

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: P332547-840

Luminaire Tested: **SA4XXDIP-C575D590U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

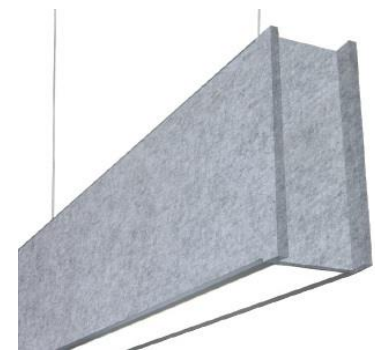
Test Information

Test Method: LM-79-08
Report Number: P332547-840
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: SA4XXDIP-C575D590U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

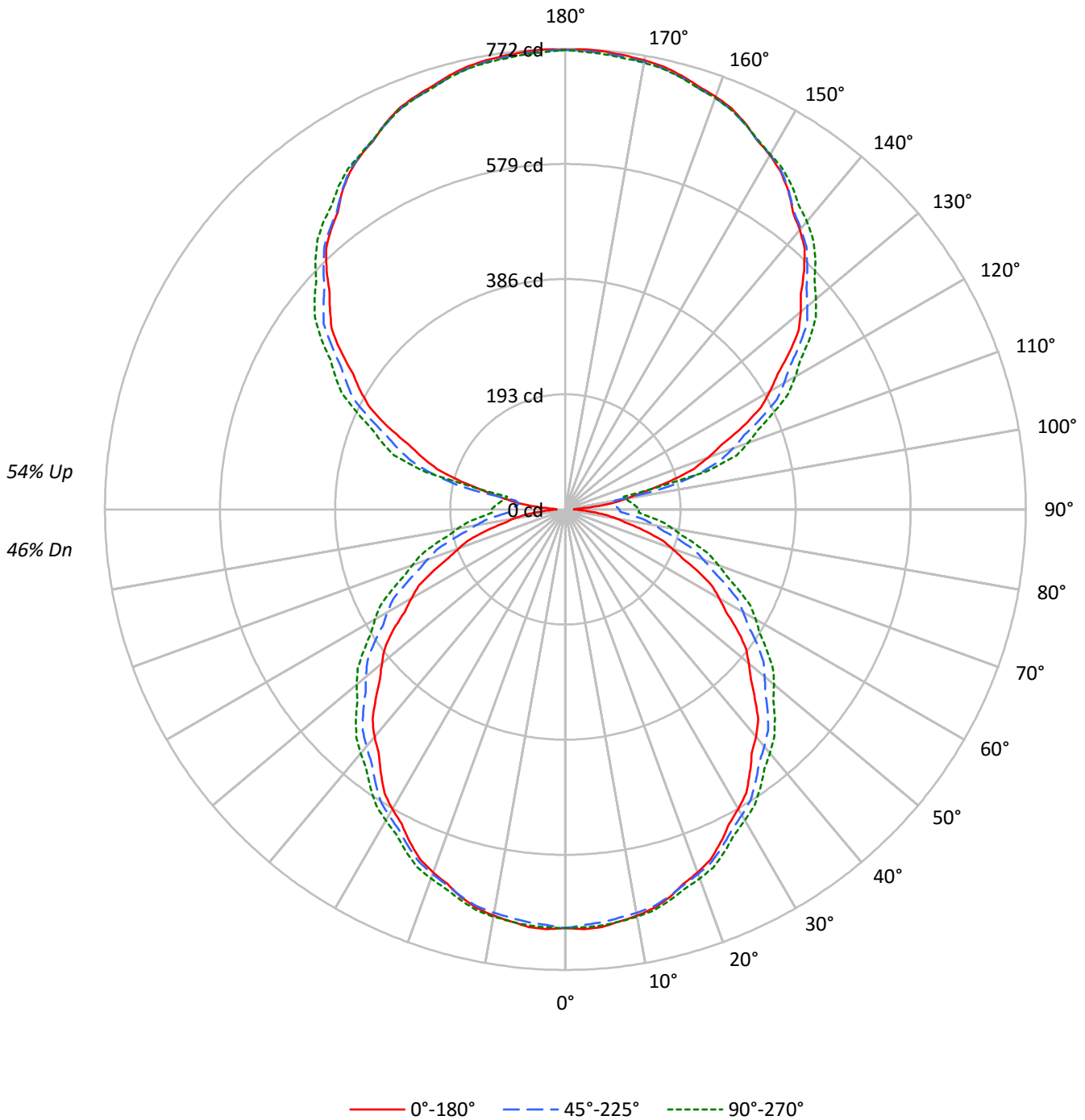
Lumens per Lamp: N/A
Luminaire Lumens: 4776.8 lumens
Efficiency: N/A
Efficacy: 145.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 32.8
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: P332547-840
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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	0
RCR																		
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.4
10°-20°	190.4	4.0
20°-30°	287.9	6.0
30°-40°	348.3	7.3
40°-50°	368.3	7.7
50°-60°	346.6	7.3
60°-70°	287.5	6.0
70°-80°	202.0	4.2
80°-90°	116.4	2.4
90°-100°	94.1	2.0
100°-110°	218.1	4.6
110°-120°	355.0	7.4
120°-130°	426.9	8.9
130°-140°	444.6	9.3
140°-150°	409.7	8.6
150°-160°	329.1	6.9
160°-170°	212.2	4.4
170°-180°	73.2	1.5
0°-30°	544.7	11.4
0°-40°	893.1	18.7
0°-60°	1607.9	33.7
0°-90°	2213.8	46.3
90°-120°	667.3	14.0
90°-150°	1948.5	40.8
90°-180°	2563.0	53.7
0°-180°	4776.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	14	52	90	116	124	10
95°	42	50	81	105	113	49
105°	180	200	232	254	242	189
115°	328	338	362	380	386	323
125°	458	461	478	494	500	409
135°	566	566	573	587	593	436
145°	652	653	653	658	662	407
155°	714	714	713	715	713	329
165°	753	750	750	754	749	213
175°	770	767	767	772	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.6	31.0	38.4	45.8	53.2	60.9	68.7	76.5	84.4	92.3	97.5
90°	14.3	22.7	31.1	39.5	47.9	56.4	64.8	73.4	81.9	90.5	96.3
92.5°	19.2	25.5	31.9	38.3	44.6	52.1	60.6	69.2	77.7	86.2	91.9
95°	41.9	43.3	44.7	46.2	47.6	51.9	59.2	66.4	73.7	81.0	86.5
97.5°	76.5	84.2	91.9	99.6	107.2	107.4	100.3	93.1	85.9	78.7	83.3
100°	103.1	110.0	116.8	123.6	130.5	128.5	117.6	106.7	95.9	85.0	87.7
102.5°	133.5	139.2	144.9	150.6	156.2	161.3	165.6	170.0	174.3	178.7	159.8
105°	180.5	184.7	188.9	193.3	197.5	203.2	210.3	217.4	224.5	231.6	237.1
107.5°	225.4	228.6	231.9	235.1	238.3	243.5	250.4	257.4	264.4	271.4	276.3
110°	255.1	258.0	260.8	263.7	266.5	271.4	278.2	285.1	292.0	298.8	303.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.0	286.9	289.7	292.6	295.4	299.9	306.2	312.4	318.5	324.7	328.5
115°	328.4	330.4	332.3	334.4	336.3	340.0	345.5	350.9	356.4	361.8	366.0
117.5°	369.2	370.6	372.1	373.5	375.1	378.5	384.0	389.5	395.0	400.4	404.0
120°	396.3	397.3	398.3	399.3	400.4	403.3	408.3	413.2	418.2	423.1	426.9
122.5°	422.0	422.4	422.8	423.2	423.6	426.4	431.3	436.3	441.2	446.3	449.9
125°	458.2	458.6	458.9	459.3	459.6	461.8	466.0	470.0	474.1	478.3	481.9
127.5°	493.1	493.0	493.0	492.9	492.9	494.8	498.8	502.7	506.6	510.6	513.7
130°	515.0	515.0	514.9	514.9	514.8	516.4	519.6	522.8	525.9	529.2	532.4
132.5°	535.7	535.8	535.9	535.9	536.0	537.3	540.1	542.8	545.5	548.3	551.4
135°	566.1	565.9	565.8	565.7	565.6	566.4	568.2	569.9	571.6	573.3	576.4
137.5°	593.6	593.5	593.4	593.3	593.2	593.7	594.8	596.0	597.1	598.2	601.1
140°	611.6	611.7	611.8	611.9	612.0	612.2	612.6	613.1	613.5	613.9	616.5
142.5°	627.1	627.5	627.9	628.4	628.8	629.0	629.1	629.1	629.2	629.2	631.6
145°	651.8	652.0	652.2	652.4	652.6	652.7	652.7	652.7	652.7	652.7	653.9
147.5°	671.5	672.0	672.5	673.1	673.6	673.8	673.7	673.6	673.4	673.3	673.6
150°	685.7	686.0	686.4	686.7	687.1	687.2	687.0	686.9	686.8	686.6	686.6
152.5°	697.1	697.4	697.8	698.2	698.5	698.6	698.4	698.2	697.9	697.7	697.9
155°	713.8	713.9	714.0	714.1	714.3	714.1	713.8	713.4	713.0	712.6	713.1
157.5°	727.9	727.8	727.7	727.7	727.6	727.3	726.9	726.5	726.0	725.6	726.3
160°	736.2	735.8	735.4	735.1	734.7	734.4	734.3	734.2	734.0	733.9	734.7
162.5°	743.6	743.1	742.6	742.1	741.6	741.3	741.1	741.0	740.9	740.8	741.5
165°	752.9	752.2	751.6	750.9	750.3	750.0	750.0	750.0	750.0	750.0	751.0
167.5°	760.2	759.6	758.9	758.3	757.6	757.2	757.2	757.1	757.0	756.9	758.1
170°	764.5	763.7	762.9	762.1	761.3	761.0	761.1	761.2	761.4	761.5	762.5
172.5°	767.2	766.4	765.7	764.9	764.2	763.8	764.0	764.1	764.2	764.3	765.4
175°	770.2	769.4	768.6	767.9	767.1	766.8	766.9	767.1	767.2	767.3	768.4
177.5°	771.5	770.8	770.1	769.4	768.7	768.4	768.6	768.8	769.0	769.2	770.1
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2



TEST NUMBER: P332547-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	102.7	108.0	113.1	116.5	118.2	119.8	121.3	122.9
90°	102.1	108.0	113.8	117.5	119.2	120.9	122.5	124.1
92.5°	97.7	103.3	109.0	112.6	114.0	115.4	116.9	118.4
95°	92.0	97.5	103.0	106.5	108.3	110.0	111.7	113.4
97.5°	88.0	92.7	97.4	100.5	102.1	103.7	105.3	106.9
100°	90.2	92.7	95.2	97.1	98.6	99.9	101.2	102.6
102.5°	140.9	122.0	103.1	94.3	95.7	97.1	98.5	99.9
105°	242.7	248.1	253.7	254.8	251.6	248.4	245.2	242.0
107.5°	281.1	286.0	290.8	294.2	295.9	297.6	299.3	301.1
110°	307.4	311.6	315.9	318.9	320.7	322.6	324.3	326.1



TEST NUMBER: P332547-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	332.3	336.2	340.0	342.8	344.8	346.7	348.5	350.4
115°	370.0	374.2	378.2	380.9	382.1	383.3	384.6	385.8
117.5°	407.6	411.2	414.8	417.2	418.6	419.9	421.2	422.6
120°	430.6	434.3	438.1	440.5	441.7	442.8	443.9	445.1
122.5°	453.5	457.2	460.8	463.1	464.1	465.1	466.2	467.2
125°	485.6	489.4	493.0	495.4	496.7	497.9	499.0	500.2
127.5°	516.7	519.8	522.9	524.9	526.0	527.1	528.3	529.3
130°	535.6	539.0	542.2	544.4	545.4	546.4	547.5	548.6
132.5°	554.5	557.6	560.8	562.8	563.8	564.7	565.7	566.6
135°	579.5	582.5	585.5	587.7	589.1	590.4	591.6	592.9
137.5°	604.0	606.8	609.7	611.5	612.2	613.0	613.8	614.6
140°	619.2	621.9	624.5	626.3	627.3	628.3	629.3	630.4
142.5°	633.8	636.1	638.3	639.9	640.7	641.4	642.2	642.9
145°	655.0	656.2	657.3	658.4	659.3	660.4	661.3	662.3
147.5°	673.8	674.0	674.3	674.7	675.4	676.1	676.8	677.5
150°	686.6	686.6	686.6	686.7	686.8	687.0	687.1	687.2
152.5°	698.1	698.3	698.5	698.6	698.5	698.4	698.3	698.3
155°	713.6	714.1	714.6	714.7	714.3	713.9	713.6	713.2
157.5°	726.9	727.6	728.2	728.2	727.6	726.9	726.3	725.6
160°	735.4	736.2	737.0	737.0	736.2	735.4	734.7	733.9
162.5°	742.4	743.1	743.9	743.9	743.0	742.0	741.2	740.3
165°	752.0	753.1	754.2	754.1	752.9	751.7	750.6	749.4
167.5°	759.2	760.3	761.4	761.3	760.1	758.8	757.5	756.3
170°	763.6	764.6	765.7	765.5	764.3	763.0	761.6	760.4
172.5°	766.4	767.4	768.4	768.2	766.9	765.5	764.1	762.7
175°	769.6	770.7	771.9	771.7	770.2	768.6	767.1	765.6
177.5°	770.9	771.7	772.5	772.3	771.1	769.9	768.6	767.4
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2

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