

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: P242914

Luminaire Tested: **S125RDR-S610D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-S610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2265.8 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

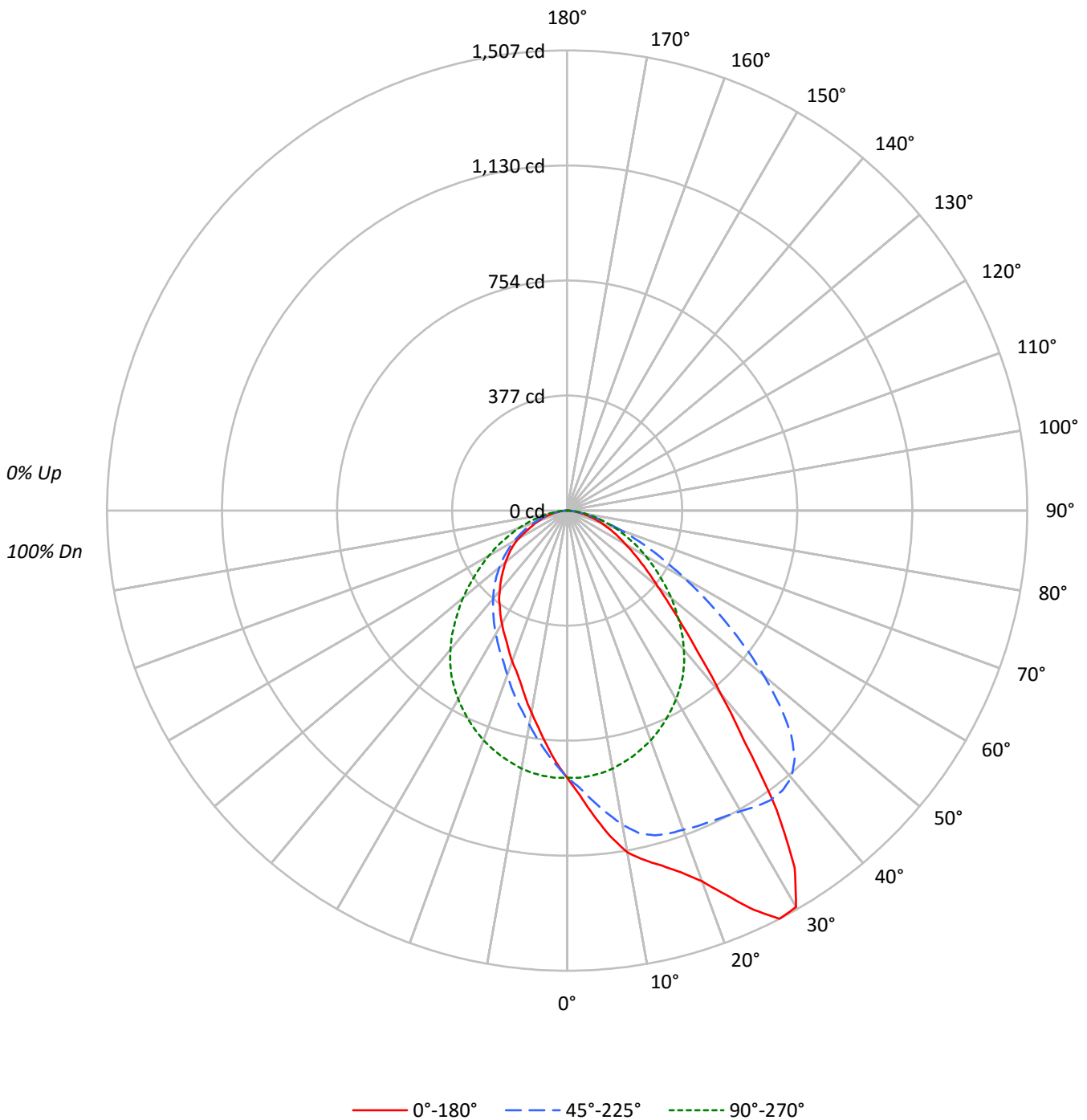
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6215	6215	6215
5°	7151	6223	5496
10°	8203	6192	4850
15°	8860	6129	4311
20°	9770	6055	3981
25°	11306	5957	3694
30°	12303	5854	3506
35°	10379	5734	3333
40°	7248	5519	3184
45°	5376	5229	3039
50°	4287	4926	2914
55°	3639	4550	2803
60°	3143	4215	2623
65°	2802	3851	2259
70°	2462	3529	2059
75°	2128	3056	1933
80°	1617	2570	1617
85°	1346	2022	1525



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.7
10°-20°	245.9	10.9
20°-30°	389.8	17.2
30°-40°	471.1	20.8
40°-50°	419.5	18.5
50°-60°	321.6	14.2
60°-70°	208.9	9.2
70°-80°	101.4	4.5
80°-90°	23.8	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	719.5	31.8
0°-40°	1190.6	52.5
0°-60°	1931.7	85.3
0°-90°	2265.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2265.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	874	874	874	874	874	
5°	1002	953	872	793	770	100
15°	1204	1101	833	642	586	345
25°	1442	1122	760	517	471	664
35°	1196	1159	661	421	384	725
45°	535	1038	520	334	302	424
55°	294	630	367	245	226	266
65°	167	300	229	157	134	165
75°	78	105	111	78	70	83
85°	16	18	25	20	19	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	931.2	930.5	931.9	928.0	928.4	922.2	922.2	917.6	911.5	906.8	904.7
5°	1002.3	1003.0	1001.6	996.2	992.6	987.2	981.1	970.4	961.4	952.8	945.9
7.5°	1074.8	1075.5	1070.9	1069.8	1060.5	1054.7	1041.1	1027.1	1014.9	998.7	987.2
10°	1136.6	1136.2	1131.2	1127.2	1119.3	1109.3	1096.0	1078.8	1062.6	1044.7	1027.4
12.5°	1172.5	1171.4	1170.7	1165.6	1158.5	1149.8	1139.1	1122.2	1101.4	1081.3	1060.5
15°	1204.1	1201.5	1196.9	1190.8	1180.4	1170.0	1157.4	1142.3	1123.3	1101.0	1082.4
17.5°	1242.1	1242.5	1235.3	1228.8	1215.2	1198.0	1179.3	1156.3	1131.9	1109.3	1090.6
20°	1291.7	1290.6	1283.4	1266.9	1250.7	1227.8	1205.5	1175.7	1144.1	1112.2	1087.4
22.5°	1362.7	1359.5	1352.0	1329.0	1301.7	1270.5	1233.5	1195.4	1155.6	1118.3	1083.8
25°	1441.7	1439.6	1424.8	1399.7	1364.5	1318.9	1274.4	1224.5	1169.6	1121.8	1082.4
27.5°	1507.0	1502.7	1489.5	1465.8	1431.3	1382.1	1320.7	1256.1	1190.8	1128.0	1073.7
30°	1499.1	1504.5	1503.1	1493.4	1469.0	1425.9	1370.3	1295.2	1213.8	1136.6	1068.7
32.5°	1386.4	1391.1	1407.2	1433.5	1441.4	1430.6	1392.5	1324.7	1239.6	1149.1	1064.8
35°	1196.2	1202.6	1227.0	1265.4	1315.7	1357.7	1366.3	1329.0	1253.2	1158.8	1060.8
37.5°	954.2	996.2	1012.7	1051.8	1130.8	1207.3	1273.7	1288.8	1247.9	1156.7	1056.2
40°	781.2	789.8	826.4	872.0	935.9	1016.3	1122.2	1198.7	1201.2	1142.3	1041.1
42.5°	640.4	651.9	674.2	708.3	760.7	841.1	951.3	1058.3	1116.1	1102.8	1021.3
45°	534.9	543.2	561.5	589.5	631.5	697.9	791.9	908.6	1001.2	1037.5	982.9
47.5°	452.3	456.6	473.5	496.1	528.4	578.7	655.2	760.7	870.9	944.5	930.1
50°	387.7	392.7	404.9	421.1	447.3	488.2	546.4	630.7	745.3	840.4	859.4
52.5°	337.5	341.4	347.9	362.9	383.4	412.5	456.6	530.9	631.1	733.8	784.0
55°	293.7	296.5	302.6	311.2	328.5	351.1	391.7	444.4	527.7	629.7	694.3
57.5°	256.3	257.8	261.3	270.0	282.5	299.4	330.3	378.4	438.7	534.5	605.6
60°	221.1	222.6	227.6	233.0	242.3	257.4	280.4	311.6	369.0	444.8	516.9
62.5°	193.1	193.9	195.3	200.7	208.6	219.3	236.2	260.3	303.0	367.2	434.4
65°	166.6	166.9	167.6	172.0	177.0	185.6	197.4	215.4	249.9	300.1	360.4
67.5°	140.0	140.7	143.2	144.7	150.8	155.1	162.6	177.0	203.5	239.4	288.3
70°	118.5	118.1	120.6	122.4	124.2	129.6	134.3	145.4	160.5	186.3	225.4
72.5°	98.4	97.3	98.0	98.4	100.9	104.1	108.8	114.5	125.3	141.1	168.7
75°	77.5	77.9	77.9	78.6	80.4	81.9	83.3	86.9	93.3	105.2	121.3
77.5°	58.2	57.4	59.2	59.2	60.7	62.5	63.5	65.0	67.5	72.9	82.6
80°	39.5	39.5	39.8	40.9	40.6	41.3	43.1	44.5	47.7	50.6	53.5
82.5°	28.0	27.6	28.0	28.0	28.0	28.7	29.1	29.1	29.8	30.9	32.7
85°	16.5	16.5	16.9	16.9	17.2	17.2	17.6	17.6	17.6	17.9	18.3
87.5°	7.9	7.5	7.2	7.2	7.5	8.3	7.9	7.5	7.5	7.5	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	904.7	902.1	897.5	893.2	887.8	883.1	879.9	875.9	870.9	864.8	859.8
5°	938.4	930.5	920.1	911.1	899.6	890.7	881.3	872.3	863.4	851.9	841.8
7.5°	975.7	960.3	945.9	927.3	910.4	895.7	881.3	866.6	852.6	836.8	822.1
10°	1009.5	989.7	967.8	942.7	919.7	897.8	877.7	858.0	837.2	818.9	799.1
12.5°	1041.1	1014.2	988.3	954.9	926.2	898.2	871.3	845.4	822.8	797.7	776.1
15°	1057.6	1032.5	1004.5	965.7	927.3	895.0	864.8	832.9	805.2	778.7	755.0
17.5°	1067.3	1040.7	1008.4	970.7	929.4	889.2	851.2	817.1	785.5	755.0	728.8
20°	1063.0	1037.5	1004.1	968.6	923.7	881.3	839.3	800.6	764.3	731.6	703.3
22.5°	1052.6	1026.0	994.0	956.0	914.0	868.4	822.8	780.8	742.4	708.3	676.7
25°	1042.2	1006.3	973.2	936.6	896.0	851.5	805.2	759.6	719.1	684.6	650.9
27.5°	1032.1	988.7	947.7	912.6	869.1	828.9	783.7	736.7	694.3	659.5	625.0
30°	1017.4	967.1	920.8	879.5	839.0	801.3	758.9	713.3	669.5	633.3	598.1
32.5°	999.1	944.9	892.8	843.6	804.9	767.5	730.2	687.1	644.7	607.1	571.2
35°	984.4	916.1	860.9	810.2	766.8	730.5	696.1	660.9	618.2	579.4	544.6
37.5°	963.9	888.9	826.4	771.1	725.9	690.0	662.3	629.0	589.1	551.4	519.1
40°	945.6	858.7	788.7	734.1	686.0	647.6	622.1	594.8	559.3	524.5	492.2
42.5°	921.2	831.1	750.7	693.2	644.7	608.1	582.3	559.3	530.9	498.6	463.5
45°	887.8	793.7	711.5	650.5	601.7	565.4	541.4	520.2	497.6	467.4	437.3
47.5°	847.9	758.2	671.7	604.5	557.5	523.4	499.7	482.1	465.6	439.4	408.9
50°	798.0	712.2	628.2	563.6	512.6	480.7	458.8	445.5	430.8	407.5	383.0
52.5°	739.2	664.9	583.0	516.6	469.2	439.8	418.9	405.7	394.2	376.2	353.2
55°	676.7	609.6	534.2	474.2	430.1	399.9	379.8	367.2	360.1	343.9	325.6
57.5°	606.0	554.3	486.1	427.6	387.7	357.6	342.5	331.3	323.1	311.2	297.6
60°	531.3	497.6	438.0	383.0	347.1	318.8	305.5	296.5	289.0	279.3	269.2
62.5°	455.6	433.3	383.4	338.2	305.9	283.2	271.0	263.1	254.2	248.4	238.7
65°	389.5	367.6	331.7	294.7	264.2	245.2	236.2	229.0	223.7	216.5	209.7
67.5°	316.3	306.2	279.7	252.0	229.8	211.4	203.5	197.8	191.7	187.4	182.4
70°	249.9	245.6	228.0	211.1	190.6	179.1	172.0	169.8	161.9	157.6	154.4
72.5°	191.0	189.5	181.3	170.9	158.0	148.3	141.8	139.3	135.0	131.7	130.0
75°	138.9	139.6	137.9	130.3	124.9	118.5	112.7	111.3	107.7	104.8	103.0
77.5°	94.8	98.4	97.6	97.3	94.8	90.1	87.6	86.5	82.6	81.5	81.1
80°	60.3	64.3	67.8	67.5	66.8	65.7	63.9	62.8	61.0	60.0	59.2
82.5°	35.2	38.8	41.6	44.2	44.2	43.1	42.0	41.6	41.6	40.9	40.9
85°	19.0	19.7	20.8	23.3	25.1	25.5	25.1	24.8	23.7	24.1	24.4
87.5°	8.3	8.3	8.6	8.6	8.3	10.1	11.1	11.5	10.8	10.1	9.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	856.2	851.2	847.6	840.4	835.4	833.2	829.3	828.2	832.1	829.3	828.9
5°	834.3	823.9	815.6	807.4	798.4	792.7	784.0	782.6	780.4	777.2	776.5
7.5°	808.8	795.9	786.2	772.5	761.4	752.4	741.7	737.4	735.2	731.3	724.8
10°	783.0	766.8	752.4	738.8	724.1	712.2	701.5	693.2	687.8	682.8	680.6
12.5°	757.5	741.0	721.6	704.3	687.5	673.8	661.6	657.0	650.9	644.7	639.0
15°	730.9	709.0	688.9	669.9	655.9	641.5	630.0	622.1	613.2	610.6	601.0
17.5°	702.5	682.1	658.4	637.9	622.1	607.1	594.5	585.2	578.3	568.6	564.0
20°	676.3	650.9	627.9	609.6	591.6	573.0	560.0	552.5	546.0	538.5	534.9
22.5°	648.3	623.6	599.9	577.6	559.3	541.0	532.7	524.8	517.3	510.5	505.5
25°	621.1	595.9	571.2	548.9	529.9	516.6	505.8	496.8	492.9	486.1	481.0
27.5°	593.8	567.2	542.1	518.7	504.0	490.7	482.1	474.9	467.4	461.3	456.6
30°	567.6	540.3	512.3	494.7	478.9	466.3	456.6	449.8	444.4	439.0	435.8
32.5°	541.4	513.0	488.9	469.6	454.8	444.4	434.4	427.9	422.2	416.1	412.1
35°	513.0	484.3	464.2	445.5	430.8	420.7	413.9	404.6	399.9	395.6	391.7
37.5°	487.5	460.2	438.0	421.8	408.2	398.5	389.5	384.8	378.7	375.1	371.9
40°	458.8	434.4	414.6	397.4	388.1	376.9	368.7	362.2	357.9	352.9	349.3
42.5°	432.9	410.7	391.7	376.6	364.4	355.4	347.5	341.0	335.3	332.1	329.2
45°	408.9	386.3	367.6	353.2	342.5	333.5	325.2	322.0	314.8	310.5	309.1
47.5°	383.8	363.3	345.0	331.7	320.6	312.3	304.4	297.2	293.7	289.3	287.2
50°	358.3	338.9	322.0	309.1	298.3	289.0	281.8	277.5	272.1	268.2	265.3
52.5°	332.8	315.2	298.3	286.1	277.1	267.8	259.6	255.2	250.2	248.1	246.3
55°	308.7	289.7	275.3	263.1	253.4	244.8	237.3	233.0	229.8	227.2	226.5
57.5°	281.1	265.7	252.0	241.2	230.8	222.6	215.8	211.8	208.9	208.6	206.1
60°	254.2	240.5	228.3	216.5	207.9	200.3	194.6	189.9	187.0	186.7	186.0
62.5°	227.2	214.3	203.2	193.1	185.6	178.4	173.0	167.6	166.2	164.1	162.3
65°	200.7	188.8	179.5	171.2	163.0	156.9	151.5	148.3	144.3	142.2	138.2
67.5°	174.5	164.8	155.8	149.0	142.2	136.1	131.4	126.7	123.9	122.1	118.8
70°	148.6	141.4	132.5	124.9	119.9	115.2	111.6	106.3	104.5	103.0	101.6
72.5°	124.2	118.1	110.9	105.2	100.2	95.9	91.5	89.7	88.0	86.5	85.8
75°	101.6	95.5	89.0	84.7	81.1	77.5	75.4	73.6	72.9	72.5	71.1
77.5°	79.0	75.4	70.0	66.1	63.5	62.1	60.0	59.2	59.6	57.8	57.4
80°	57.1	55.3	51.0	49.5	47.7	46.3	45.2	43.4	41.6	40.9	39.8
82.5°	38.8	37.0	35.9	33.4	32.0	31.2	30.2	29.8	30.5	29.4	29.1
85°	22.6	20.8	20.1	19.7	19.0	19.7	19.4	19.0	18.7	18.3	18.7
87.5°	9.0	9.0	8.6	9.3	8.3	8.6	8.6	8.3	8.3	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	874.5	874.5	874.5	874.5
2.5°	828.6	824.6	823.5	825.0
5°	772.9	769.3	771.1	770.4
7.5°	725.9	721.2	715.8	717.3
10°	676.0	672.4	670.2	672.0
12.5°	634.0	632.2	630.4	629.0
15°	596.6	592.3	590.5	585.9
17.5°	560.7	559.3	554.6	551.4
20°	529.5	528.1	523.4	526.3
22.5°	503.7	500.1	499.4	497.6
25°	479.6	474.9	473.2	471.0
27.5°	455.2	452.7	450.2	449.5
30°	431.5	429.0	427.2	427.2
32.5°	410.3	408.5	406.7	406.4
35°	389.9	387.0	386.3	384.1
37.5°	368.3	365.8	365.8	366.2
40°	347.9	346.1	345.7	343.2
42.5°	326.0	325.2	323.8	323.1
45°	306.6	304.1	304.1	302.3
47.5°	286.1	284.0	284.3	282.2
50°	265.7	264.6	264.2	263.5
52.5°	245.2	244.8	246.6	244.8
55°	227.2	226.2	228.3	226.2
57.5°	206.1	205.3	207.5	206.1
60°	185.2	183.1	184.2	184.5
62.5°	160.5	159.4	160.1	158.0
65°	137.5	136.4	135.0	134.3
67.5°	119.5	116.3	116.3	117.0
70°	99.4	99.4	99.1	99.1
72.5°	85.4	85.1	84.4	84.0
75°	71.1	71.4	70.7	70.4
77.5°	55.6	53.8	54.6	53.8
80°	39.8	39.5	40.6	39.5
82.5°	29.4	29.1	29.4	28.7
85°	19.0	18.7	18.3	18.7
87.5°	8.3	7.9	7.9	7.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)