

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: P333042-840

Luminaire Tested: **S124RDIW-S575D770U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333042-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S575D770U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5062.8 lumens
Efficiency: N/A
Efficacy: 134.6 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

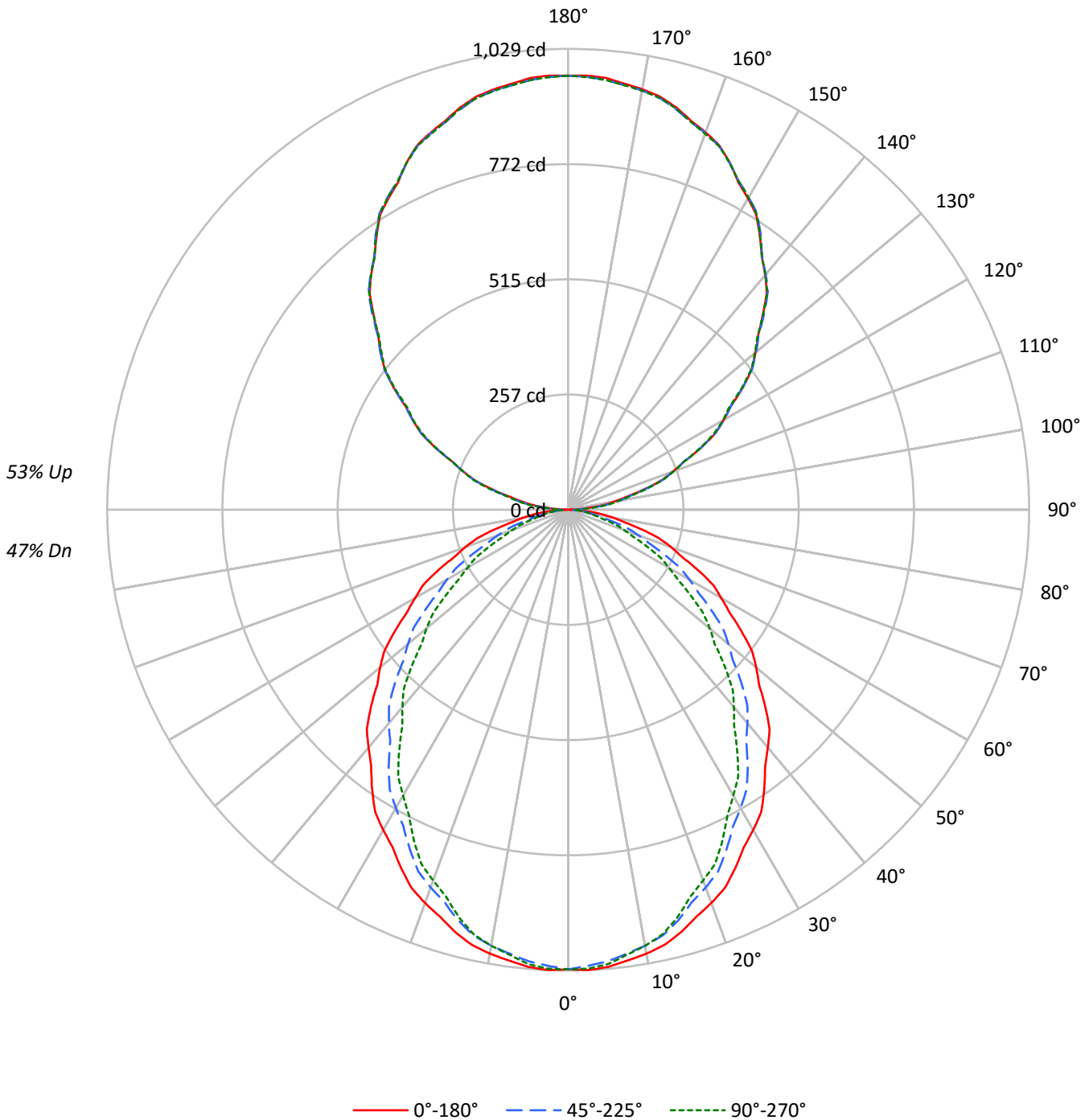
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47				47
1	97	93	89	86	89	86	83	80	72	70	67	59	58	56	47	46	45				40	
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39				34	
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33				29	
4	74	64	56	50	68	59	52	47	50	45	41	41	38	35	34	31	29				25	
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	30	27	25				22	
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22				19	
7	58	46	38	33	53	43	36	31	37	31	27	31	27	23	25	22	20				17	
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18				15	
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	21	18	16				14	
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15				13	

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	1.9
10°-20°	268.8	5.3
20°-30°	388.2	7.7
30°-40°	440.0	8.7
40°-50°	424.9	8.4
50°-60°	353.4	7.0
60°-70°	244.0	4.8
70°-80°	123.7	2.4
80°-90°	34.6	0.7
90°-100°	63.9	1.3
100°-110°	189.3	3.7
110°-120°	321.4	6.3
120°-130°	423.8	8.4
130°-140°	475.9	9.4
140°-150°	467.7	9.2
150°-160°	393.4	7.8
160°-170°	261.7	5.2
170°-180°	91.6	1.8
0°-30°	753.5	14.9
0°-40°	1193.5	23.6
0°-60°	1971.8	38.9
0°-90°	2374.1	46.9
90°-120°	574.6	11.4
90°-150°	1942.0	38.4
90°-180°	2689.0	53.1
0°-180°	5062.8	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°	2	10	16	21	22	5
95°	45	52	57	59	59	50
105°	175	176	178	181	183	185
115°	327	327	325	325	324	322
125°	476	476	475	474	472	424
135°	614	618	618	617	615	475
145°	746	749	750	749	746	467
155°	854	854	854	856	854	393
165°	930	928	926	930	928	262
175°	968	964	963	968	963	92
180°	969	969	969	969	969	



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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°	14.9	14.1	13.4	12.6	11.9	11.6	11.7	11.8	12.0	12.1	12.1
90°	2.2	4.0	6.0	7.8	9.6	11.2	12.5	13.8	15.1	16.5	17.5
92.5°	16.1	18.2	20.2	22.3	24.4	26.0	26.9	27.8	28.8	29.7	30.3
95°	44.9	46.5	48.0	49.5	51.0	52.3	53.4	54.6	55.8	57.0	57.5
97.5°	78.6	79.8	81.0	82.1	83.3	84.6	86.0	87.4	88.8	90.1	90.7
100°	104.9	105.6	106.2	106.9	107.6	108.7	110.2	111.7	113.2	114.7	115.0
102.5°	132.5	132.8	133.0	133.3	133.6	134.4	135.7	137.1	138.5	139.9	140.4
105°	174.6	174.8	175.0	175.1	175.3	175.7	176.4	177.0	177.7	178.3	178.8
107.5°	218.8	219.0	219.2	219.4	219.6	219.8	219.9	220.0	220.2	220.3	220.7
110°	248.8	249.1	249.5	249.8	250.1	250.2	250.0	249.9	249.7	249.5	249.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.0	280.0	280.1	280.2	280.2	280.1	279.8	279.5	279.2	278.9	278.9
115°	326.8	326.8	326.8	326.8	326.8	326.6	326.3	326.0	325.6	325.3	325.1
117.5°	370.8	371.0	371.1	371.2	371.4	371.3	371.1	370.9	370.6	370.4	369.8
120°	400.2	400.9	401.5	402.2	402.9	402.9	402.5	402.0	401.5	401.0	400.1
122.5°	430.8	431.1	431.3	431.6	431.9	431.9	431.7	431.4	431.2	431.0	430.4
125°	475.9	475.9	475.9	475.9	475.9	475.8	475.6	475.5	475.3	475.1	474.8
127.5°	516.8	517.4	517.9	518.4	518.9	519.0	518.7	518.5	518.2	518.0	517.6
130°	545.6	546.1	546.6	547.1	547.6	547.9	547.9	547.9	547.9	547.9	547.5
132.5°	575.0	575.4	575.7	576.1	576.5	576.6	576.4	576.3	576.2	576.0	575.7
135°	613.9	614.8	615.8	616.8	617.8	618.3	618.3	618.3	618.3	618.3	618.0
137.5°	656.1	656.6	657.0	657.5	658.0	658.3	658.6	658.8	659.1	659.4	658.9
140°	684.3	684.6	685.0	685.3	685.6	685.8	685.8	685.8	685.8	685.8	685.6
142.5°	710.0	710.4	710.7	711.0	711.4	711.6	711.3	711.2	711.1	710.9	710.9
145°	745.8	746.4	747.1	747.8	748.4	748.8	749.0	749.2	749.3	749.5	749.3
147.5°	781.1	781.9	782.7	783.6	784.4	784.7	784.6	784.4	784.3	784.2	784.0
150°	802.7	803.3	804.1	804.8	805.4	805.8	805.8	805.8	805.8	805.8	805.8
152.5°	823.1	823.5	823.9	824.4	824.8	825.0	825.1	825.3	825.4	825.5	825.9
155°	854.4	854.4	854.4	854.4	854.4	854.3	854.1	854.0	853.8	853.7	854.3
157.5°	880.8	880.5	880.2	879.9	879.6	879.5	879.4	879.4	879.4	879.3	879.8
160°	896.5	896.3	896.1	896.0	895.8	895.5	895.4	895.2	895.0	894.9	895.4
162.5°	910.8	910.4	909.9	909.5	909.1	908.8	908.6	908.5	908.3	908.1	909.0
165°	930.2	929.7	929.2	928.7	928.2	927.8	927.4	927.1	926.8	926.3	927.4
167.5°	944.9	944.3	943.6	942.9	942.2	941.8	941.9	941.9	941.9	942.0	943.0
170°	953.4	952.5	951.7	950.9	950.1	949.7	949.9	950.1	950.2	950.4	951.4
172.5°	959.4	958.7	958.0	957.3	956.5	956.2	956.2	956.3	956.3	956.3	957.6
175°	967.7	966.7	965.9	965.1	964.3	963.8	963.6	963.4	963.3	963.1	964.3
177.5°	970.3	969.7	969.0	968.4	967.7	967.3	967.3	967.3	967.3	967.3	968.3
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1



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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°	12.2	12.3	12.3	12.5	12.7	12.9	13.1	13.3
90°	18.5	19.5	20.5	21.1	21.5	21.8	22.1	22.5
92.5°	30.9	31.5	32.1	32.5	32.7	32.9	33.1	33.3
95°	58.0	58.5	59.0	59.2	59.2	59.2	59.2	59.2
97.5°	91.3	91.9	92.5	92.8	92.8	92.8	92.8	92.8
100°	115.3	115.6	116.0	116.1	116.1	116.1	116.1	116.1
102.5°	140.8	141.3	141.7	142.0	142.2	142.3	142.4	142.6
105°	179.4	179.9	180.4	180.9	181.4	181.9	182.4	182.9
107.5°	221.2	221.6	222.1	222.3	222.3	222.3	222.2	222.2
110°	248.9	248.6	248.2	248.3	248.8	249.3	249.8	250.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.7	278.7	278.7	278.8	278.9	279.0	279.1
115°	325.0	324.8	324.6	324.5	324.3	324.2	324.0	323.8
117.5°	369.3	368.7	368.1	367.7	367.4	367.0	366.7	366.4
120°	399.3	398.5	397.7	397.4	397.8	398.1	398.4	398.7
122.5°	429.8	429.3	428.7	428.1	427.5	426.9	426.4	425.8
125°	474.5	474.2	473.8	473.5	473.2	472.8	472.5	472.2
127.5°	517.3	516.9	516.5	516.2	516.0	515.7	515.4	515.2
130°	547.2	546.8	546.5	546.0	545.4	544.7	544.0	543.4
132.5°	575.4	575.1	574.7	574.4	574.2	573.9	573.6	573.4
135°	617.6	617.3	617.0	616.6	616.1	615.6	615.1	614.6
137.5°	658.5	658.1	657.7	657.5	657.6	657.7	657.8	657.9
140°	685.5	685.3	685.1	685.0	684.8	684.6	684.5	684.3
142.5°	710.9	710.8	710.8	710.8	710.7	710.7	710.7	710.6
145°	749.2	749.0	748.8	748.5	748.0	747.5	747.0	746.5
147.5°	783.9	783.8	783.6	783.5	783.3	783.2	782.9	782.7
150°	805.8	805.8	805.8	805.7	805.5	805.3	805.2	805.0
152.5°	826.3	826.7	827.1	827.1	826.7	826.3	825.8	825.4
155°	855.1	855.7	856.4	856.4	855.7	855.1	854.3	853.7
157.5°	880.3	880.8	881.3	881.3	880.7	880.2	879.6	879.0
160°	896.0	896.5	897.0	896.8	896.0	895.0	894.2	893.4
162.5°	909.9	910.8	911.7	911.7	910.9	910.1	909.3	908.4
165°	928.4	929.4	930.4	930.6	929.9	929.2	928.6	927.9
167.5°	944.0	944.9	945.9	945.9	944.9	943.9	942.9	941.8
170°	952.4	953.4	954.4	954.3	953.1	952.0	950.8	949.7
172.5°	958.7	959.8	960.9	960.9	959.7	958.6	957.4	956.2
175°	965.4	966.6	967.8	967.8	966.6	965.4	964.3	963.1
177.5°	969.2	970.1	971.1	971.0	969.9	968.9	967.8	966.7
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1

(END OF REPORT)