

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: P331334

Luminaire Tested: **SA2XXDIP-C675D330U835-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331334
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D330U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

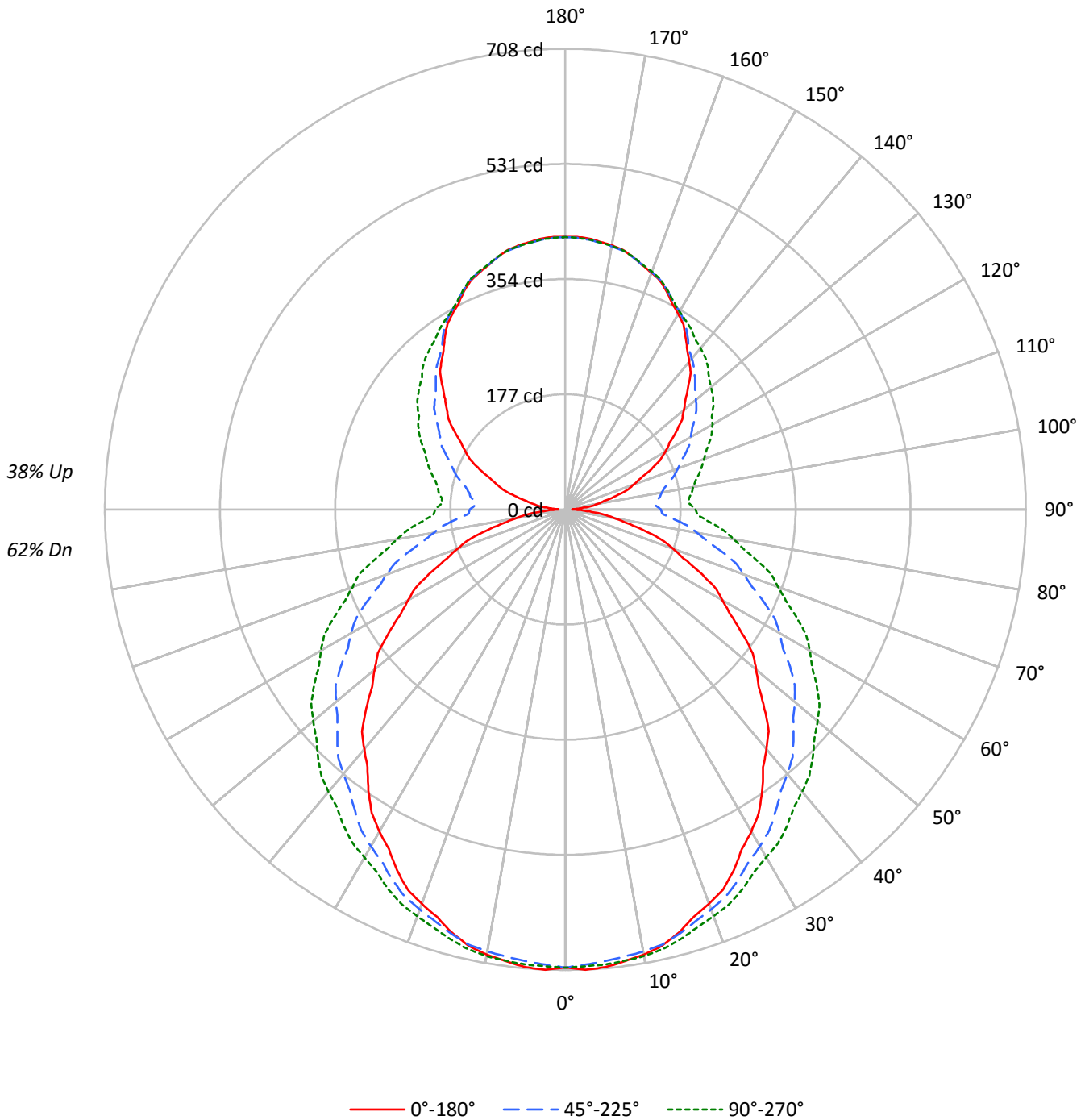
Lumens per Lamp: N/A
Luminaire Lumens: 3859.6 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 35
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	
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62				
1	99	93	89	84	92	87	83	80	76	73	70	66	63	61	56	55	53	48				
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43	39				
3	81	70	62	55	75	66	58	52	57	52	47	50	45	41	42	39	36	32				
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	30	27				
5	67	55	46	39	63	51	44	38	45	39	34	39	34	30	34	30	26	23				
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23	20				
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	23	20	18				
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18	16				
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16	14				
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.7
10°-20°	191.4	5.0
20°-30°	290.0	7.5
30°-40°	353.3	9.2
40°-50°	380.0	9.8
50°-60°	369.1	9.6
60°-70°	322.3	8.3
70°-80°	248.1	6.4
80°-90°	168.2	4.4
90°-100°	141.2	3.7
100°-110°	166.2	4.3
110°-120°	196.2	5.1
120°-130°	216.1	5.6
130°-140°	220.8	5.7
140°-150°	206.1	5.3
150°-160°	171.0	4.4
160°-170°	113.4	2.9
170°-180°	39.6	1.0
0°-30°	548.2	14.2
0°-40°	901.4	23.4
0°-60°	1650.6	42.8
0°-90°	2389.1	61.9
90°-120°	503.6	13.0
90°-150°	1146.5	29.7
90°-180°	1471.0	38.1
0°-180°	3859.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	75	147	186	200	8
95°	26	79	140	177	190	27
105°	81	113	166	201	213	86
115°	145	161	204	233	244	143
125°	208	212	242	268	278	186
135°	267	271	282	302	310	207
145°	323	325	328	334	338	202
155°	369	370	371	373	372	170
165°	402	401	401	404	402	113
175°	418	417	416	418	416	40
180°	419	419	419	419	419	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.1	33.8	47.5	61.2	74.9	89.2	104.1	118.9	133.8	148.7	157.9
90°	10.6	24.7	38.8	52.9	67.0	82.1	98.4	114.6	130.9	147.1	156.0
92.5°	15.7	28.6	41.6	54.5	67.4	81.1	95.5	109.9	124.3	138.6	147.6
95°	26.5	38.0	49.4	60.9	72.3	84.9	98.7	112.5	126.2	140.0	148.6
97.5°	40.7	50.9	61.1	71.2	81.4	93.2	106.5	119.9	133.3	146.6	155.0
100°	52.0	61.0	70.1	79.1	88.1	99.1	112.0	125.0	137.9	150.8	159.2
102.5°	63.1	71.2	79.4	87.6	95.8	106.2	118.8	131.4	144.1	156.7	165.0
105°	81.1	87.9	94.7	101.5	108.3	117.7	129.7	141.6	153.6	165.5	173.6
107.5°	100.2	105.8	111.4	117.0	122.7	131.1	142.4	153.7	165.0	176.3	184.0
110°	111.8	116.8	121.9	126.9	131.9	139.9	151.1	162.2	173.3	184.4	191.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.4	129.7	134.0	138.3	142.5	149.9	160.4	170.9	181.5	192.0	199.0
115°	145.4	148.4	151.3	154.3	157.3	163.8	173.8	183.9	193.9	204.0	210.7
117.5°	164.3	166.6	168.8	171.1	173.4	179.0	188.0	197.0	206.0	215.0	221.5
120°	177.6	179.1	180.7	182.2	183.7	188.7	197.2	205.6	214.1	222.5	228.9
122.5°	189.7	190.9	192.0	193.1	194.2	198.8	206.9	215.0	223.1	231.2	237.2
125°	207.7	208.4	209.1	209.8	210.5	214.4	221.4	228.4	235.4	242.4	248.3
127.5°	226.1	226.8	227.4	228.1	228.8	231.9	237.5	243.0	248.6	254.2	259.5
130°	237.7	238.5	239.3	240.1	240.9	243.6	248.2	252.8	257.4	262.0	267.3
132.5°	250.7	251.3	251.9	252.5	253.1	255.3	259.0	262.7	266.4	270.1	275.0
135°	267.1	267.9	268.8	269.6	270.5	272.2	274.6	277.0	279.4	281.9	286.5
137.5°	285.4	286.0	286.7	287.3	288.0	288.9	290.1	291.3	292.5	293.7	297.9
140°	296.4	296.9	297.3	297.8	298.3	299.0	299.8	300.7	301.5	302.3	306.0
142.5°	307.7	308.2	308.6	309.1	309.6	310.0	310.4	310.7	311.1	311.5	314.4
145°	322.9	323.5	324.0	324.6	325.1	325.6	326.1	326.6	327.0	327.5	328.9
147.5°	337.4	338.1	338.7	339.4	340.0	340.5	340.8	341.2	341.5	341.8	342.1
150°	347.3	347.8	348.2	348.7	349.2	349.6	349.9	350.2	350.5	350.8	351.1
152.5°	356.1	356.5	357.0	357.5	357.9	358.4	358.7	359.1	359.5	359.9	360.2
155°	369.2	369.4	369.7	369.9	370.1	370.4	370.6	370.8	371.1	371.3	371.7
157.5°	380.4	380.6	380.7	380.9	381.1	381.2	381.4	381.5	381.6	381.8	382.3
160°	387.2	387.4	387.5	387.7	387.8	388.0	388.0	388.1	388.2	388.3	388.7
162.5°	393.4	393.5	393.5	393.5	393.6	393.6	393.7	393.8	393.9	393.9	394.5
165°	401.7	401.6	401.5	401.5	401.4	401.3	401.3	401.3	401.3	401.3	401.9
167.5°	408.6	408.4	408.2	407.9	407.7	407.6	407.5	407.5	407.5	407.5	408.0
170°	412.3	412.1	411.8	411.6	411.4	411.2	411.1	411.0	411.0	410.9	411.4
172.5°	414.8	414.6	414.4	414.1	413.9	413.7	413.7	413.6	413.5	413.4	414.0
175°	418.0	417.7	417.5	417.2	417.0	416.8	416.7	416.5	416.3	416.2	416.7
177.5°	419.2	419.0	418.8	418.7	418.5	418.3	418.2	418.1	417.9	417.8	418.2
180°	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	167.1	176.3	185.6	191.6	194.5	197.5	200.4	203.3
90°	165.0	173.9	182.8	188.6	191.4	194.2	197.0	199.8
92.5°	156.5	165.4	174.3	180.2	182.9	185.6	188.4	191.1
95°	157.3	165.9	174.5	180.1	182.6	185.2	187.8	190.3
97.5°	163.4	171.8	180.2	185.7	188.4	191.1	193.7	196.4
100°	167.6	176.0	184.4	189.8	192.2	194.7	197.1	199.5
102.5°	173.3	181.5	189.8	195.2	197.6	200.0	202.4	204.8
105°	181.7	189.8	197.9	203.2	205.7	208.2	210.7	213.2
107.5°	191.7	199.4	207.0	211.9	214.1	216.2	218.4	220.5
110°	198.9	206.2	213.4	218.2	220.5	222.7	225.0	227.2



TEST NUMBER: P331334

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	206.1	213.2	220.2	224.9	227.3	229.6	231.9	234.2
115°	217.4	224.2	230.9	235.4	237.6	239.9	242.2	244.4
117.5°	228.0	234.6	241.1	245.4	247.5	249.5	251.6	253.7
120°	235.2	241.6	247.9	252.2	254.5	256.7	259.0	261.3
122.5°	243.1	249.1	255.1	259.1	261.0	263.0	265.0	266.9
125°	254.2	260.1	266.0	269.9	271.9	273.9	275.8	277.8
127.5°	264.9	270.2	275.6	279.1	280.8	282.6	284.3	286.1
130°	272.6	277.9	283.1	286.5	288.0	289.5	291.0	292.5
132.5°	279.9	284.9	289.8	293.0	294.6	296.1	297.7	299.3
135°	291.2	295.9	300.6	303.7	305.3	306.9	308.5	310.0
137.5°	302.0	306.1	310.2	312.9	314.1	315.3	316.5	317.8
140°	309.6	313.2	316.9	319.2	320.3	321.3	322.3	323.4
142.5°	317.4	320.4	323.3	325.2	326.1	327.0	327.8	328.7
145°	330.4	331.8	333.3	334.4	335.2	336.0	336.9	337.7
147.5°	342.5	342.8	343.2	343.5	343.7	344.0	344.2	344.5
150°	351.3	351.5	351.8	351.8	351.5	351.3	351.1	350.8
152.5°	360.5	360.8	361.1	361.1	360.8	360.5	360.2	359.9
155°	372.1	372.5	372.9	373.0	372.7	372.5	372.3	372.0
157.5°	382.8	383.4	383.9	384.0	383.6	383.2	382.9	382.5
160°	389.2	389.7	390.2	390.2	389.9	389.6	389.3	389.0
162.5°	395.0	395.5	396.1	396.1	395.8	395.4	395.0	394.6
165°	402.4	403.0	403.5	403.6	403.2	402.8	402.4	402.1
167.5°	408.6	409.1	409.7	409.8	409.4	408.9	408.5	408.1
170°	412.0	412.5	413.1	413.1	412.7	412.2	411.7	411.2
172.5°	414.5	415.1	415.6	415.7	415.2	414.7	414.3	413.8
175°	417.3	417.8	418.4	418.4	418.0	417.5	417.0	416.5
177.5°	418.6	418.9	419.3	419.3	418.9	418.6	418.2	417.8
180°	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7

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