.3	588.4	597.4	601.2	601.3
155°	521.6	535.4	548.2	557.7	567.1	573.2	576.6	574.9
157.5°	509.4	520.9	531.8	539.2	545.8	550.8	552.3	552.3
160°	501.8	511.3	520.7	526.8	532.8	537.1	538.0	538.0
162.5°	494.3	502.3	510.4	515.1	521.1	524.0	524.9	524.2
165°	482.9	489.0	495.0	498.4	501.8	505.2	505.2	504.4
167.5°	472.1	476.7	480.9	484.0	485.5	487.4	487.2	486.2
170°	466.6	469.2	472.6	474.3	475.2	477.8	476.9	475.2
172.5°	460.4	462.3	465.0	466.1	466.9	468.1	467.3	466.2
175°	453.7	454.6	455.5	456.3	456.3	457.2	456.3	454.6
177.5°	448.9	448.9	449.6	449.6	449.6	449.6	448.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9

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