

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: P332905

Luminaire Tested: **SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332905
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

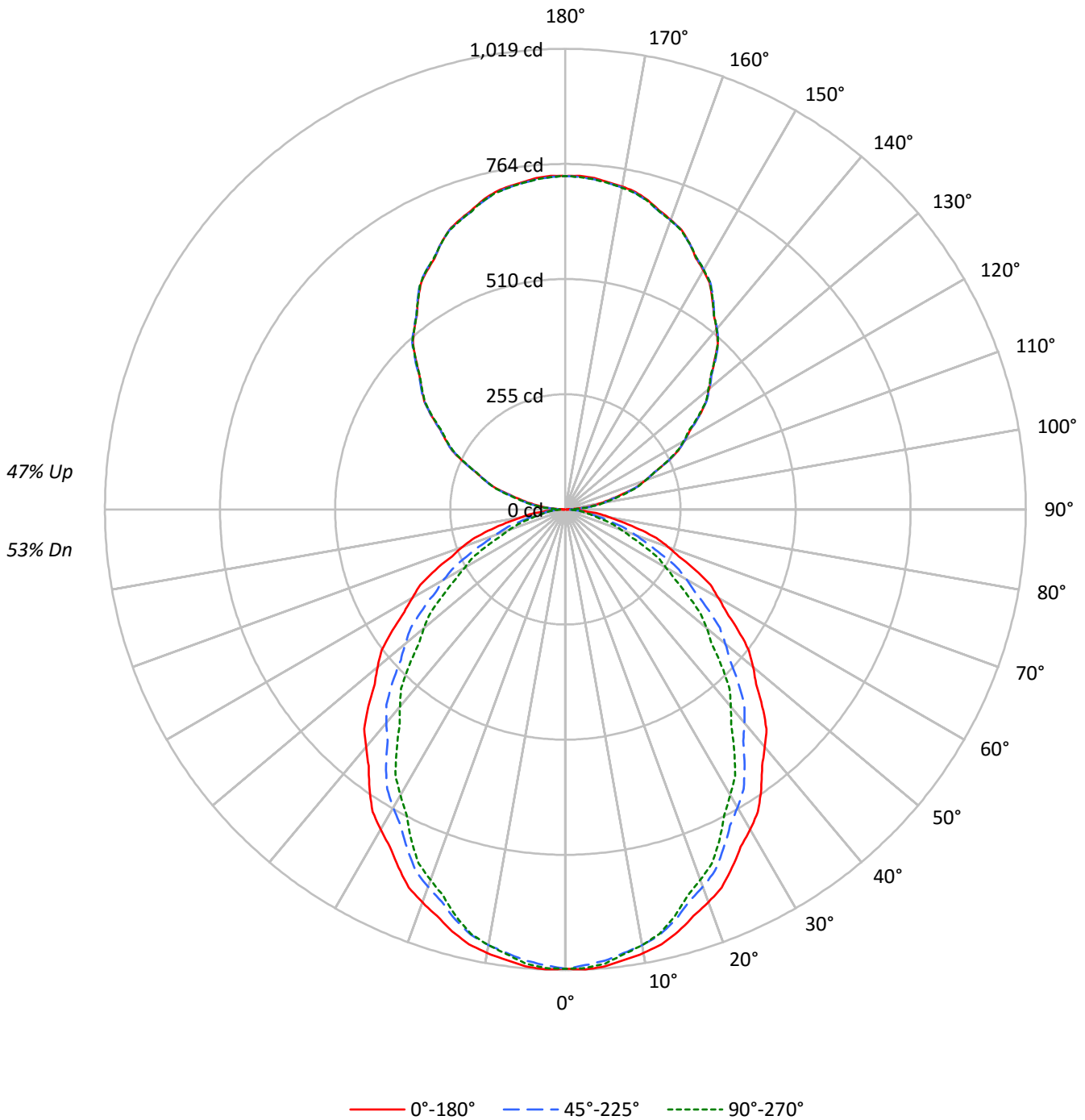
Lumens per Lamp: N/A
Luminaire Lumens: 4396.3 lumens
Efficiency: N/A
Efficacy: 134.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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: P332905
CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





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CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				53
1	99	95	91	87	91	88	85	82	75	73	71	64	62	60	53	52	51				46	
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43				39	
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37				33	
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	37	35	32				29	
5	69	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28				25	
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	27	25				22	
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22				20	
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	23	20				18	
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18				16	
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16				15	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



TEST NUMBER: P332905

CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	2.2
10°-20°	266.2	6.1
20°-30°	384.4	8.7
30°-40°	435.7	9.9
40°-50°	420.8	9.6
50°-60°	349.9	8.0
60°-70°	241.6	5.5
70°-80°	122.5	2.8
80°-90°	33.6	0.8
90°-100°	48.6	1.1
100°-110°	144.1	3.3
110°-120°	244.6	5.6
120°-130°	322.5	7.3
130°-140°	362.2	8.2
140°-150°	355.9	8.1
150°-160°	299.3	6.8
160°-170°	199.1	4.5
170°-180°	69.7	1.6
0°-30°	746.1	17.0
0°-40°	1181.8	26.9
0°-60°	1952.5	44.4
0°-90°	2350.2	53.5
90°-120°	437.3	9.9
90°-150°	1477.8	33.6
90°-180°	2046.0	46.5
0°-180°	4396.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	2	8	12	16	17	4
95°	34	39	43	45	45	38
105°	133	134	136	137	139	141
115°	249	249	248	247	246	245
125°	362	362	362	360	359	323
135°	467	470	470	469	468	361
145°	568	570	570	570	568	355
155°	650	650	650	652	650	299
165°	708	706	705	708	706	199
175°	736	734	733	736	733	70
180°	738	738	738	738	738	



TEST NUMBER: P332905

CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.7	13.8	13.0	12.2	11.3	11.0	11.0	11.1	11.2	11.2	11.2
90°	1.7	3.1	4.5	5.9	7.3	8.5	9.5	10.5	11.5	12.5	13.3
92.5°	12.2	13.8	15.4	17.0	18.6	19.7	20.5	21.2	21.9	22.6	23.0
95°	34.2	35.4	36.5	37.6	38.8	39.8	40.7	41.6	42.5	43.3	43.7
97.5°	59.8	60.7	61.6	62.5	63.4	64.4	65.4	66.5	67.5	68.6	69.0
100°	79.8	80.4	80.9	81.4	81.9	82.7	83.8	85.0	86.1	87.3	87.5
102.5°	100.8	101.0	101.2	101.4	101.6	102.3	103.3	104.3	105.4	106.4	106.8
105°	132.9	133.0	133.1	133.3	133.4	133.7	134.2	134.7	135.2	135.7	136.1
107.5°	166.5	166.7	166.8	167.0	167.2	167.3	167.3	167.4	167.5	167.6	167.9
110°	189.4	189.6	189.9	190.1	190.4	190.4	190.3	190.2	190.1	189.9	189.7



TEST NUMBER: P332905

CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	213.1	213.1	213.2	213.2	213.3	213.2	213.0	212.7	212.5	212.3	212.2
115°	248.7	248.7	248.7	248.7	248.7	248.5	248.3	248.0	247.8	247.5	247.4
117.5°	282.2	282.3	282.4	282.5	282.6	282.6	282.4	282.2	282.0	281.9	281.4
120°	304.6	305.1	305.6	306.1	306.6	306.7	306.3	305.9	305.5	305.1	304.5
122.5°	327.8	328.0	328.2	328.4	328.6	328.7	328.5	328.3	328.1	328.0	327.5
125°	362.2	362.2	362.2	362.2	362.2	362.1	362.0	361.9	361.7	361.6	361.3
127.5°	393.3	393.7	394.1	394.5	394.8	394.9	394.7	394.5	394.3	394.1	393.9
130°	415.2	415.6	416.0	416.4	416.7	416.9	416.9	416.9	416.9	416.9	416.7
132.5°	437.6	437.9	438.1	438.4	438.7	438.8	438.7	438.6	438.5	438.4	438.1
135°	467.1	467.9	468.6	469.4	470.2	470.5	470.5	470.5	470.5	470.5	470.3
137.5°	499.3	499.6	500.0	500.3	500.7	501.0	501.2	501.4	501.6	501.8	501.5
140°	520.7	521.0	521.2	521.5	521.7	521.9	521.9	521.9	521.9	521.9	521.7
142.5°	540.3	540.6	540.9	541.1	541.4	541.4	541.3	541.2	541.1	541.0	541.0
145°	567.5	568.0	568.5	569.0	569.5	569.8	570.0	570.1	570.2	570.3	570.2
147.5°	594.4	595.0	595.6	596.2	596.9	597.1	597.0	596.9	596.8	596.7	596.6
150°	610.8	611.4	611.9	612.4	612.9	613.1	613.1	613.1	613.1	613.1	613.1
152.5°	626.4	626.7	627.0	627.3	627.6	627.8	627.9	628.0	628.1	628.2	628.5
155°	650.2	650.2	650.2	650.2	650.2	650.1	650.0	649.9	649.8	649.6	650.1
157.5°	670.3	670.0	669.8	669.6	669.4	669.2	669.2	669.2	669.2	669.1	669.5
160°	682.1	682.0	681.9	681.8	681.6	681.5	681.4	681.3	681.1	681.0	681.4
162.5°	693.1	692.8	692.4	692.1	691.8	691.5	691.4	691.3	691.2	691.0	691.7
165°	707.8	707.4	707.0	706.7	706.3	706.0	705.7	705.5	705.2	705.0	705.7
167.5°	719.1	718.6	718.0	717.5	717.0	716.7	716.7	716.8	716.8	716.8	717.6
170°	725.5	724.9	724.2	723.6	722.9	722.7	722.8	722.9	723.1	723.2	724.0
172.5°	730.0	729.5	729.0	728.5	727.9	727.7	727.7	727.7	727.7	727.8	728.6
175°	736.3	735.7	735.1	734.4	733.8	733.4	733.3	733.2	733.0	732.9	733.8
177.5°	738.4	737.9	737.4	736.9	736.3	736.1	736.1	736.1	736.1	736.1	736.8
180°	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5



TEST NUMBER: P332905

CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	11.3	11.3	11.3	11.4	11.6	11.8	11.9	12.1
90°	14.1	14.8	15.6	16.1	16.4	16.6	16.9	17.1
92.5°	23.5	24.0	24.4	24.7	24.9	25.0	25.2	25.3
95°	44.1	44.5	44.9	45.1	45.1	45.1	45.1	45.1
97.5°	69.5	69.9	70.4	70.6	70.6	70.6	70.6	70.6
100°	87.8	88.0	88.3	88.4	88.4	88.4	88.4	88.4
102.5°	107.1	107.5	107.8	108.1	108.2	108.3	108.4	108.5
105°	136.5	136.9	137.3	137.6	138.0	138.4	138.8	139.2
107.5°	168.3	168.6	169.0	169.2	169.1	169.1	169.1	169.1
110°	189.4	189.2	188.9	189.0	189.4	189.7	190.1	190.5



TEST NUMBER: P332905
CATALOG NUMBER: SA4XXRDIP-C575D590U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	212.2	212.1	212.1	212.1	212.2	212.2	212.3	212.4
115°	247.3	247.2	247.0	246.9	246.8	246.6	246.5	246.4
117.5°	281.0	280.6	280.1	279.8	279.5	279.3	279.0	278.8
120°	303.9	303.2	302.6	302.4	302.7	302.9	303.2	303.4
122.5°	327.1	326.7	326.2	325.8	325.3	324.9	324.4	324.0
125°	361.1	360.8	360.6	360.3	360.1	359.8	359.6	359.3
127.5°	393.6	393.4	393.1	392.9	392.7	392.5	392.3	392.1
130°	416.4	416.2	415.9	415.5	415.0	414.5	414.0	413.5
132.5°	437.9	437.6	437.4	437.1	436.9	436.7	436.5	436.3
135°	470.0	469.8	469.5	469.2	468.8	468.4	468.1	467.7
137.5°	501.1	500.8	500.5	500.3	500.4	500.5	500.6	500.7
140°	521.6	521.5	521.4	521.2	521.1	521.0	520.9	520.7
142.5°	541.0	541.0	540.9	540.9	540.9	540.9	540.8	540.8
145°	570.1	570.0	569.8	569.6	569.2	568.8	568.4	568.1
147.5°	596.5	596.4	596.3	596.2	596.1	595.9	595.8	595.7
150°	613.1	613.1	613.1	613.1	612.9	612.8	612.7	612.6
152.5°	628.8	629.1	629.4	629.4	629.1	628.7	628.4	628.1
155°	650.6	651.1	651.7	651.7	651.1	650.6	650.1	649.6
157.5°	669.9	670.3	670.7	670.6	670.2	669.8	669.3	668.9
160°	681.8	682.1	682.5	682.4	681.8	681.1	680.5	679.9
162.5°	692.4	693.1	693.8	693.8	693.2	692.5	691.9	691.3
165°	706.5	707.2	708.0	708.1	707.6	707.1	706.6	706.1
167.5°	718.3	719.1	719.9	719.8	719.1	718.3	717.5	716.7
170°	724.7	725.5	726.2	726.2	725.3	724.4	723.5	722.6
172.5°	729.5	730.4	731.2	731.2	730.3	729.4	728.5	727.7
175°	734.7	735.6	736.4	736.4	735.6	734.7	733.8	732.9
177.5°	737.5	738.2	738.9	738.9	738.1	737.3	736.4	735.6
180°	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5

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