

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: P332316-927

Luminaire Tested: **S123RDIP-S775D805U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332316-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D805U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4497.3 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

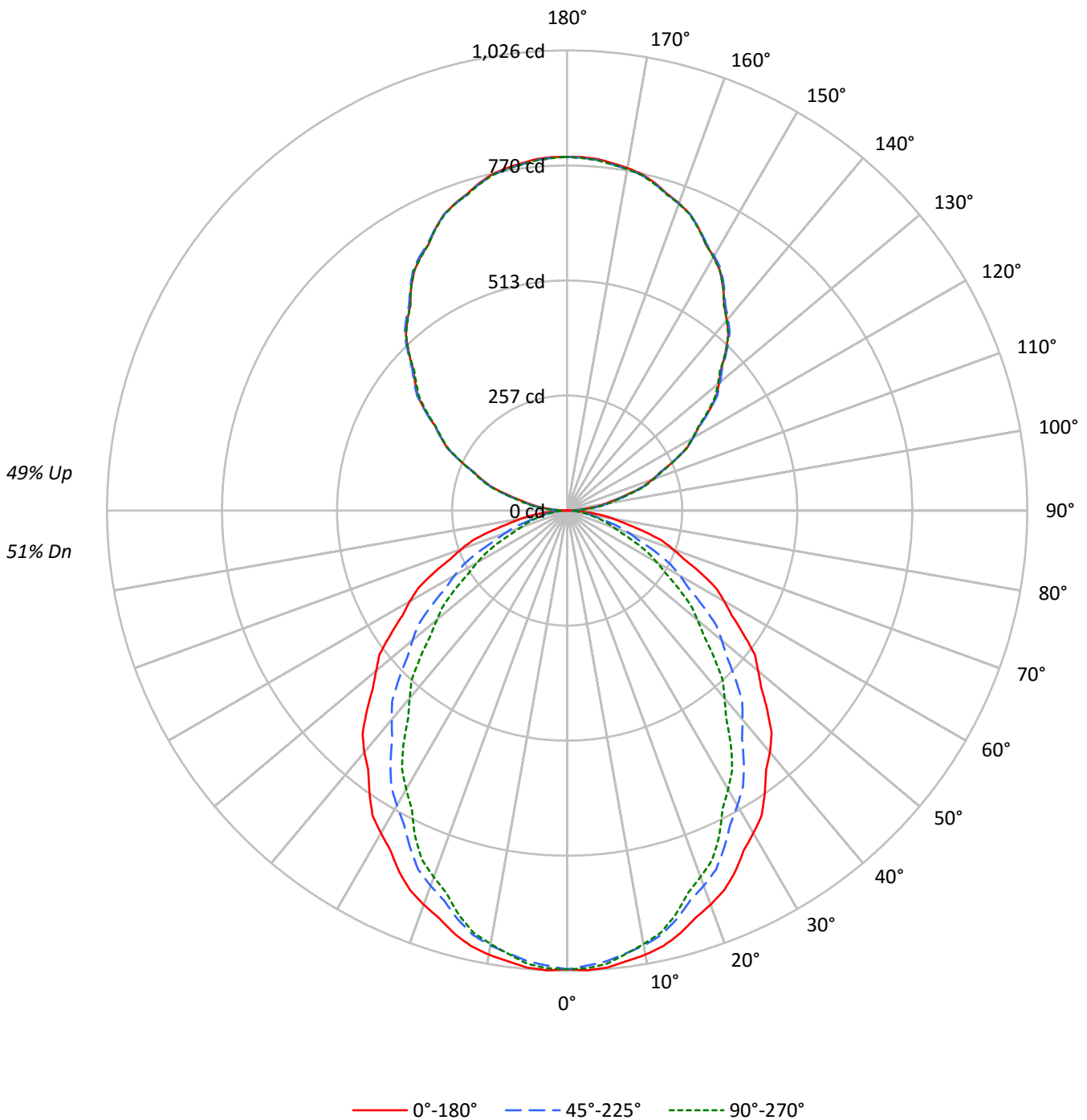
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84		70	70	70		57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70		62	61	59		51	50	49	44
2	90	83	77	72	83	77	71	67	65	62	58		55	52	50		46	44	42	37
3	82	73	66	60	76	68	61	56	58	53	49		49	46	43		41	38	36	32
4	75	65	57	51	69	60	53	48	52	46	42		44	40	37		36	34	31	28
5	69	58	50	44	64	54	47	42	46	41	37		39	35	32		33	30	27	24
6	64	52	44	38	59	49	41	36	42	36	32		36	31	28		30	27	24	21
7	59	47	39	34	55	44	37	32	38	33	28		33	28	25		28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25		30	26	22		25	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23		28	23	20		23	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21		26	21	18		22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	2.1
10°-20°	267.2	5.9
20°-30°	384.8	8.6
30°-40°	433.4	9.6
40°-50°	414.6	9.2
50°-60°	339.6	7.6
60°-70°	229.1	5.1
70°-80°	115.3	2.6
80°-90°	32.8	0.7
90°-100°	51.4	1.1
100°-110°	153.7	3.4
110°-120°	261.5	5.8
120°-130°	343.9	7.6
130°-140°	386.6	8.6
140°-150°	380.0	8.4
150°-160°	319.9	7.1
160°-170°	212.9	4.7
170°-180°	74.6	1.7
0°-30°	748.0	16.6
0°-40°	1181.5	26.3
0°-60°	1935.6	43.0
0°-90°	2312.8	51.4
90°-120°	466.6	10.4
90°-150°	1577.1	35.1
90°-180°	2185.0	48.6
0°-180°	4497.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	7	15	17	19	4
95°	36	41	46	48	48	41
105°	139	141	146	146	147	149
115°	263	265	264	264	264	260
125°	385	387	386	383	381	343
135°	500	503	503	500	499	385
145°	606	608	609	609	606	379
155°	694	694	695	697	693	319
165°	756	754	754	758	754	213
175°	787	784	784	787	784	75
180°	788	788	788	788	788	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.1	14.7	13.4	12.0	10.7	10.1	10.5	10.9	11.2	11.6	11.6
90°	0.6	2.0	3.4	4.8	6.1	7.7	9.5	11.2	13.1	14.9	15.4
92.5°	15.0	15.9	16.9	17.8	18.7	19.7	20.8	21.8	22.7	23.8	24.2
95°	36.5	37.5	38.5	39.5	40.4	41.4	42.5	43.6	44.8	45.9	46.4
97.5°	64.9	65.6	66.3	67.0	67.8	68.5	69.3	70.1	70.9	71.7	72.3
100°	84.2	85.1	85.9	86.7	87.5	88.3	89.0	89.7	90.4	91.0	91.5
102.5°	106.5	107.0	107.5	108.1	108.5	109.2	110.1	111.1	111.9	112.9	113.3
105°	139.3	139.7	139.9	140.2	140.5	141.2	142.4	143.7	145.0	146.2	146.2
107.5°	177.5	177.7	177.8	178.0	178.2	178.5	179.0	179.5	180.0	180.5	180.9
110°	201.3	201.5	201.8	202.1	202.4	202.6	203.0	203.2	203.5	203.7	204.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.1	226.2	226.4	226.6	226.7	226.8	226.9	227.0	227.0	227.0	227.8
115°	263.2	263.6	264.0	264.4	264.9	265.0	264.7	264.4	264.1	263.9	264.0
117.5°	300.6	301.0	301.2	301.4	301.7	301.7	301.3	301.0	300.6	300.2	300.2
120°	323.9	324.7	325.6	326.4	327.3	327.3	326.6	325.9	325.3	324.6	324.4
122.5°	348.2	348.8	349.4	350.0	350.6	350.8	350.4	350.1	349.7	349.4	349.0
125°	385.2	385.6	386.0	386.5	386.9	387.0	386.7	386.4	386.1	385.9	385.3
127.5°	419.5	420.3	421.2	422.1	422.9	423.3	422.9	422.6	422.3	422.0	421.3
130°	442.2	443.3	444.4	445.5	446.6	446.9	446.6	446.2	445.8	445.3	444.7
132.5°	465.0	466.1	467.2	468.3	469.4	469.8	469.5	469.2	468.9	468.6	467.9
135°	499.8	500.7	501.5	502.3	503.1	503.5	503.4	503.2	503.0	503.0	502.4
137.5°	532.0	532.7	533.4	534.1	534.8	535.3	535.7	536.0	536.4	536.7	536.1
140°	554.3	555.0	555.7	556.4	557.1	557.5	557.6	557.8	557.9	558.0	557.9
142.5°	574.6	575.4	576.0	576.7	577.4	577.9	578.1	578.4	578.6	578.8	578.7
145°	606.3	606.7	606.9	607.2	607.4	607.8	608.2	608.6	609.0	609.4	609.3
147.5°	634.1	634.6	635.1	635.6	636.1	636.5	636.9	637.3	637.7	638.1	638.1
150°	653.4	653.7	653.9	654.3	654.5	654.8	655.1	655.4	655.6	655.9	655.9
152.5°	669.3	669.6	670.0	670.4	670.8	671.1	671.3	671.5	671.6	671.8	672.0
155°	694.3	694.3	694.3	694.3	694.3	694.3	694.5	694.7	694.8	694.9	695.5
157.5°	715.6	715.4	715.3	715.1	714.9	714.9	715.0	715.2	715.3	715.3	716.0
160°	729.0	728.7	728.4	728.2	727.9	727.8	727.8	727.8	727.8	727.8	728.4
162.5°	740.8	740.5	740.1	739.7	739.3	739.2	739.3	739.4	739.5	739.7	740.3
165°	756.2	755.8	755.4	755.0	754.6	754.4	754.4	754.4	754.4	754.4	755.2
167.5°	768.5	767.9	767.4	766.8	766.3	766.1	766.2	766.3	766.4	766.5	767.4
170°	775.5	774.9	774.4	773.8	773.2	772.9	772.9	772.9	772.9	772.9	774.0
172.5°	780.9	780.4	779.8	779.3	778.7	778.4	778.4	778.4	778.4	778.4	779.3
175°	786.6	786.0	785.5	785.0	784.4	784.1	784.1	784.1	784.1	784.1	785.0
177.5°	788.9	788.5	788.1	787.6	787.2	787.0	787.0	787.0	787.0	787.0	787.6
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	11.5	11.5	11.5	11.4	11.3	11.2	11.1	11.0
90°	16.0	16.5	17.0	17.5	17.7	18.1	18.3	18.6
92.5°	24.6	25.1	25.5	25.7	25.5	25.3	25.2	25.0
95°	46.9	47.5	48.0	48.3	48.3	48.3	48.3	48.3
97.5°	73.0	73.6	74.2	74.5	74.5	74.5	74.4	74.3
100°	91.9	92.3	92.7	93.1	93.3	93.6	93.9	94.1
102.5°	113.7	114.1	114.5	114.7	114.6	114.5	114.5	114.5
105°	146.2	146.2	146.2	146.3	146.6	146.9	147.1	147.4
107.5°	181.3	181.8	182.3	182.4	182.2	182.0	181.9	181.7
110°	204.9	205.4	206.0	206.1	205.8	205.6	205.3	205.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	228.4	229.0	229.7	230.0	230.0	229.9	229.8	229.8
115°	264.1	264.3	264.4	264.4	264.3	264.1	264.0	263.9
117.5°	300.2	300.2	300.2	299.9	299.6	299.2	298.8	298.4
120°	324.2	324.2	324.0	323.8	323.5	323.2	323.0	322.7
122.5°	348.6	348.2	347.9	347.5	347.1	346.7	346.3	345.9
125°	384.8	384.2	383.7	383.1	382.5	382.0	381.4	380.9
127.5°	420.5	419.7	419.0	418.3	417.6	417.0	416.4	415.7
130°	444.3	443.7	443.1	442.4	441.4	440.5	439.5	438.5
132.5°	467.3	466.6	466.0	465.2	464.5	463.7	463.0	462.3
135°	501.8	501.3	500.7	500.3	500.0	499.8	499.5	499.2
137.5°	535.6	535.0	534.4	533.9	533.4	532.8	532.3	531.8
140°	557.8	557.6	557.5	557.0	556.0	555.0	554.1	553.1
142.5°	578.6	578.5	578.3	577.9	577.1	576.4	575.6	574.9
145°	609.2	609.0	608.9	608.6	608.0	607.4	606.9	606.3
147.5°	638.1	638.1	638.1	637.6	636.8	636.0	635.2	634.4
150°	655.9	655.9	655.9	655.5	654.7	653.9	653.0	652.2
152.5°	672.2	672.4	672.6	672.4	671.7	671.0	670.3	669.6
155°	696.0	696.6	697.1	696.9	695.9	695.0	694.0	693.1
157.5°	716.5	717.1	717.6	717.6	716.8	716.1	715.3	714.5
160°	729.1	729.8	730.5	730.6	730.0	729.4	728.9	728.3
162.5°	741.0	741.7	742.4	742.3	741.4	740.5	739.7	738.8
165°	756.1	756.9	757.7	757.6	756.7	755.7	754.7	753.8
167.5°	768.3	769.1	769.9	769.9	769.1	768.3	767.4	766.5
170°	774.9	775.9	776.8	776.8	775.9	774.9	774.0	772.9
172.5°	780.1	781.0	781.8	781.8	780.8	779.8	778.9	777.9
175°	785.8	786.6	787.4	787.3	786.4	785.4	784.4	783.5
177.5°	788.3	788.9	789.6	789.6	788.8	788.0	787.3	786.5
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

(END OF REPORT)