

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: P332005-927

Luminaire Tested: **S123DIP-S1000D365U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332005-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D365U927-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4367.6 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

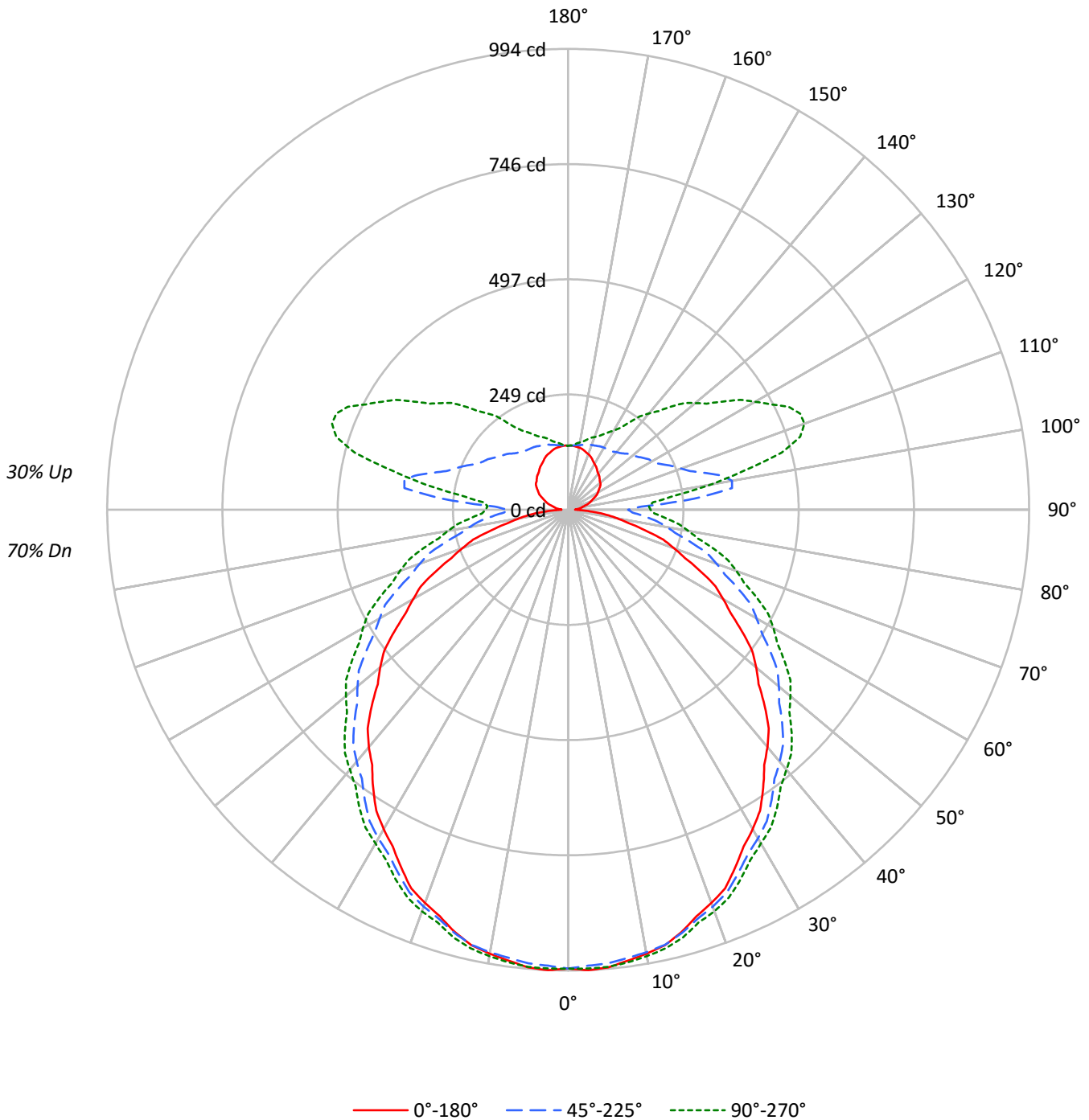
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	101	96	91	87	95	90	86	83	81	77	75	72	69	67	63	62	60	56
2	91	83	76	70	86	78	72	67	70	65	61	62	58	55	55	52	49	46
3	83	72	64	58	78	68	61	55	61	55	50	54	50	46	48	45	41	38
4	76	64	55	48	71	60	53	46	54	48	43	48	43	39	43	39	35	32
5	69	57	48	41	65	54	46	40	48	42	37	43	38	34	38	34	31	28
6	64	51	42	36	60	48	40	35	44	37	32	39	34	29	35	30	27	24
7	59	46	37	31	56	44	36	30	39	33	28	36	30	26	32	27	24	21
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	19
9	51	38	30	25	48	36	29	24	33	27	22	30	25	21	27	22	19	17
10	48	35	27	22	45	34	26	22	31	24	20	28	22	19	25	21	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	2.1
10°-20°	267.5	6.1
20°-30°	400.0	9.2
30°-40°	477.7	10.9
40°-50°	499.9	11.4
50°-60°	469.1	10.7
60°-70°	391.8	9.0
70°-80°	280.3	6.4
80°-90°	168.2	3.9
90°-100°	181.8	4.2
100°-110°	295.0	6.8
110°-120°	265.8	6.1
120°-130°	200.4	4.6
130°-140°	148.0	3.4
140°-150°	103.5	2.4
150°-160°	70.2	1.6
160°-170°	41.2	0.9
170°-180°	13.4	0.3
0°-30°	761.3	17.4
0°-40°	1239.1	28.4
0°-60°	2208.0	50.6
0°-90°	3048.3	69.8
90°-120°	742.7	17.0
90°-150°	1194.5	27.3
90°-180°	1319.0	30.2
0°-180°	4367.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	15	70	129	165	177	10
95°	21	85	273	187	183	20
105°	41	84	306	504	477	43
115°	63	91	229	460	525	62
125°	83	99	195	347	406	74
135°	96	113	171	271	315	74
145°	108	122	156	205	229	67
155°	121	131	152	172	179	56
165°	132	136	145	154	156	37
175°	138	138	139	141	141	13
180°	138	138	138	138	138	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	28.8	40.8	52.9	65.0	77.0	89.2	101.6	114.0	126.4	138.8	146.9
90°	14.6	26.9	39.2	51.7	64.1	76.6	89.7	102.7	115.7	128.8	136.7
92.5°	16.6	28.9	41.8	54.6	67.6	83.0	102.3	126.4	150.3	158.0	155.3
95°	21.4	31.5	44.0	58.1	74.7	96.2	131.7	185.1	242.8	272.7	248.8
97.5°	26.8	35.5	46.3	58.9	74.5	96.2	130.2	188.4	276.1	356.2	381.4
100°	30.4	38.3	48.0	59.6	74.0	94.2	124.8	177.3	262.0	358.9	421.0
102.5°	34.2	41.7	50.3	60.9	73.8	92.8	121.1	167.2	243.5	339.2	417.9
105°	41.1	47.7	55.1	64.2	75.3	92.0	117.4	156.5	219.8	305.9	393.0
107.5°	47.3	53.0	59.6	67.7	77.6	93.0	116.1	149.8	202.2	275.9	355.3
110°	51.8	57.0	62.7	70.1	79.1	94.0	116.1	146.9	194.1	258.8	331.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.7	61.2	66.1	72.7	81.0	95.0	115.9	144.8	187.0	245.1	310.2
115°	62.7	66.8	71.3	77.0	84.6	97.9	117.2	142.9	180.1	229.3	283.5
117.5°	69.7	72.7	75.9	80.2	87.4	99.3	117.9	141.2	173.6	216.4	264.0
120°	73.8	75.8	78.3	82.4	88.9	100.4	118.4	140.9	170.3	209.6	253.2
122.5°	78.0	79.5	81.5	85.2	90.9	102.3	119.8	140.7	168.0	203.7	243.5
125°	83.0	83.6	85.2	88.3	93.6	104.7	121.4	140.7	164.5	195.2	230.2
127.5°	87.7	88.2	90.1	93.0	98.6	108.9	124.1	141.0	161.8	187.7	217.6
130°	90.5	91.2	93.5	96.6	102.2	112.0	126.1	141.5	160.3	182.8	209.9
132.5°	92.0	93.0	95.7	99.7	105.4	114.7	127.5	141.8	158.3	178.2	202.6
135°	95.7	96.6	99.3	103.3	109.0	117.7	129.0	141.2	155.0	171.3	192.2
137.5°	99.1	100.1	103.0	107.3	112.9	120.5	130.3	140.9	152.3	165.6	183.2
140°	100.8	102.1	105.0	109.4	115.0	122.4	131.2	140.3	150.6	161.9	177.5
142.5°	103.5	104.4	107.3	111.1	116.5	123.0	131.0	139.3	148.4	158.0	171.9
145°	107.7	108.4	110.6	114.5	119.1	125.4	132.7	140.2	148.1	156.5	167.4
147.5°	111.1	111.5	114.0	117.6	122.2	127.7	134.4	141.2	148.1	155.4	163.7
150°	113.9	114.2	116.5	120.1	124.0	129.0	135.5	141.4	148.1	154.6	161.5
152.5°	116.8	116.9	119.1	122.3	125.8	130.6	136.2	141.8	147.4	153.4	159.7
155°	121.2	121.2	122.9	125.7	128.8	132.7	137.4	142.0	146.7	151.5	157.0
157.5°	124.7	124.9	126.3	128.7	131.3	134.4	138.2	142.2	145.8	149.7	154.0
160°	127.4	127.4	128.5	130.7	132.7	135.5	138.9	142.2	145.3	148.4	152.0
162.5°	129.4	129.4	130.3	132.1	133.8	136.2	139.1	142.0	144.4	147.0	150.0
165°	132.4	132.1	132.7	134.1	135.2	137.2	139.4	141.4	143.1	145.0	147.3
167.5°	134.7	134.4	134.7	135.7	136.5	137.8	139.3	140.9	141.7	143.0	144.7
170°	136.0	135.5	135.8	136.6	137.2	137.8	139.1	140.2	140.9	141.6	143.1
172.5°	137.0	136.6	136.7	137.3	137.6	137.9	139.1	140.1	140.1	140.5	141.5
175°	138.0	137.8	137.4	138.0	138.0	138.3	138.9	139.4	139.1	139.1	139.7
177.5°	138.6	138.3	138.1	138.3	138.3	138.3	138.6	138.9	138.6	138.3	138.6
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	155.0	163.3	171.4	176.8	179.2	181.6	184.1	186.4
90°	145.1	153.5	162.0	167.8	169.9	172.6	175.3	177.4
92.5°	154.4	157.5	163.3	166.9	168.6	169.9	172.5	174.1
95°	222.4	197.3	189.9	184.7	181.8	181.7	182.1	183.4
97.5°	364.5	321.6	292.6	264.0	245.7	235.4	230.3	230.3
100°	437.8	422.0	396.2	361.2	335.3	317.2	308.7	311.4
102.5°	458.4	464.5	452.1	431.5	411.9	398.1	391.3	387.3
105°	458.2	492.9	504.9	502.1	491.4	482.9	476.1	476.8
107.5°	428.0	479.9	510.9	525.1	527.4	525.9	525.1	524.6
110°	402.3	460.0	501.5	525.2	535.0	539.1	540.4	541.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	375.9	434.6	480.1	509.4	525.9	534.9	539.2	541.4
115°	341.0	395.5	442.4	476.7	499.6	513.9	521.4	524.7
117.5°	313.4	361.2	403.8	438.6	462.3	478.3	488.2	492.0
120°	298.2	341.5	380.6	412.5	436.3	453.6	462.0	465.3
122.5°	285.2	324.7	361.2	390.9	412.3	428.0	437.1	440.9
125°	267.1	302.7	334.5	360.3	379.9	393.9	402.6	406.2
127.5°	250.4	282.4	311.4	334.9	352.5	364.7	372.6	376.0
130°	239.7	269.4	296.7	318.7	335.0	346.5	353.8	357.5
132.5°	229.4	257.0	282.4	303.6	319.1	330.8	337.6	340.9
135°	215.3	239.5	262.0	280.7	295.6	305.2	311.4	314.6
137.5°	202.2	222.2	241.7	258.0	270.8	280.4	285.9	288.4
140°	194.3	212.1	229.2	243.7	255.5	264.5	270.2	271.1
142.5°	186.2	201.8	216.6	229.3	239.6	247.7	252.9	253.8
145°	178.2	189.4	200.3	209.8	217.8	224.6	227.8	229.3
147.5°	171.8	179.7	187.5	194.0	200.2	205.0	208.0	209.1
150°	167.9	174.4	180.3	185.8	190.5	194.1	196.2	196.7
152.5°	165.5	171.0	176.3	180.7	184.1	187.0	188.1	188.3
155°	161.8	166.3	170.5	173.8	176.3	178.6	179.2	179.4
157.5°	157.9	161.6	164.9	167.5	169.7	171.3	171.8	171.7
160°	155.7	158.8	161.5	163.5	165.4	167.2	167.2	166.8
162.5°	153.0	155.6	158.2	159.9	161.2	162.6	162.6	162.4
165°	149.5	151.1	153.1	154.6	155.7	156.8	156.5	156.5
167.5°	146.5	147.7	148.9	149.9	150.4	151.1	150.9	150.9
170°	144.4	145.3	146.4	146.9	147.3	147.8	147.5	147.5
172.5°	142.7	143.3	144.2	144.5	144.6	145.1	144.7	144.4
175°	140.2	140.5	141.1	141.1	141.1	141.4	141.1	140.9
177.5°	138.7	138.9	139.2	139.2	138.9	139.2	138.7	138.7
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3

(END OF REPORT)