

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: P331302

Luminaire Tested: **SA2XXDIP-C485D530U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331302
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: SA2XXDIP-C485D530U835-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

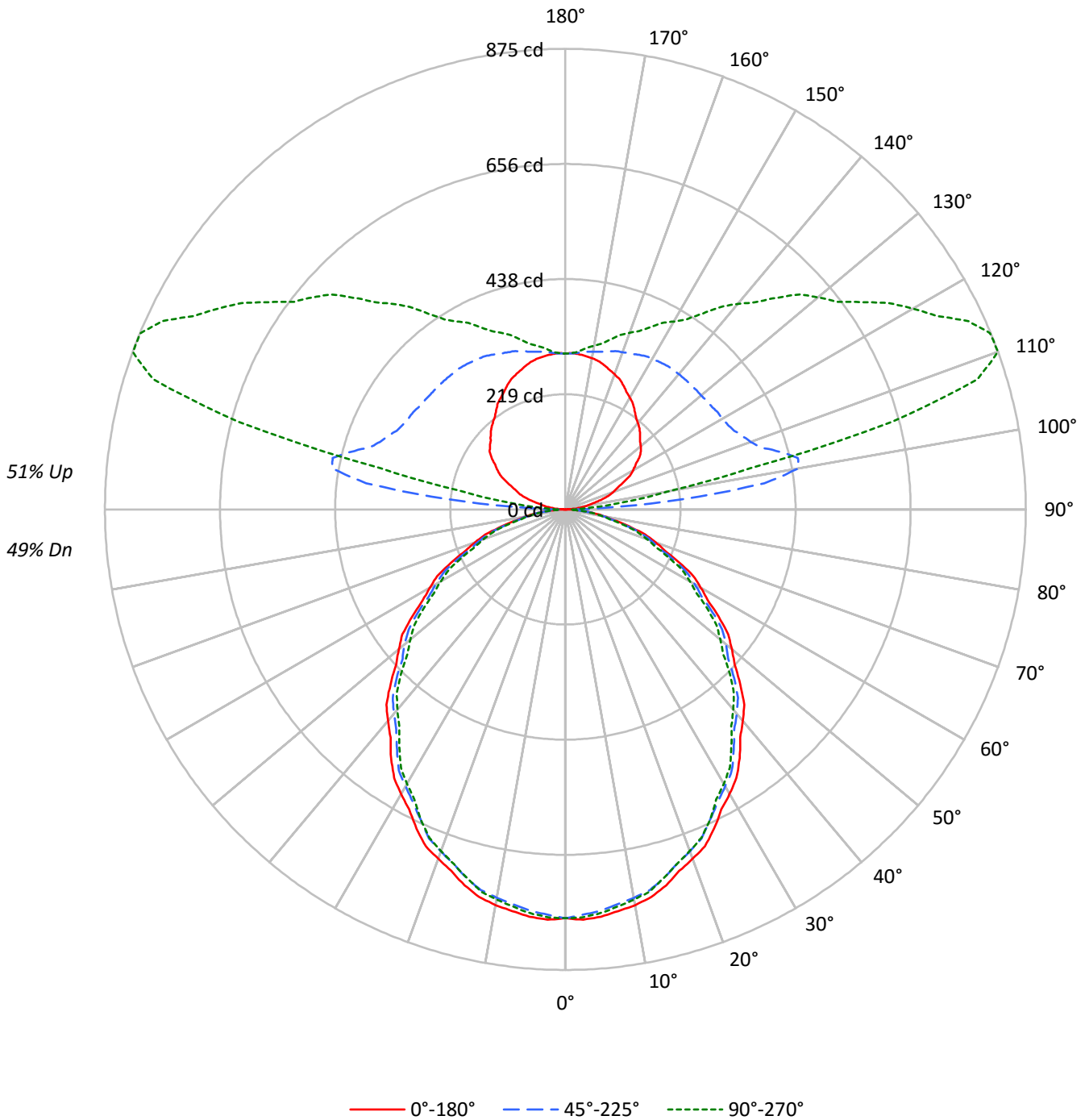
Lumens per Lamp: N/A
Luminaire Lumens: 4042.3 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR	0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																											
	1	98	93	89	86	90	86	83	80	73	70	68	60	58	57	49	48	47	41																											
	2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35																											
	3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	33	29																											
	4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25																											
	5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22																											
	6	63	51	42	37	58	47	40	35	40	35	30	34	29	26	28	25	22	19																											
	7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17																											
	8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15																											
	9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14																											
	10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12																											

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12540	12540	12540
5°	12588	12407	12480
10°	12514	12281	12342
15°	12359	12122	12109
20°	12139	11883	11869
25°	11922	11589	11589
30°	11641	11320	11222
35°	11379	10996	10835
40°	11051	10673	10467
45°	10727	10351	10095
50°	10374	10017	9661
55°	10007	9627	9272
60°	9597	9164	8825
65°	9158	8703	8302
70°	8601	8143	7756
75°	7829	7498	7317
80°	6946	6732	6388
85°	5669	5391	4835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	1.8
10°-20°	205.5	5.1
20°-30°	302.1	7.5
30°-40°	350.9	8.7
40°-50°	350.5	8.7
50°-60°	305.6	7.6
60°-70°	226.0	5.6
70°-80°	128.0	3.2
80°-90°	37.1	0.9
90°-100°	118.6	2.9
100°-110°	402.4	10.0
110°-120°	427.5	10.6
120°-130°	351.9	8.7
130°-140°	282.6	7.0
140°-150°	213.5	5.3
150°-160°	150.1	3.7
160°-170°	88.3	2.2
170°-180°	28.8	0.7
0°-30°	580.6	14.4
0°-40°	931.5	23.0
0°-60°	1587.6	39.3
0°-90°	1978.7	49.0
90°-120°	948.4	23.5
90°-150°	1796.4	44.4
90°-180°	2064.0	51.1
0°-180°	4042.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	773	766	771	770	74
15°	739	735	725	728	724	208
25°	669	663	650	652	650	308
35°	577	570	558	553	550	360
45°	470	464	453	445	442	362
55°	356	351	342	333	329	318
65°	240	235	228	221	217	237
75°	126	124	120	116	117	134
85°	31	30	29	27	26	35
90°	1	8	19	18	19	3
95°	20	49	224	84	65	21
105°	70	105	423	755	643	74
115°	123	155	354	730	846	122
125°	171	202	340	591	686	152
135°	201	240	336	497	569	155
145°	229	263	334	415	454	144
155°	261	281	324	367	382	120
165°	284	293	311	330	335	80
175°	296	296	299	303	302	28
180°	296	296	296	296	296	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	780.3	779.6	779.0	778.3	777.6	776.6	775.1	773.7	772.2	770.7	772.1
5°	776.7	776.0	775.4	774.7	774.1	772.8	771.0	769.2	767.3	765.5	766.8
7.5°	769.8	768.8	767.8	766.7	765.7	764.3	762.4	760.6	758.7	756.8	758.2
10°	763.3	762.1	760.9	759.8	758.6	757.0	755.0	753.1	751.1	749.1	750.4
12.5°	754.3	753.3	752.2	751.2	750.2	748.7	746.7	744.7	742.7	740.7	741.6
15°	739.4	738.4	737.4	736.4	735.4	733.8	731.6	729.5	727.3	725.2	725.8
17.5°	720.2	719.3	718.3	717.3	716.3	714.7	712.5	710.3	708.1	705.9	706.7
20°	706.5	705.5	704.5	703.5	702.5	700.9	698.5	696.2	693.9	691.6	692.1
22.5°	692.8	691.4	690.0	688.6	687.2	685.4	683.2	681.0	678.8	676.6	676.7
25°	669.2	667.8	666.5	665.2	663.9	661.8	659.0	656.1	653.3	650.5	650.8
27.5°	642.3	641.1	639.9	638.7	637.5	635.8	633.6	631.3	629.1	626.9	626.4
30°	624.4	623.0	621.7	620.4	619.0	617.1	614.6	612.2	609.7	607.2	606.7
32.5°	605.2	604.2	603.1	602.0	601.0	599.1	596.5	593.9	591.3	588.7	587.8
35°	577.3	575.6	574.0	572.3	570.7	568.5	565.9	563.2	560.5	557.9	556.9
37.5°	545.8	544.3	542.9	541.4	539.9	537.9	535.2	532.6	529.9	527.3	526.0
40°	524.3	522.9	521.6	520.3	519.0	517.0	514.3	511.7	509.0	506.4	504.9
42.5°	503.4	502.0	500.7	499.4	498.1	496.1	493.4	490.8	488.1	485.4	483.8
45°	469.8	468.6	467.4	466.3	465.1	463.3	460.8	458.3	455.8	453.3	451.5
47.5°	436.3	435.2	434.1	433.0	431.9	430.1	427.5	424.9	422.3	419.7	417.8
50°	413.0	412.2	411.3	410.5	409.7	408.1	405.8	403.5	401.1	398.8	396.5
52.5°	390.3	389.2	388.1	387.0	385.9	384.3	382.1	379.9	377.7	375.5	373.6
55°	355.5	354.5	353.5	352.5	351.5	350.0	348.0	346.0	344.0	342.0	340.1
57.5°	320.5	319.7	318.9	318.2	317.4	315.9	313.7	311.5	309.3	307.1	305.1
60°	297.2	296.6	295.9	295.2	294.6	293.1	290.8	288.4	286.1	283.8	282.0
62.5°	274.5	273.5	272.4	271.3	270.3	268.9	267.1	265.3	263.5	261.7	260.0
65°	239.7	238.7	237.7	236.7	235.8	234.4	232.8	231.1	229.4	227.8	226.3
67.5°	204.3	203.5	202.7	201.9	201.1	200.0	198.5	197.0	195.5	194.0	192.9
70°	182.2	181.6	180.9	180.2	179.6	178.5	177.0	175.5	174.0	172.5	171.4
72.5°	159.5	158.9	158.2	157.5	156.9	156.1	155.1	154.1	153.2	152.2	151.0
75°	125.5	125.1	124.8	124.5	124.1	123.6	122.7	121.9	121.1	120.2	119.2
77.5°	95.0	94.4	93.9	93.3	92.7	92.3	92.0	91.6	91.3	91.0	90.5
80°	74.7	74.5	74.4	74.2	74.0	73.8	73.4	73.1	72.8	72.4	71.9
82.5°	55.6	55.5	55.5	55.5	55.4	55.3	55.1	54.9	54.7	54.5	53.9
85°	30.6	30.5	30.3	30.1	30.0	29.8	29.6	29.5	29.3	29.1	28.6
87.5°	10.9	10.9	11.1	11.1	11.1	11.1	11.4	12.0	12.4	12.2	11.7
90°	0.6	2.3	4.6	5.7	6.8	8.6	11.4	15.4	18.8	19.4	18.8
92.5°	7.0	10.0	14.1	16.7	20.5	25.9	38.8	56.9	73.1	74.1	62.6
95°	20.0	22.2	27.9	33.1	42.2	55.9	82.1	131.7	197.9	223.6	195.6
97.5°	32.5	35.6	41.6	49.4	59.9	75.4	108.4	177.5	287.4	381.6	400.3
100°	43.9	45.6	50.8	59.9	71.3	87.3	117.5	187.1	310.2	450.5	532.6
102.5°	54.4	55.7	60.8	69.9	81.8	97.7	125.7	187.5	301.6	452.8	581.9
105°	69.6	71.9	75.8	84.4	96.9	112.9	139.7	190.5	284.6	422.6	574.3
107.5°	86.0	87.8	91.7	99.6	112.0	128.1	154.1	198.3	276.1	390.2	524.2
110°	96.9	99.2	102.7	110.1	122.0	138.6	163.7	204.7	274.3	374.7	492.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	107.0	109.3	113.1	120.1	131.6	148.6	172.8	211.6	274.8	364.6	470.8
115°	122.6	125.5	128.9	135.7	147.1	162.5	187.1	221.8	277.2	353.6	443.7
117.5°	138.8	141.1	144.5	150.6	161.5	177.5	200.2	232.8	281.3	348.2	426.6
120°	148.8	151.1	154.5	159.7	171.1	187.1	209.3	240.1	284.0	345.0	417.5
122.5°	158.4	160.3	163.7	169.3	180.7	197.1	218.0	246.5	287.2	343.2	409.7
125°	171.1	172.8	176.2	183.1	194.5	210.4	231.0	256.6	292.0	339.9	398.6
127.5°	181.1	183.4	188.2	195.7	206.7	223.1	243.1	266.1	296.9	338.0	388.4
130°	187.1	189.3	195.0	203.0	214.4	230.4	250.4	272.0	300.5	337.0	381.5
132.5°	192.5	195.3	201.4	209.9	221.7	237.7	256.7	278.0	304.2	336.6	376.0
135°	200.7	203.0	209.9	218.4	231.5	247.5	265.8	285.7	308.5	335.9	368.4
137.5°	208.5	211.2	218.1	227.2	240.2	255.0	273.1	291.6	312.4	335.8	363.0
140°	214.4	216.7	223.6	232.7	245.2	260.1	277.2	294.8	314.2	335.3	359.9
142.5°	220.4	222.2	228.6	237.7	249.8	263.7	280.4	297.6	315.6	335.3	356.7
145°	229.3	231.5	237.2	245.8	257.2	269.7	285.1	301.1	317.1	334.2	352.4
147.5°	238.8	240.5	246.0	253.9	263.4	274.5	289.0	303.1	317.5	332.1	348.1
150°	245.2	246.9	251.5	258.9	267.5	277.7	290.8	304.0	317.1	330.8	344.5
152.5°	251.6	252.4	257.0	263.5	271.6	280.9	292.7	304.4	316.2	328.5	341.3
155°	260.6	261.2	264.6	270.9	277.2	285.7	295.4	305.1	314.8	324.5	335.3
157.5°	268.1	268.7	271.5	276.9	282.0	289.1	297.3	305.1	312.2	320.4	329.7
160°	273.2	273.7	276.0	280.6	285.1	291.4	298.3	305.1	310.8	317.7	325.6
162.5°	278.2	277.8	280.1	283.8	287.9	292.8	298.7	304.6	309.4	315.4	322.0
165°	284.0	283.4	284.6	288.0	290.8	294.3	299.4	303.4	306.8	310.8	315.9
167.5°	288.8	288.1	289.1	291.3	293.4	295.5	299.3	302.6	304.2	306.8	310.0
170°	292.0	290.8	291.4	293.1	294.3	296.0	298.8	301.7	302.8	304.5	306.8
172.5°	293.8	293.1	292.8	294.5	295.2	296.4	298.4	300.3	301.0	301.8	303.6
175°	296.0	295.4	294.8	296.0	296.0	296.5	297.7	298.8	298.3	298.8	299.4
177.5°	297.0	296.1	295.6	296.5	296.5	296.5	297.0	297.9	297.0	296.5	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	773.4	774.7	776.0	776.6	776.3	776.0	775.8	775.5
5°	768.2	769.5	770.8	771.3	771.0	770.6	770.3	770.0
7.5°	759.5	760.8	762.2	762.6	762.3	761.9	761.5	761.2
10°	751.7	753.1	754.4	754.8	754.3	753.8	753.3	752.8
12.5°	742.6	743.5	744.4	744.7	744.3	744.0	743.6	743.2
15°	726.5	727.2	727.8	727.7	726.9	726.1	725.3	724.4
17.5°	707.4	708.2	709.0	708.9	708.1	707.4	706.6	705.8
20°	692.6	693.1	693.6	693.5	692.8	692.1	691.5	690.8
22.5°	676.8	676.9	677.0	676.9	676.5	676.1	675.7	675.3
25°	651.2	651.5	651.8	651.8	651.5	651.2	650.8	650.5
27.5°	625.9	625.4	624.9	624.3	623.5	622.7	621.9	621.1
30°	606.2	605.7	605.2	604.6	603.9	603.3	602.6	601.9
32.5°	586.9	586.0	585.1	584.3	583.6	583.0	582.3	581.6
35°	555.9	554.9	553.9	553.0	552.2	551.3	550.5	549.7
37.5°	524.8	523.6	522.4	521.3	520.5	519.7	518.9	518.2
40°	503.4	501.9	500.4	499.3	498.6	498.0	497.3	496.6
42.5°	482.2	480.6	478.9	477.7	476.7	475.8	474.9	473.9
45°	449.7	447.9	446.0	444.8	444.1	443.5	442.8	442.1
47.5°	415.9	413.9	412.0	410.6	409.6	408.7	407.7	406.7
50°	394.2	391.8	389.5	387.9	387.1	386.3	385.4	384.6
52.5°	371.7	369.7	367.8	366.3	365.2	364.1	363.0	361.9
55°	338.1	336.1	334.1	332.7	331.8	331.0	330.2	329.4
57.5°	303.2	301.2	299.3	298.0	297.3	296.7	296.1	295.4
60°	280.1	278.3	276.5	275.3	274.8	274.3	273.8	273.3
62.5°	258.3	256.6	254.9	253.8	253.1	252.5	251.9	251.2
65°	224.8	223.3	221.8	220.6	219.8	219.0	218.2	217.3
67.5°	191.7	190.5	189.4	188.5	187.8	187.1	186.5	185.8
70°	170.2	169.0	167.9	167.0	166.3	165.6	165.0	164.3
72.5°	149.9	148.7	147.6	146.7	146.2	145.6	145.1	144.6
75°	118.2	117.3	116.3	115.9	116.3	116.6	116.9	117.3
77.5°	90.0	89.5	89.0	88.5	88.0	87.6	87.1	86.6
80°	71.4	70.9	70.5	70.0	69.7	69.4	69.0	68.7
82.5°	53.3	52.6	52.0	51.6	51.6	51.5	51.4	51.4
85°	28.1	27.6	27.1	26.8	26.6	26.5	26.3	26.1
87.5°	11.2	10.6	10.4	10.3	10.1	10.0	9.9	9.7
90°	18.2	17.1	18.2	18.8	18.8	18.8	18.8	18.8
92.5°	49.7	42.7	37.9	34.3	33.9	32.1	32.5	31.6
95°	149.4	114.6	90.7	78.1	70.7	66.2	64.4	65.0
97.5°	348.7	285.3	223.6	182.4	155.1	141.1	132.8	128.0
100°	520.7	450.0	371.8	302.8	255.5	231.0	214.4	204.2
102.5°	633.4	617.4	560.3	487.1	435.7	393.8	373.2	359.3
105°	692.9	757.3	764.8	745.9	710.6	675.2	650.7	642.7
107.5°	650.0	747.1	806.4	834.0	838.4	836.5	831.6	821.0
110°	613.1	715.1	788.1	834.9	859.4	870.3	875.4	874.8



TEST NUMBER: P331302

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	579.3	677.3	755.3	808.9	843.0	861.1	870.8	873.9
115°	537.8	625.6	700.3	759.1	799.5	825.8	840.6	845.7
117.5°	506.5	583.6	651.4	706.5	747.8	775.5	791.1	795.4
120°	491.0	561.7	622.2	674.1	714.0	740.8	757.3	763.0
122.5°	478.7	543.5	600.7	647.6	683.4	709.8	724.5	729.3
125°	460.8	519.5	569.7	612.5	645.6	667.2	681.5	686.1
127.5°	443.1	496.3	543.6	583.1	611.9	632.2	644.5	648.2
130°	431.7	480.8	525.8	563.4	591.4	610.8	622.2	626.7
132.5°	420.8	466.2	507.6	542.9	570.4	589.8	600.3	604.4
135°	405.5	443.1	480.8	512.7	537.2	556.0	566.3	568.6
137.5°	393.3	424.8	454.6	482.5	504.8	521.0	530.0	533.4
140°	385.5	412.9	439.1	464.2	482.5	497.3	505.8	509.3
142.5°	379.1	402.4	425.0	446.0	463.3	476.8	484.4	485.1
145°	370.1	388.9	406.6	423.2	436.8	446.5	452.2	453.9
147.5°	363.2	378.0	391.8	403.9	415.2	422.9	426.8	427.8
150°	358.1	370.7	382.7	392.9	401.5	408.3	411.7	412.3
152.5°	353.1	364.8	374.9	383.8	390.5	396.5	399.0	399.1
155°	346.2	355.3	363.8	370.1	376.4	380.4	382.7	381.5
157.5°	338.1	345.7	352.9	357.8	362.2	365.6	366.6	366.6
160°	333.0	339.3	345.6	349.6	353.6	356.4	357.0	357.0
162.5°	328.0	333.4	338.8	341.8	345.8	347.8	348.3	347.9
165°	320.5	324.5	328.5	330.8	333.0	335.3	335.3	334.8
167.5°	313.3	316.4	319.1	321.2	322.2	323.5	323.4	322.7
170°	309.7	311.4	313.7	314.8	315.4	317.1	316.5	315.4
172.5°	305.6	306.8	308.6	309.3	309.9	310.7	310.1	309.4
175°	301.1	301.7	302.3	302.8	302.8	303.4	302.8	301.7
177.5°	297.9	297.9	298.4	298.4	298.4	298.4	297.9	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5

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