

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: P332286

Luminaire Tested: **S123RDIP-S560D805U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332286
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-S560D805U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 4894.3 lumens
Efficiency: N/A
Efficacy: 127.5 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

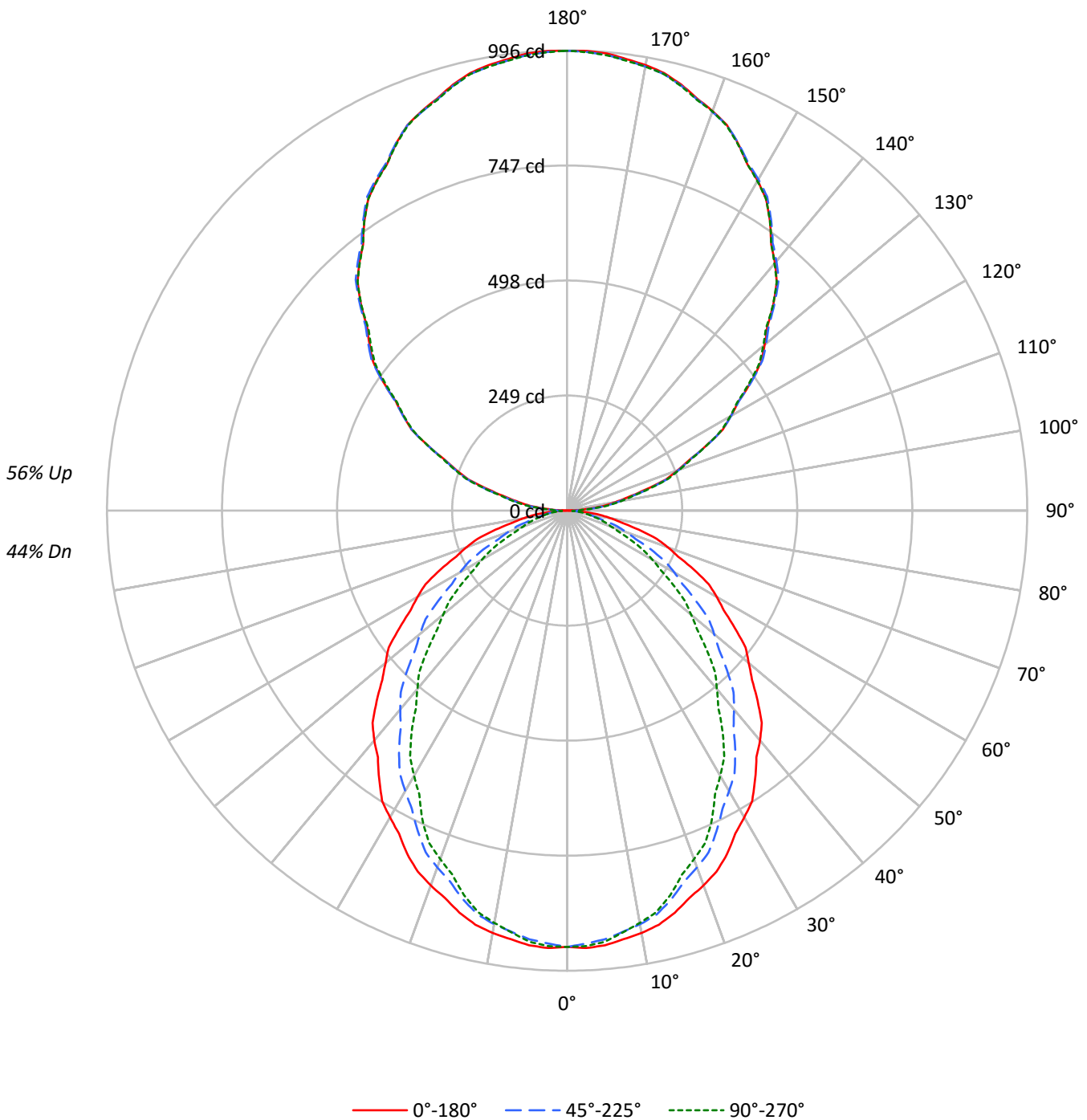
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	97	92	89	85	88	85	82	79	70	68	66	57	56	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	46	40	38	37	32
3	81	71	64	59	74	66	60	55	55	50	47	45	42	39	36	33	31	27
4	74	63	56	50	67	58	52	46	49	44	40	40	36	34	32	29	27	24
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	26	23	21	18
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	18	15	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10167	10167	10167
5°	10205	10065	10122
10°	10147	9939	9905
15°	10038	9706	9604
20°	9889	9415	9196
25°	9734	9089	8797
30°	9531	8712	8236
35°	9320	8335	7720
40°	9128	7890	7082
45°	8873	7451	6506
50°	8594	6953	5863
55°	8310	6382	5262
60°	8047	5772	4600
65°	7707	5112	3940
70°	7279	4293	3182
75°	6658	3377	2994
80°	5938	2994	2752
85°	5014	2643	2458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	1.8
10°-20°	246.8	5.0
20°-30°	355.3	7.3
30°-40°	400.3	8.2
40°-50°	382.9	7.8
50°-60°	313.6	6.4
60°-70°	211.6	4.3
70°-80°	106.4	2.2
80°-90°	31.1	0.6
90°-100°	64.8	1.3
100°-110°	194.1	4.0
110°-120°	330.1	6.7
120°-130°	434.2	8.9
130°-140°	488.0	10.0
140°-150°	479.7	9.8
150°-160°	403.8	8.3
160°-170°	268.8	5.5
170°-180°	94.1	1.9
0°-30°	690.8	14.1
0°-40°	1091.1	22.3
0°-60°	1787.6	36.5
0°-90°	2136.7	43.7
90°-120°	589.0	12.0
90°-150°	1990.8	40.7
90°-180°	2758.0	56.4
0°-180°	4894.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	944	940	932	938	937	90
15°	901	892	871	867	862	254
25°	820	800	765	750	741	377
35°	709	681	634	602	588	444
45°	583	547	490	447	427	450
55°	443	404	340	297	280	397
65°	303	259	201	165	155	299
75°	160	123	81	74	72	171
85°	41	25	21	20	20	46
90°	1	9	19	22	24	5
95°	46	52	58	61	61	52
105°	176	178	184	185	186	188
115°	332	334	333	334	333	329
125°	486	488	487	484	481	434
135°	631	635	635	632	630	486
145°	765	767	769	768	765	478
155°	876	876	877	880	875	403
165°	955	952	952	956	952	269
175°	993	990	990	994	989	94
180°	995	995	995	995	995	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	947.6	947.0	946.5	945.9	945.4	944.3	942.7	941.0	939.4	937.8	939.3
5°	944.5	943.7	942.8	942.0	941.1	939.7	937.6	935.6	933.5	931.5	933.0
7.5°	935.8	934.9	933.9	933.0	932.1	930.3	927.7	925.0	922.3	919.7	920.5
10°	928.4	927.2	926.0	924.8	923.7	921.5	918.5	915.4	912.3	909.3	909.4
12.5°	918.0	916.7	915.3	914.0	912.7	910.2	906.4	902.7	898.9	895.2	895.1
15°	900.8	899.0	897.1	895.2	893.4	890.0	885.3	880.5	875.7	871.0	870.1
17.5°	879.2	877.1	874.9	872.7	870.5	866.4	860.3	854.3	848.2	842.2	840.4
20°	863.3	860.6	857.9	855.1	852.4	847.8	841.3	834.9	828.4	821.9	819.7
22.5°	845.5	842.4	839.3	836.1	833.0	828.0	821.1	814.2	807.4	800.5	797.7
25°	819.6	815.4	811.1	806.9	802.6	796.6	788.7	780.9	773.1	765.3	761.7
27.5°	788.2	783.5	778.8	774.1	769.4	762.7	754.0	745.3	736.6	727.9	722.9
30°	766.8	761.7	756.6	751.5	746.4	739.0	729.5	720.0	710.4	700.9	695.1
32.5°	745.3	739.6	733.8	728.0	722.2	714.3	704.2	694.1	684.0	673.9	667.6
35°	709.3	703.2	697.1	691.0	684.8	676.5	665.9	655.4	644.8	634.3	626.9
37.5°	672.9	666.1	659.3	652.4	645.6	636.6	625.3	614.1	602.8	591.5	583.2
40°	649.6	642.1	634.6	627.1	619.6	609.8	597.8	585.7	573.6	561.5	552.6
42.5°	623.2	615.7	608.3	600.8	593.3	583.3	570.8	558.3	545.8	533.3	523.6
45°	582.9	575.3	567.6	560.0	552.3	541.9	528.8	515.7	502.6	489.5	479.8
47.5°	542.6	534.2	525.8	517.4	509.0	498.3	485.1	472.0	458.9	445.8	435.3
50°	513.2	505.2	497.2	489.2	481.2	470.3	456.5	442.8	429.0	415.2	404.6
52.5°	486.9	478.2	469.5	460.8	452.2	441.0	427.3	413.7	400.0	386.4	375.4
55°	442.8	434.4	426.1	417.7	409.4	398.0	383.5	369.1	354.6	340.1	330.2
57.5°	402.0	392.9	383.8	374.7	365.6	353.8	339.3	324.8	310.2	295.7	286.4
60°	373.8	364.5	355.1	345.7	336.4	324.6	310.5	296.4	282.2	268.1	258.9
62.5°	345.6	336.3	326.9	317.5	308.2	296.4	282.3	268.2	254.0	239.9	231.3
65°	302.6	293.2	283.9	274.5	265.1	253.8	240.5	227.3	214.0	200.7	192.4
67.5°	259.5	250.1	240.6	231.1	221.7	210.6	197.8	185.1	172.4	159.6	153.4
70°	231.3	222.1	213.0	203.8	194.6	184.0	172.1	160.2	148.3	136.4	130.4
72.5°	203.1	194.1	185.0	176.0	166.9	157.0	146.2	135.3	124.5	113.7	108.8
75°	160.1	151.9	143.8	135.6	127.4	118.6	109.3	99.9	90.6	81.2	79.5
77.5°	120.9	113.5	106.1	98.7	91.3	84.6	78.6	72.6	66.5	60.5	59.6
80°	95.8	88.8	81.8	74.8	67.8	62.6	59.0	55.4	51.8	48.3	47.7
82.5°	71.9	65.8	59.8	53.8	47.7	43.9	42.2	40.6	38.9	37.2	36.7
85°	40.6	36.9	33.1	29.4	25.6	23.5	23.0	22.5	22.0	21.4	21.1
87.5°	14.9	13.7	12.6	11.4	10.3	9.9	10.4	10.8	11.3	11.7	11.7
90°	0.8	2.5	4.3	6.0	7.7	9.7	12.0	14.2	16.5	18.8	19.5
92.5°	18.9	20.1	21.3	22.5	23.6	24.9	26.2	27.5	28.7	30.0	30.6
95°	46.1	47.3	48.6	49.8	51.0	52.3	53.7	55.1	56.5	57.9	58.6
97.5°	81.9	82.8	83.7	84.6	85.6	86.5	87.5	88.5	89.5	90.5	91.3
100°	106.3	107.4	108.4	109.5	110.5	111.5	112.3	113.2	114.1	114.9	115.5
102.5°	134.5	135.1	135.7	136.4	137.0	137.9	139.0	140.2	141.3	142.5	143.0
105°	175.9	176.3	176.6	177.0	177.3	178.3	179.8	181.4	183.0	184.5	184.5
107.5°	224.1	224.3	224.5	224.7	224.9	225.3	226.0	226.6	227.2	227.8	228.4
110°	254.1	254.4	254.8	255.1	255.5	255.8	256.2	256.5	256.9	257.2	257.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	285.4	285.6	285.8	286.0	286.2	286.3	286.4	286.5	286.6	286.6	287.5
115°	332.3	332.8	333.3	333.8	334.4	334.5	334.1	333.8	333.4	333.1	333.2
117.5°	379.5	379.9	380.2	380.5	380.9	380.8	380.4	379.9	379.5	379.0	379.0
120°	408.9	409.9	411.0	412.0	413.1	413.2	412.3	411.4	410.6	409.7	409.5
122.5°	439.6	440.3	441.1	441.8	442.6	442.8	442.3	441.9	441.4	441.0	440.5
125°	486.3	486.8	487.3	487.9	488.4	488.5	488.1	487.8	487.4	487.1	486.4
127.5°	529.5	530.6	531.7	532.8	533.9	534.3	533.9	533.5	533.1	532.7	531.8
130°	558.2	559.6	561.0	562.4	563.8	564.2	563.7	563.2	562.7	562.1	561.4
132.5°	587.0	588.4	589.8	591.2	592.6	593.1	592.7	592.3	591.9	591.5	590.7
135°	630.9	632.0	633.0	634.1	635.1	635.6	635.4	635.2	635.0	634.9	634.2
137.5°	671.6	672.5	673.3	674.2	675.1	675.7	676.2	676.6	677.1	677.5	676.8
140°	699.7	700.6	701.5	702.4	703.2	703.7	703.9	704.1	704.3	704.4	704.3
142.5°	725.4	726.3	727.1	728.0	728.9	729.5	729.8	730.1	730.4	730.7	730.5
145°	765.4	765.8	766.1	766.5	766.8	767.2	767.8	768.3	768.8	769.3	769.2
147.5°	800.5	801.1	801.7	802.3	803.0	803.5	804.0	804.5	805.0	805.5	805.5
150°	824.8	825.2	825.5	825.9	826.2	826.6	826.9	827.3	827.6	828.0	828.0
152.5°	844.9	845.3	845.8	846.3	846.8	847.2	847.4	847.6	847.8	848.0	848.3
155°	876.4	876.4	876.4	876.4	876.4	876.5	876.7	876.9	877.1	877.2	877.9
157.5°	903.3	903.1	902.9	902.7	902.5	902.5	902.6	902.8	902.9	903.0	903.8
160°	920.2	919.9	919.5	919.2	918.8	918.7	918.7	918.7	918.7	918.7	919.5
162.5°	935.2	934.8	934.3	933.8	933.3	933.1	933.3	933.4	933.5	933.7	934.5
165°	954.6	954.1	953.6	953.1	952.5	952.3	952.3	952.3	952.3	952.3	953.3
167.5°	970.1	969.4	968.7	968.0	967.3	967.1	967.2	967.3	967.5	967.6	968.7
170°	978.9	978.2	977.5	976.8	976.1	975.7	975.7	975.7	975.7	975.7	977.0
172.5°	985.7	985.1	984.4	983.7	983.0	982.6	982.6	982.6	982.6	982.6	983.7
175°	992.9	992.2	991.6	990.9	990.2	989.8	989.8	989.8	989.8	989.8	990.9
177.5°	995.9	995.4	994.8	994.2	993.7	993.4	993.4	993.4	993.4	993.4	994.2
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	940.8	942.3	943.8	944.4	944.1	943.8	943.6	943.3
5°	934.5	936.1	937.6	938.2	937.9	937.5	937.2	936.8
7.5°	921.4	922.2	923.1	923.2	922.6	922.1	921.5	920.9
10°	909.6	909.8	909.9	909.6	908.8	907.9	907.1	906.2
12.5°	895.0	894.9	894.8	894.2	893.2	892.2	891.3	890.3
15°	869.3	868.4	867.6	866.5	865.3	864.2	863.0	861.8
17.5°	838.6	836.8	834.9	833.2	831.4	829.6	827.8	826.1
20°	817.5	815.3	813.1	811.0	808.9	806.9	804.8	802.8
22.5°	795.0	792.2	789.5	787.1	785.2	783.3	781.4	779.5
25°	758.1	754.5	751.0	748.2	746.4	744.5	742.6	740.7
27.5°	717.9	713.0	708.0	704.1	701.2	698.4	695.5	692.6
30°	689.3	683.5	677.8	673.5	670.8	668.1	665.3	662.6
32.5°	661.3	654.9	648.6	644.0	641.2	638.3	635.4	632.6
35°	619.6	612.3	605.0	599.8	596.7	593.7	590.6	587.5
37.5°	574.9	566.6	558.3	552.3	548.5	544.7	540.9	537.1
40°	543.8	534.9	526.1	519.7	515.8	511.9	508.0	504.0
42.5°	514.0	504.3	494.6	488.0	484.5	481.0	477.5	474.0
45°	470.1	460.4	450.7	443.8	439.7	435.6	431.5	427.4
47.5°	424.7	414.2	403.6	396.5	392.9	389.2	385.6	381.9
50°	394.1	383.5	373.0	365.7	361.8	357.9	354.0	350.1
52.5°	364.5	353.5	342.5	335.3	331.8	328.3	324.8	321.3
55°	320.4	310.5	300.6	294.0	290.6	287.2	283.8	280.4
57.5°	277.0	267.7	258.4	252.3	249.4	246.5	243.6	240.7
60°	249.7	240.5	231.3	225.3	222.4	219.5	216.6	213.7
62.5°	222.6	214.0	205.3	199.5	196.5	193.4	190.4	187.4
65°	184.0	175.7	167.3	162.2	160.4	158.5	156.6	154.7
67.5°	147.2	140.9	134.7	130.6	128.6	126.6	124.6	122.6
70°	124.4	118.5	112.5	108.6	106.7	104.9	103.0	101.1
72.5°	103.9	99.1	94.2	91.4	90.6	89.8	89.0	88.2
75°	77.8	76.1	74.4	73.4	73.0	72.7	72.3	72.0
77.5°	58.7	57.8	56.8	56.2	55.9	55.5	55.2	54.8
80°	47.2	46.7	46.2	45.8	45.5	45.1	44.8	44.4
82.5°	36.2	35.7	35.2	34.9	34.8	34.8	34.7	34.6
85°	20.8	20.4	20.1	19.9	19.9	19.9	19.9	19.9
87.5°	11.7	11.7	11.7	11.7	11.6	11.6	11.5	11.4
90°	20.2	20.8	21.5	22.1	22.4	22.8	23.1	23.5
92.5°	31.1	31.7	32.2	32.4	32.2	32.0	31.8	31.6
95°	59.2	59.9	60.6	61.0	61.0	61.0	61.0	61.0
97.5°	92.1	92.9	93.7	94.1	94.0	94.0	93.9	93.8
100°	116.0	116.5	117.0	117.5	117.8	118.1	118.5	118.8
102.5°	143.5	144.0	144.5	144.8	144.7	144.6	144.6	144.5
105°	184.5	184.5	184.5	184.7	185.0	185.4	185.7	186.1
107.5°	228.9	229.5	230.1	230.2	230.0	229.8	229.6	229.4
110°	258.6	259.3	260.0	260.2	259.8	259.5	259.1	258.8



TEST NUMBER: P332286

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	288.3	289.1	290.0	290.3	290.3	290.2	290.1	290.1
115°	333.4	333.6	333.8	333.8	333.6	333.4	333.2	333.1
117.5°	379.0	378.9	378.9	378.6	378.2	377.7	377.2	376.7
120°	409.3	409.2	409.0	408.7	408.4	408.0	407.7	407.3
122.5°	440.1	439.6	439.2	438.7	438.2	437.7	437.2	436.7
125°	485.7	485.0	484.3	483.6	482.9	482.2	481.5	480.8
127.5°	530.8	529.8	528.9	528.0	527.2	526.4	525.6	524.8
130°	560.8	560.1	559.4	558.4	557.2	556.0	554.8	553.5
132.5°	589.9	589.0	588.2	587.3	586.4	585.4	584.5	583.6
135°	633.5	632.8	632.1	631.6	631.2	630.9	630.5	630.2
137.5°	676.1	675.4	674.6	673.9	673.3	672.6	672.0	671.3
140°	704.1	703.9	703.7	703.1	701.8	700.6	699.4	698.2
142.5°	730.4	730.2	730.0	729.5	728.5	727.6	726.6	725.7
145°	769.0	768.8	768.6	768.2	767.5	766.8	766.1	765.4
147.5°	805.5	805.5	805.5	804.9	803.9	802.8	801.8	800.8
150°	828.0	828.0	828.0	827.5	826.4	825.4	824.3	823.3
152.5°	848.5	848.8	849.1	848.8	847.9	847.0	846.1	845.2
155°	878.6	879.3	880.0	879.7	878.5	877.3	876.1	874.9
157.5°	904.5	905.2	905.9	905.8	904.9	903.9	902.9	901.9
160°	920.4	921.3	922.1	922.2	921.5	920.8	920.1	919.4
162.5°	935.4	936.3	937.2	937.0	935.9	934.8	933.7	932.6
165°	954.4	955.4	956.5	956.4	955.2	953.9	952.7	951.5
167.5°	969.8	970.8	971.9	971.9	970.8	969.8	968.7	967.6
170°	978.2	979.4	980.6	980.6	979.4	978.2	977.0	975.7
172.5°	984.8	985.9	986.9	986.9	985.6	984.4	983.2	982.0
175°	991.9	992.9	994.0	993.9	992.7	991.5	990.2	989.0
177.5°	995.1	995.9	996.7	996.7	995.7	994.7	993.8	992.8
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3

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