

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: P332911-930

Luminaire Tested: **S124RDIP-S575D810U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332911-930  
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: S124RDIP-S575D810U930-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4203.3 lumens  
Efficiency: N/A  
Efficacy: 109.5 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

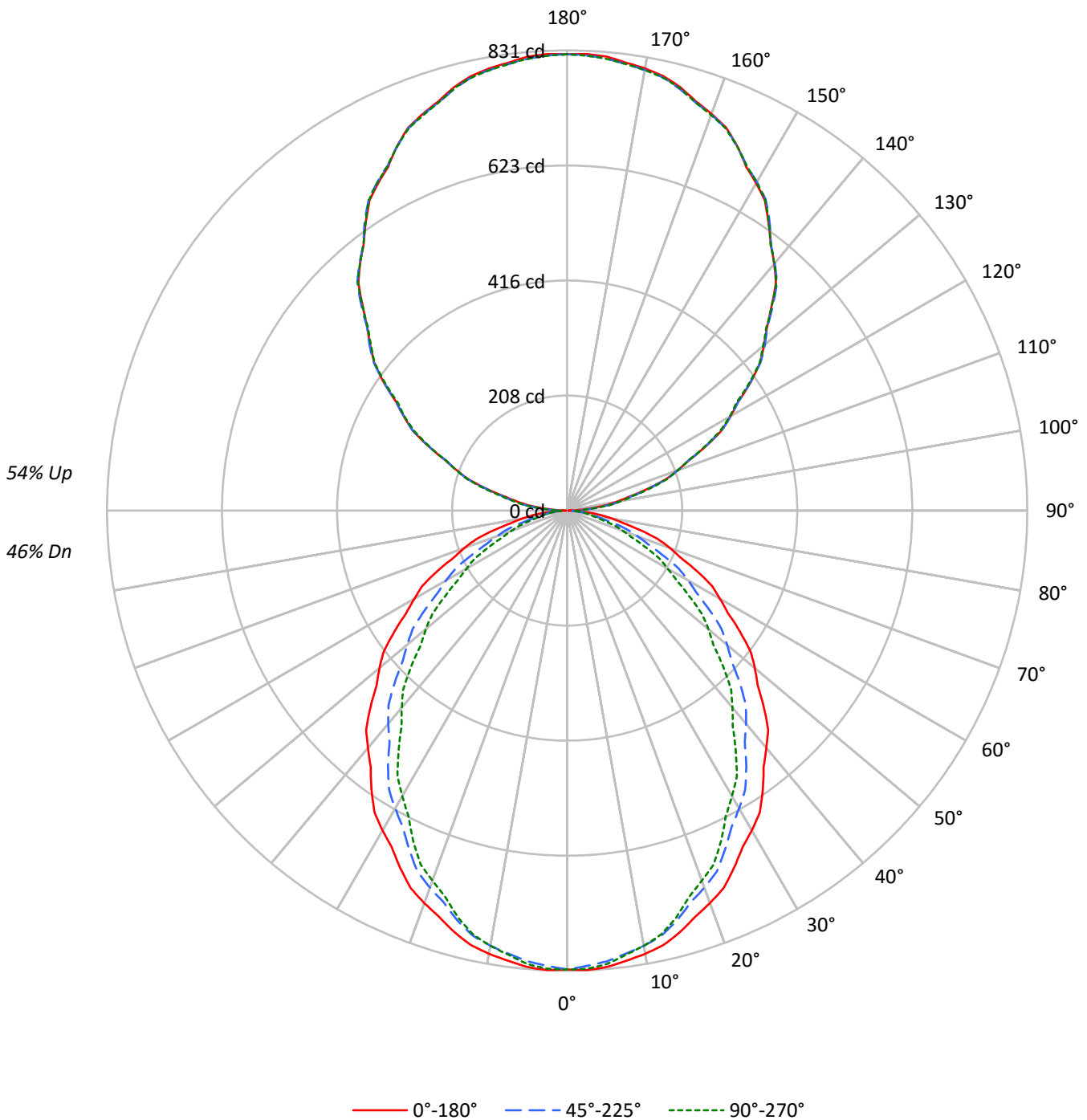
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332911-930

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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	81	81	81	66	66	66	52	52	52	46
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	81	75	70	81	75	70	65	63	59	56	51	49	47	41	39	38	33
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	37	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	30	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15
9	50	38	31	26	46	35	29	24	30	25	21	26	21	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	14	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.8	1.9
10°-20°	217.0	5.2
20°-30°	313.4	7.5
30°-40°	355.3	8.5
40°-50°	343.1	8.2
50°-60°	285.3	6.8
60°-70°	197.0	4.7
70°-80°	99.8	2.4
80°-90°	28.1	0.7
90°-100°	54.4	1.3
100°-110°	161.0	3.8
110°-120°	273.3	6.5
120°-130°	360.4	8.6
130°-140°	404.7	9.6
140°-150°	397.7	9.5
150°-160°	334.5	8.0
160°-170°	222.6	5.3
170°-180°	77.9	1.9
0°-30°	608.3	14.5
0°-40°	963.6	22.9
0°-60°	1591.9	37.9
0°-90°	1916.8	45.6
90°-120°	488.7	11.6
90°-150°	1651.5	39.3
90°-180°	2287.0	54.4
0°-180°	4203.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	2	9	14	18	19	4
95°	38	44	48	50	50	43
105°	148	149	152	154	156	158
115°	278	278	277	276	275	274
125°	405	405	404	403	402	361
135°	522	526	526	524	523	404
145°	634	637	637	637	635	397
155°	727	727	726	728	726	334
165°	791	789	788	791	789	223
175°	823	820	819	823	819	78
180°	824	824	824	824	824	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	12.1	11.5	10.8	10.3	9.7	9.5	9.5	9.7	9.8	9.9	9.9
90°	1.9	3.5	5.1	6.6	8.2	9.5	10.6	11.7	12.9	14.0	14.8
92.5°	13.6	15.4	17.2	19.0	20.8	22.1	22.8	23.6	24.5	25.3	25.8
95°	38.2	39.5	40.8	42.1	43.4	44.5	45.5	46.5	47.5	48.4	48.8
97.5°	66.8	67.8	68.8	69.9	70.8	72.0	73.1	74.3	75.4	76.6	77.1
100°	89.3	89.8	90.3	90.9	91.5	92.5	93.7	95.0	96.2	97.5	97.8
102.5°	112.7	112.9	113.2	113.4	113.6	114.3	115.4	116.6	117.8	119.0	119.4
105°	148.5	148.6	148.8	149.0	149.1	149.4	150.0	150.6	151.2	151.7	152.1
107.5°	186.1	186.3	186.5	186.6	186.8	186.9	187.0	187.1	187.2	187.3	187.7
110°	211.7	211.9	212.1	212.5	212.7	212.8	212.7	212.5	212.4	212.2	212.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	238.1	238.1	238.2	238.3	238.4	238.2	238.0	237.7	237.5	237.3	237.2
115°	277.9	277.9	277.9	277.9	277.9	277.8	277.4	277.2	276.9	276.6	276.5
117.5°	315.4	315.5	315.6	315.7	315.8	315.8	315.6	315.4	315.2	315.0	314.5
120°	340.4	341.0	341.5	342.1	342.7	342.7	342.3	341.9	341.4	341.0	340.3
122.5°	366.4	366.6	366.8	367.0	367.3	367.3	367.1	366.9	366.7	366.5	366.0
125°	404.7	404.7	404.7	404.7	404.7	404.6	404.6	404.4	404.2	404.1	403.8
127.5°	439.5	439.9	440.4	440.8	441.2	441.3	441.1	440.9	440.7	440.4	440.2
130°	464.0	464.5	464.9	465.3	465.7	465.9	465.9	465.9	465.9	465.9	465.6
132.5°	489.0	489.3	489.7	489.9	490.2	490.3	490.2	490.2	490.0	489.9	489.6
135°	522.0	522.9	523.7	524.6	525.5	525.9	525.9	525.9	525.9	525.9	525.5
137.5°	558.0	558.4	558.7	559.1	559.5	559.9	560.1	560.4	560.5	560.8	560.4
140°	582.0	582.2	582.5	582.8	583.1	583.2	583.2	583.2	583.2	583.2	583.1
142.5°	603.9	604.1	604.5	604.7	605.0	605.1	605.0	604.9	604.7	604.6	604.6
145°	634.2	634.8	635.4	635.9	636.5	636.8	637.0	637.1	637.2	637.4	637.2
147.5°	664.3	665.0	665.6	666.3	667.0	667.3	667.2	667.1	666.9	666.8	666.8
150°	682.7	683.2	683.8	684.4	684.9	685.2	685.2	685.2	685.2	685.2	685.2
152.5°	700.0	700.3	700.7	701.0	701.3	701.6	701.6	701.8	701.9	702.1	702.4
155°	726.6	726.6	726.6	726.6	726.6	726.5	726.4	726.3	726.1	726.0	726.5
157.5°	749.1	748.8	748.5	748.3	748.0	747.9	747.9	747.9	747.8	747.8	748.2
160°	762.3	762.1	762.1	761.9	761.7	761.6	761.5	761.3	761.2	761.1	761.5
162.5°	774.5	774.2	773.8	773.5	773.1	772.8	772.7	772.6	772.4	772.3	773.1
165°	791.0	790.6	790.2	789.7	789.3	789.0	788.6	788.4	788.1	787.8	788.6
167.5°	803.6	803.0	802.4	801.8	801.3	801.0	801.0	801.0	801.0	801.0	801.9
170°	810.7	810.1	809.3	808.6	808.0	807.6	807.8	808.0	808.0	808.2	809.0
172.5°	815.9	815.3	814.6	814.1	813.5	813.2	813.3	813.3	813.3	813.3	814.2
175°	822.9	822.1	821.4	820.8	820.0	819.6	819.5	819.3	819.2	819.0	820.0
177.5°	825.2	824.6	824.0	823.5	822.9	822.6	822.6	822.6	822.6	822.6	823.4
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	10.0	10.1	10.1	10.3	10.4	10.6	10.8	10.9
90°	15.7	16.6	17.4	18.0	18.3	18.6	18.8	19.2
92.5°	26.3	26.7	27.3	27.6	27.8	28.0	28.1	28.3
95°	49.3	49.7	50.1	50.4	50.4	50.4	50.4	50.4
97.5°	77.6	78.1	78.7	78.9	78.9	78.9	78.9	78.9
100°	98.1	98.4	98.7	98.8	98.8	98.8	98.8	98.8
102.5°	119.8	120.1	120.5	120.7	120.9	121.0	121.2	121.2
105°	152.5	153.0	153.4	153.8	154.3	154.7	155.1	155.6
107.5°	188.1	188.4	188.8	189.1	189.0	189.0	189.0	188.9
110°	211.7	211.4	211.1	211.2	211.7	212.1	212.5	212.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	237.1	237.1	237.0	237.0	237.1	237.2	237.3	237.3
115°	276.3	276.2	276.1	275.9	275.8	275.7	275.5	275.3
117.5°	314.1	313.6	313.1	312.7	312.4	312.1	311.9	311.5
120°	339.6	338.8	338.2	337.9	338.3	338.5	338.8	339.1
122.5°	365.5	365.1	364.6	364.1	363.5	363.1	362.6	362.1
125°	403.6	403.2	403.0	402.7	402.4	402.1	401.9	401.5
127.5°	439.9	439.6	439.3	439.0	438.8	438.6	438.4	438.1
130°	465.4	465.0	464.8	464.4	463.8	463.3	462.7	462.1
132.5°	489.3	489.0	488.8	488.5	488.3	488.0	487.8	487.6
135°	525.3	525.0	524.7	524.3	523.9	523.5	523.1	522.7
137.5°	560.0	559.7	559.3	559.1	559.2	559.3	559.4	559.5
140°	582.9	582.8	582.6	582.5	582.4	582.2	582.0	582.0
142.5°	604.5	604.5	604.5	604.5	604.5	604.5	604.4	604.4
145°	637.1	637.0	636.8	636.5	636.1	635.7	635.3	634.9
147.5°	666.6	666.5	666.3	666.3	666.1	665.9	665.9	665.7
150°	685.2	685.2	685.2	685.1	685.0	684.9	684.7	684.5
152.5°	702.7	703.0	703.4	703.4	703.0	702.6	702.3	701.9
155°	727.1	727.7	728.2	728.2	727.7	727.1	726.5	726.0
157.5°	748.6	749.1	749.5	749.4	749.0	748.5	748.0	747.5
160°	761.9	762.3	762.7	762.6	761.9	761.2	760.5	759.8
162.5°	773.8	774.5	775.3	775.3	774.6	774.0	773.2	772.5
165°	789.5	790.4	791.2	791.3	790.8	790.2	789.6	789.1
167.5°	802.7	803.6	804.5	804.5	803.6	802.7	801.8	801.0
170°	809.9	810.7	811.6	811.5	810.6	809.6	808.5	807.6
172.5°	815.2	816.2	817.2	817.2	816.2	815.1	814.2	813.2
175°	821.0	822.0	823.0	823.0	822.0	821.0	820.0	819.0
177.5°	824.2	825.0	825.8	825.7	824.8	823.9	823.0	822.1
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1

(END OF REPORT)