

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: P333037-840

Luminaire Tested: **S124RDIW-S575D470U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333037-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S575D470U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4265.8 lumens
Efficiency: N/A
Efficacy: 141.3 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

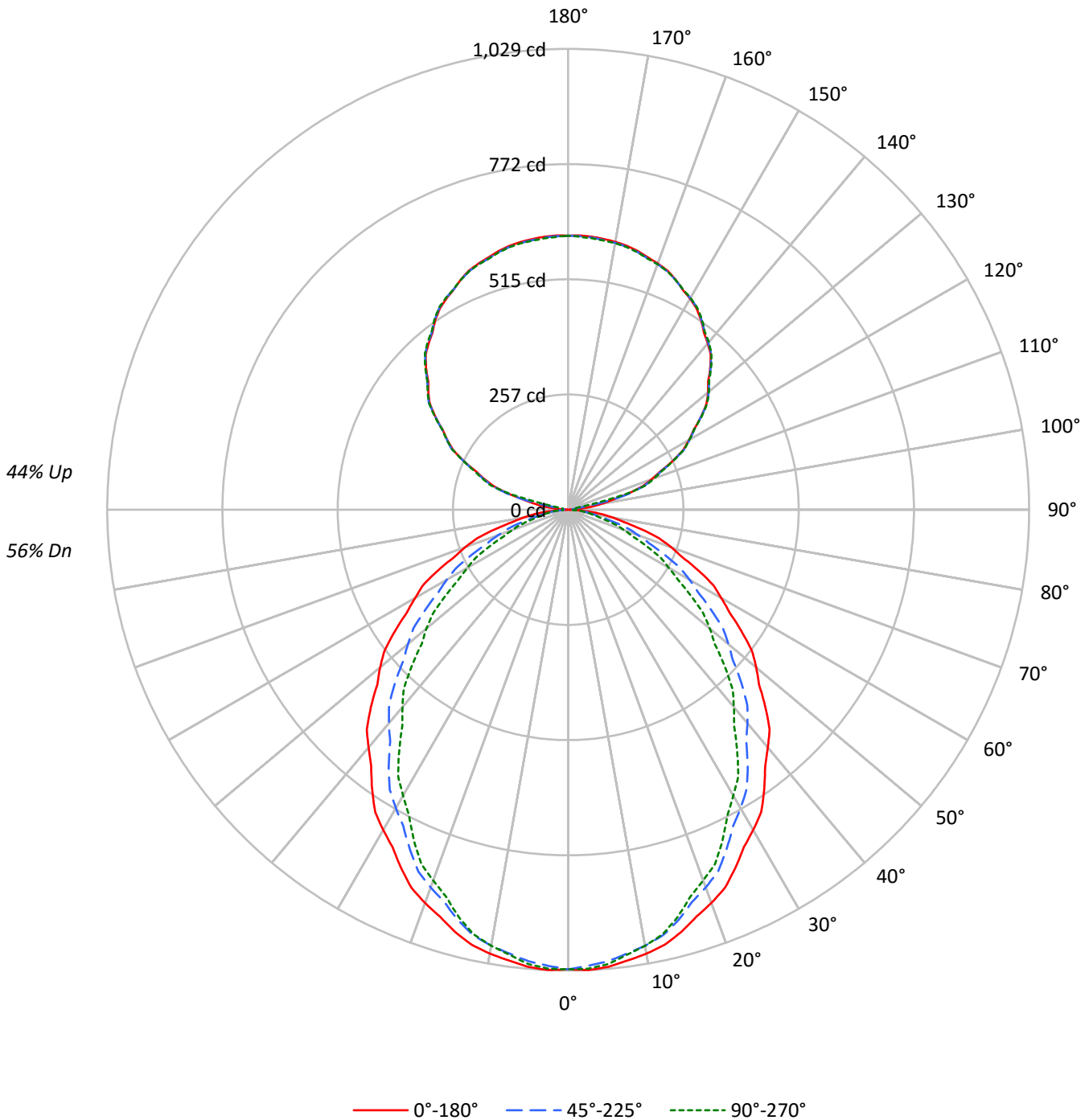
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	56
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	53	52	47
2	91	83	77	72	84	78	72	68	67	63	60	57	55	52	48	46	45	40
3	83	74	66	61	77	69	62	57	60	55	51	51	47	44	43	41	38	34
4	76	65	57	51	70	61	54	49	53	48	43	46	42	38	39	36	33	30
5	70	58	50	44	65	55	47	42	48	42	38	41	37	33	35	32	29	26
6	64	52	44	39	60	49	42	37	43	37	33	37	33	29	32	28	26	23
7	60	47	40	34	55	45	37	32	39	33	29	34	29	26	29	26	23	20
8	55	43	35	30	52	41	34	29	36	30	26	31	27	23	27	23	21	18
9	52	40	32	27	48	37	30	26	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	28	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8285	8285	8285
5°	8304	8203	8253
10°	8252	8104	8104
15°	8157	7934	7875
20°	8027	7710	7568
25°	7861	7448	7259
30°	7699	7171	6871
35°	7521	6885	6482
40°	7304	6559	6062
45°	7106	6235	5634
50°	6880	5863	5181
55°	6636	5475	4690
60°	6370	5050	4187
65°	6124	4518	3692
70°	5769	3932	3135
75°	5321	3260	2548
80°	4640	2483	2338
85°	3927	2251	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	2.3
10°-20°	268.8	6.3
20°-30°	388.2	9.1
30°-40°	440.0	10.3
40°-50°	424.9	10.0
50°-60°	353.4	8.3
60°-70°	244.0	5.7
70°-80°	123.7	2.9
80°-90°	33.5	0.8
90°-100°	20.9	0.5
100°-110°	133.4	3.1
110°-120°	255.3	6.0
120°-130°	324.0	7.6
130°-140°	346.7	8.1
140°-150°	324.2	7.6
150°-160°	261.4	6.1
160°-170°	168.6	4.0
170°-180°	58.1	1.4
0°-30°	753.5	17.7
0°-40°	1193.5	28.0
0°-60°	1971.8	46.2
0°-90°	2372.9	55.6
90°-120°	409.6	9.6
90°-150°	1404.6	32.9
90°-180°	1893.0	44.4
0°-180°	4265.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1025	1021	1012	1020	1018	97
15°	976	968	949	948	942	275
25°	882	867	836	823	815	406
35°	763	737	699	673	658	477
45°	622	592	546	509	494	480
55°	472	439	389	350	333	422
65°	321	286	236	204	193	317
75°	171	141	104	87	82	180
85°	42	28	24	23	23	48
90°	1	6	10	13	14	3
95°	25	10	10	13	13	32
105°	138	140	143	146	130	144
115°	257	258	258	259	259	253
125°	362	363	362	364	364	323
135°	448	448	450	451	452	345
145°	517	518	519	519	520	323
155°	567	567	566	568	567	261
165°	598	596	596	599	595	169
175°	612	609	610	613	608	58
180°	612	612	612	612	612	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1028.9	1028.2	1027.7	1027.1	1026.6	1025.5	1024.0	1022.5	1020.9	1019.4	1020.9
5°	1024.7	1024.0	1023.3	1022.6	1022.0	1020.6	1018.4	1016.3	1014.2	1012.2	1013.9
7.5°	1015.4	1014.7	1014.0	1013.3	1012.5	1010.8	1008.0	1005.3	1002.6	999.9	1001.0
10°	1006.6	1005.8	1004.9	1004.0	1003.2	1001.2	998.0	994.8	991.7	988.6	989.3
12.5°	995.3	994.3	993.3	992.3	991.3	989.0	985.2	981.5	977.9	974.1	974.5
15°	976.0	974.4	972.9	971.3	969.7	966.7	962.4	958.1	953.6	949.3	949.0
17.5°	952.6	950.3	948.1	945.7	943.5	939.8	934.5	929.3	924.0	918.8	917.9
20°	934.3	932.1	929.8	927.6	925.2	921.2	915.2	909.3	903.3	897.5	896.1
22.5°	914.2	911.7	909.2	906.6	904.0	899.6	893.2	886.9	880.5	874.1	872.0
25°	882.5	879.4	876.2	873.0	869.9	864.7	857.6	850.4	843.2	836.2	833.1
27.5°	849.2	845.3	841.3	837.4	833.3	827.6	819.9	812.3	804.7	797.0	793.3
30°	825.9	821.5	817.2	812.8	808.5	802.1	794.0	785.8	777.5	769.3	765.0
32.5°	801.4	796.5	791.5	786.6	781.7	775.0	766.5	758.0	749.5	741.0	736.0
35°	763.1	757.5	751.8	746.3	740.7	733.6	724.8	716.1	707.3	698.6	692.7
37.5°	722.1	716.3	710.5	704.8	698.9	691.3	681.6	671.9	662.3	652.6	645.9
40°	693.1	687.3	681.6	675.8	670.0	662.2	652.3	642.3	632.4	622.4	615.0
42.5°	665.4	659.4	653.4	647.3	641.3	633.1	622.7	612.3	602.0	591.6	584.1
45°	622.4	615.9	609.5	603.0	596.5	588.0	577.5	567.1	556.6	546.1	537.6
47.5°	577.9	571.3	564.5	557.8	551.2	542.4	531.5	520.7	509.8	498.9	490.0
50°	547.8	540.9	534.1	527.3	520.5	511.5	500.3	489.2	478.0	466.8	458.1
52.5°	516.9	510.3	503.6	497.0	490.2	481.2	469.7	458.3	446.8	435.4	426.5
55°	471.5	464.5	457.6	450.5	443.5	434.3	423.0	411.7	400.3	389.0	379.9
57.5°	426.6	419.3	412.0	404.8	397.5	388.3	377.1	365.9	354.8	343.6	334.4
60°	394.5	387.5	380.5	373.5	366.6	357.5	346.3	335.1	324.0	312.8	303.7
62.5°	365.6	358.3	351.0	343.8	336.5	327.2	315.7	304.3	292.8	281.3	273.0
65°	320.6	313.2	305.6	298.1	290.5	281.2	270.0	258.9	247.7	236.5	229.0
67.5°	274.0	266.7	259.5	252.4	245.2	236.4	226.0	215.6	205.3	194.9	188.4
70°	244.4	237.0	229.7	222.4	215.1	206.4	196.4	186.5	176.5	166.6	160.9
72.5°	213.0	206.3	199.7	193.1	186.4	178.4	169.1	159.7	150.2	140.8	135.9
75°	170.6	164.1	157.6	151.2	144.7	137.3	129.2	120.9	112.7	104.5	100.5
77.5°	127.4	122.0	116.5	111.0	105.5	99.5	92.8	86.2	79.6	72.9	70.6
80°	99.8	94.7	89.7	84.6	79.6	74.4	69.2	63.9	58.7	53.4	52.9
82.5°	75.9	71.3	66.7	62.0	57.4	53.5	50.5	47.5	44.5	41.5	41.1
85°	42.4	39.0	35.4	31.9	28.5	26.5	26.0	25.4	24.8	24.3	24.0
87.5°	14.7	13.8	12.9	12.0	11.1	10.7	10.7	10.8	10.8	10.8	10.8
90°	1.4	2.5	3.6	4.7	5.9	6.8	7.7	8.5	9.3	10.1	10.7
92.5°	5.8	5.9	5.9	6.0	6.1	6.5	7.3	8.1	8.9	9.7	10.3
95°	25.1	21.7	18.3	14.8	11.3	9.7	9.8	9.9	10.0	10.1	10.7
97.5°	53.4	55.6	57.8	59.9	62.1	57.5	46.2	34.7	23.4	12.1	12.1
100°	75.0	76.9	78.8	80.6	82.4	76.2	62.2	48.2	34.1	20.1	18.4
102.5°	99.3	100.6	101.9	103.2	104.6	104.3	102.5	100.7	98.9	97.0	78.4
105°	137.7	138.4	139.0	139.6	140.2	140.8	141.3	141.8	142.3	142.8	143.7
107.5°	173.6	173.9	174.2	174.5	174.8	175.3	175.9	176.6	177.3	178.0	178.4
110°	197.7	198.0	198.3	198.6	198.9	199.3	200.0	200.7	201.3	201.9	202.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	221.2	221.7	222.3	222.8	223.4	223.8	224.1	224.3	224.6	224.9	224.9
115°	257.2	257.5	257.8	258.1	258.4	258.5	258.4	258.3	258.2	258.1	258.3
117.5°	289.7	290.1	290.5	290.9	291.3	291.6	291.9	292.1	292.4	292.6	292.5
120°	311.6	312.0	312.5	312.9	313.3	313.5	313.4	313.3	313.2	313.1	313.3
122.5°	332.1	332.4	332.6	333.0	333.2	333.4	333.5	333.7	333.8	334.0	334.1
125°	361.5	361.9	362.3	362.7	363.1	363.2	363.0	362.8	362.6	362.4	362.7
127.5°	389.4	389.5	389.6	389.7	389.8	390.1	390.5	391.0	391.5	391.9	391.9
130°	407.3	407.4	407.6	407.7	407.8	408.0	408.3	408.6	408.9	409.2	409.3
132.5°	423.8	423.9	424.1	424.3	424.5	424.9	425.3	425.6	426.0	426.4	426.5
135°	448.5	448.4	448.3	448.2	448.1	448.3	448.7	449.1	449.5	449.9	450.1
137.5°	470.4	470.4	470.5	470.5	470.6	470.8	471.2	471.7	472.1	472.6	472.8
140°	484.6	484.8	485.0	485.2	485.4	485.6	485.8	486.1	486.4	486.6	486.9
142.5°	497.5	497.9	498.3	498.6	499.0	499.2	499.3	499.5	499.6	499.7	499.9
145°	517.2	517.5	517.8	518.1	518.4	518.6	518.6	518.6	518.6	518.6	518.7
147.5°	532.8	533.4	533.9	534.5	535.1	535.3	535.2	535.1	535.0	534.9	535.0
150°	544.2	544.6	545.0	545.4	545.8	545.9	545.8	545.7	545.6	545.5	545.5
152.5°	553.7	554.0	554.3	554.6	555.0	555.0	554.9	554.7	554.5	554.3	554.5
155°	567.0	567.1	567.2	567.3	567.4	567.3	567.0	566.7	566.4	566.1	566.5
157.5°	578.3	578.2	578.1	578.1	578.0	577.8	577.5	577.1	576.8	576.5	577.0
160°	584.9	584.6	584.3	584.0	583.7	583.5	583.4	583.3	583.2	583.1	583.7
162.5°	590.8	590.4	590.0	589.6	589.3	589.0	588.9	588.8	588.7	588.5	589.2
165°	598.1	597.6	597.1	596.6	596.1	595.9	595.9	595.9	595.9	595.9	596.7
167.5°	604.0	603.5	603.0	602.5	601.9	601.6	601.6	601.5	601.5	601.4	602.3
170°	607.3	606.7	606.1	605.5	604.9	604.6	604.7	604.8	604.9	605.0	605.8
172.5°	609.6	608.9	608.3	607.7	607.1	606.8	606.9	607.0	607.1	607.2	608.0
175°	611.9	611.3	610.7	610.1	609.5	609.3	609.4	609.5	609.6	609.7	610.6
177.5°	613.0	612.5	611.9	611.3	610.8	610.6	610.7	610.9	611.0	611.2	611.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1022.5	1024.0	1025.5	1026.2	1026.1	1025.9	1025.8	1025.7
5°	1015.6	1017.4	1019.2	1019.9	1019.5	1019.2	1018.8	1018.4
7.5°	1002.1	1003.2	1004.4	1004.6	1004.1	1003.5	1003.0	1002.4
10°	990.0	990.7	991.4	991.4	990.7	990.0	989.3	988.6
12.5°	974.9	975.3	975.8	975.5	974.5	973.6	972.6	971.6
15°	948.6	948.3	947.9	947.2	945.8	944.6	943.4	942.2
17.5°	916.9	915.8	914.8	913.4	911.6	909.8	907.9	906.1
20°	894.6	893.2	891.8	890.0	887.8	885.4	883.2	880.9
22.5°	870.0	867.9	865.8	863.8	861.9	860.1	858.3	856.4
25°	830.2	827.2	824.3	821.9	820.1	818.4	816.7	814.9
27.5°	789.6	786.0	782.3	779.2	776.7	774.2	771.7	769.2
30°	760.6	756.2	751.8	748.3	745.5	742.7	739.9	737.1
32.5°	730.9	725.9	720.7	716.9	714.3	711.7	708.9	706.3
35°	686.7	680.8	674.9	670.3	667.2	664.0	660.9	657.7
37.5°	639.2	632.7	626.0	621.2	617.9	614.8	611.7	608.5
40°	607.7	600.4	593.0	587.8	584.6	581.5	578.3	575.2
42.5°	576.6	569.2	561.7	556.3	553.0	549.8	546.4	543.2
45°	529.1	520.5	511.9	506.0	502.9	499.8	496.7	493.5
47.5°	481.1	472.2	463.3	457.2	453.7	450.3	446.9	443.3
50°	449.3	440.6	431.8	425.9	422.5	419.2	415.9	412.5
52.5°	417.6	408.7	399.9	393.7	390.2	386.8	383.3	379.9
55°	370.8	361.7	352.6	346.5	343.2	339.8	336.5	333.2
57.5°	325.1	315.9	306.7	300.8	298.3	295.8	293.3	290.7
60°	294.6	285.5	276.4	270.5	267.7	264.9	262.2	259.3
62.5°	264.6	256.2	247.8	242.5	240.2	238.0	235.8	233.6
65°	221.6	214.0	206.5	201.7	199.7	197.5	195.4	193.3
67.5°	182.0	175.5	169.1	164.7	162.4	160.1	157.7	155.4
70°	155.1	149.4	143.5	139.8	138.0	136.3	134.5	132.8
72.5°	131.0	126.0	121.1	117.9	116.2	114.6	113.0	111.4
75°	96.4	92.5	88.5	85.9	84.8	83.8	82.8	81.7
77.5°	68.3	65.9	63.5	62.2	61.9	61.6	61.3	61.0
80°	52.4	51.9	51.3	51.0	50.8	50.6	50.5	50.3
82.5°	40.7	40.3	40.0	39.7	39.5	39.3	39.2	39.0
85°	23.6	23.3	22.9	22.8	22.8	22.8	22.8	22.8
87.5°	10.8	10.8	10.7	10.8	11.0	11.2	11.4	11.5
90°	11.3	11.9	12.5	12.9	13.1	13.3	13.5	13.7
92.5°	10.9	11.5	12.1	12.4	12.5	12.5	12.6	12.6
95°	11.3	11.9	12.5	12.8	12.9	13.0	13.1	13.2
97.5°	12.2	12.2	12.3	12.4	12.5	12.6	12.7	12.8
100°	16.7	14.9	13.2	12.4	12.5	12.6	12.7	12.8
102.5°	59.7	41.1	22.4	13.1	13.1	13.1	13.1	13.2
105°	144.6	145.5	146.4	145.1	141.4	137.7	134.1	130.5
107.5°	178.9	179.4	179.9	180.3	180.7	181.0	181.4	181.8
110°	202.3	202.5	202.7	202.9	203.2	203.5	203.8	204.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.8	224.8	224.7	224.9	225.3	225.7	226.1	226.4
115°	258.5	258.7	258.9	259.0	259.0	259.0	259.0	259.0
117.5°	292.5	292.5	292.4	292.4	292.3	292.3	292.3	292.2
120°	313.5	313.7	313.9	313.9	313.7	313.5	313.3	313.1
122.5°	334.2	334.3	334.4	334.4	334.2	334.0	333.8	333.6
125°	363.0	363.3	363.7	363.9	364.0	364.1	364.2	364.3
127.5°	391.8	391.7	391.7	391.6	391.5	391.4	391.4	391.3
130°	409.4	409.5	409.6	409.6	409.6	409.6	409.6	409.6
132.5°	426.6	426.7	426.8	426.8	426.7	426.7	426.6	426.5
135°	450.3	450.5	450.7	450.9	451.1	451.3	451.5	451.7
137.5°	473.0	473.2	473.5	473.5	473.5	473.4	473.4	473.3
140°	487.2	487.5	487.8	488.0	488.1	488.2	488.3	488.4
142.5°	500.1	500.4	500.6	500.7	500.7	500.8	500.8	500.8
145°	518.8	518.9	519.0	519.1	519.3	519.5	519.7	519.9
147.5°	535.1	535.1	535.2	535.3	535.4	535.5	535.6	535.7
150°	545.5	545.5	545.5	545.6	545.7	545.8	545.9	546.0
152.5°	554.6	554.8	555.0	555.0	555.0	554.9	554.8	554.8
155°	566.9	567.3	567.7	567.8	567.5	567.2	566.9	566.6
157.5°	577.5	578.0	578.6	578.6	578.0	577.5	577.0	576.5
160°	584.3	584.9	585.5	585.5	584.9	584.3	583.7	583.1
162.5°	589.8	590.4	591.0	591.0	590.3	589.6	588.9	588.2
165°	597.5	598.3	599.2	599.1	598.1	597.2	596.3	595.4
167.5°	603.2	604.1	605.0	604.9	603.9	602.9	601.9	600.9
170°	606.6	607.4	608.3	608.2	607.1	606.1	605.1	604.1
172.5°	608.8	609.7	610.5	610.4	609.3	608.1	607.0	605.9
175°	611.5	612.4	613.3	613.1	611.9	610.7	609.5	608.2
177.5°	612.5	613.1	613.8	613.6	612.7	611.7	610.7	609.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9

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