

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: P332560-940

Luminaire Tested: **S124DIP-S575D810U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332560-940  
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: S124DIP-S575D810U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4725.7 lumens  
Efficiency: N/A  
Efficacy: 123.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

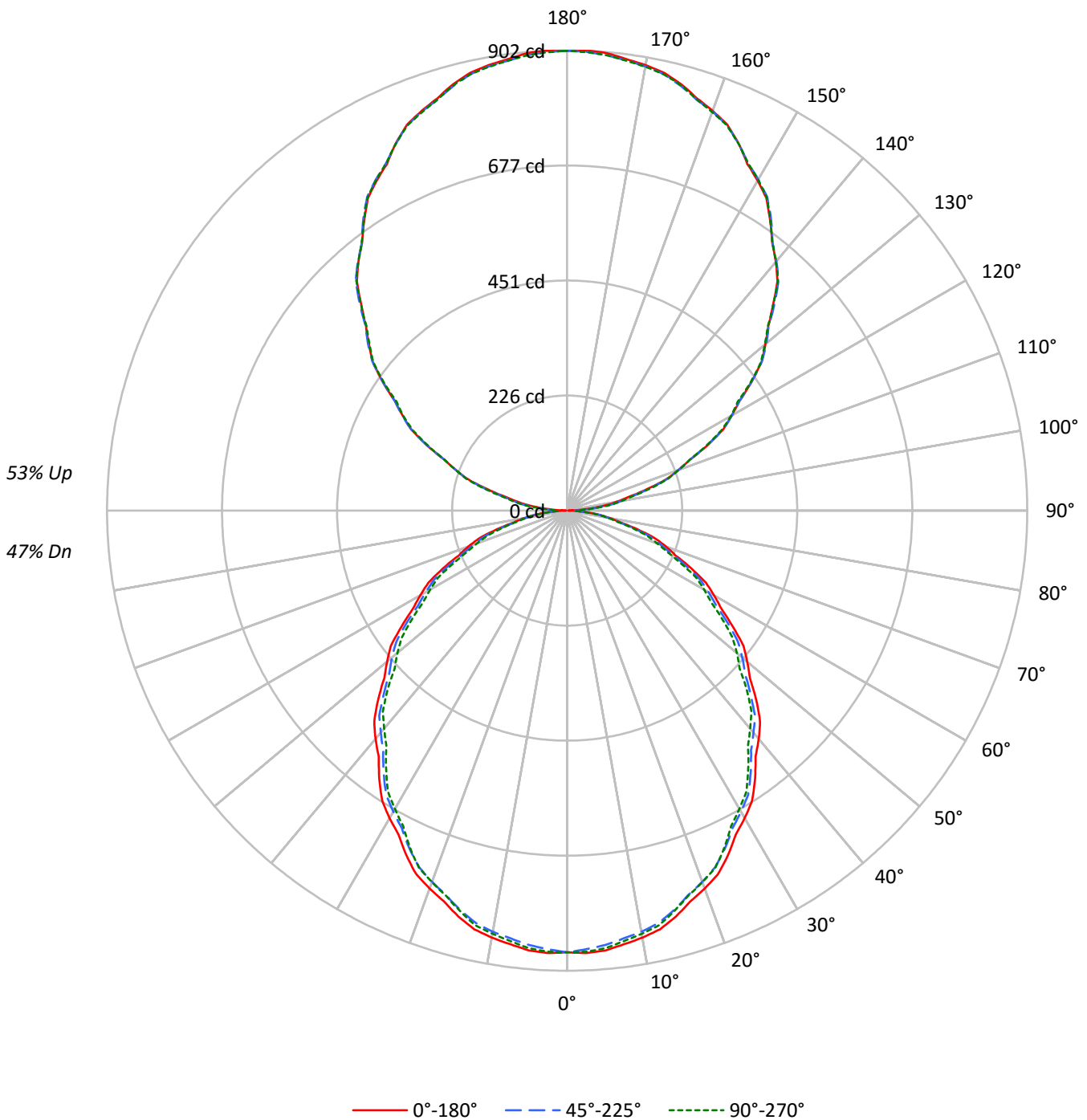
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	82	82	82		67	67	67		53	53	53	47
1	97	93	89	85	89	85	82	79	72	69	67		59	57	56		47	46	45	40
2	88	81	75	70	81	75	69	65	63	59	55		52	49	46		41	40	38	33
3	81	71	64	58	74	66	59	54	55	51	47		46	42	39		37	34	32	28
4	74	63	55	49	67	58	51	46	49	44	40		41	37	34		33	30	28	24
5	68	56	48	42	62	52	45	39	44	38	34		36	32	29		30	27	24	21
6	62	50	42	36	57	47	39	34	40	34	30		33	29	26		27	24	21	18
7	58	45	37	32	53	42	35	30	36	30	26		30	26	23		25	21	19	16
8	53	41	33	28	49	38	31	27	33	27	23		27	23	20		23	19	17	15
9	50	38	30	25	46	35	28	24	30	25	21		25	21	18		21	18	15	13
10	46	34	27	22	43	32	26	21	28	22	19		23	19	16		19	16	14	12

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

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	1.7
10°-20°	229.8	4.9
20°-30°	338.2	7.2
30°-40°	393.2	8.3
40°-50°	393.2	8.3
50°-60°	343.9	7.3
60°-70°	255.4	5.4
70°-80°	145.1	3.1
80°-90°	44.6	0.9
90°-100°	59.5	1.3
100°-110°	176.1	3.7
110°-120°	298.9	6.3
120°-130°	394.2	8.3
130°-140°	442.7	9.4
140°-150°	435.0	9.2
150°-160°	365.9	7.7
160°-170°	243.4	5.2
170°-180°	85.2	1.8
0°-30°	649.5	13.7
0°-40°	1042.7	22.1
0°-60°	1779.8	37.7
0°-90°	2224.9	47.1
90°-120°	534.5	11.3
90°-150°	1806.3	38.2
90°-180°	2501.0	52.9
0°-180°	4725.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	2	10	15	19	21	5
95°	42	48	53	55	55	47
105°	162	163	166	168	170	172
115°	304	304	303	302	301	300
125°	443	443	442	441	439	394
135°	571	575	575	574	572	442
145°	694	696	697	696	694	434
155°	795	795	794	796	794	366
165°	865	863	862	865	863	244
175°	900	897	896	900	896	85
180°	901	901	901	901	901	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.9	15.1	15.2	15.5	15.7	15.9	16.1	16.1	16.2	16.4	16.6
90°	2.1	3.8	5.5	7.2	8.9	10.3	11.6	12.8	14.1	15.3	16.2
92.5°	14.9	16.9	18.8	20.8	22.7	24.2	25.0	25.9	26.8	27.6	28.2
95°	41.8	43.2	44.6	46.0	47.4	48.7	49.8	50.8	51.9	53.0	53.4
97.5°	73.0	74.2	75.3	76.4	77.5	78.7	80.0	81.2	82.5	83.8	84.4
100°	97.6	98.2	98.8	99.4	100.0	101.1	102.5	103.9	105.2	106.6	107.0
102.5°	123.2	123.5	123.8	124.0	124.2	125.0	126.3	127.5	128.9	130.1	130.5
105°	162.5	162.6	162.7	162.9	163.1	163.5	164.1	164.7	165.3	165.9	166.4
107.5°	203.6	203.8	203.9	204.1	204.3	204.5	204.6	204.6	204.7	204.8	205.3
110°	231.5	231.8	232.0	232.4	232.6	232.7	232.6	232.5	232.3	232.1	231.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	260.5	260.5	260.6	260.6	260.7	260.6	260.3	260.0	259.8	259.5	259.4
115°	304.0	304.0	304.0	304.0	304.0	303.8	303.4	303.2	302.8	302.6	302.4
117.5°	344.9	345.1	345.2	345.3	345.4	345.4	345.2	344.9	344.7	344.6	344.0
120°	372.3	372.9	373.5	374.2	374.8	374.8	374.3	373.9	373.4	373.0	372.2
122.5°	400.7	400.9	401.2	401.4	401.7	401.7	401.5	401.3	401.1	400.8	400.3
125°	442.6	442.6	442.6	442.6	442.6	442.6	442.5	442.3	442.1	442.0	441.7
127.5°	480.7	481.2	481.7	482.1	482.6	482.7	482.4	482.2	482.0	481.7	481.4
130°	507.5	508.0	508.5	508.9	509.3	509.6	509.6	509.6	509.6	509.6	509.3
132.5°	534.8	535.2	535.6	535.8	536.2	536.3	536.2	536.1	535.9	535.8	535.5
135°	571.0	571.9	572.8	573.7	574.7	575.2	575.2	575.2	575.2	575.2	574.8
137.5°	610.3	610.7	611.1	611.5	612.0	612.3	612.6	612.9	613.1	613.3	613.0
140°	636.5	636.8	637.1	637.4	637.8	637.8	637.8	637.8	637.8	637.8	637.8
142.5°	660.5	660.8	661.1	661.4	661.7	661.8	661.6	661.6	661.4	661.3	661.3
145°	693.7	694.3	694.9	695.5	696.2	696.5	696.7	696.8	697.0	697.1	697.0
147.5°	726.6	727.3	728.0	728.8	729.5	729.9	729.7	729.6	729.4	729.3	729.2
150°	746.6	747.3	747.9	748.5	749.1	749.4	749.4	749.4	749.4	749.4	749.4
152.5°	765.6	766.0	766.3	766.7	767.0	767.3	767.4	767.6	767.7	767.9	768.2
155°	794.7	794.7	794.7	794.7	794.7	794.6	794.5	794.3	794.2	794.1	794.6
157.5°	819.3	818.9	818.7	818.4	818.1	818.0	818.0	818.0	817.9	817.9	818.3
160°	833.7	833.6	833.5	833.3	833.1	832.9	832.9	832.7	832.5	832.4	832.9
162.5°	847.1	846.8	846.3	846.0	845.5	845.3	845.1	845.0	844.8	844.6	845.5
165°	865.1	864.7	864.2	863.7	863.3	862.9	862.6	862.3	861.9	861.7	862.6
167.5°	879.0	878.2	877.6	877.0	876.4	876.0	876.0	876.1	876.1	876.1	877.1
170°	886.7	886.0	885.2	884.4	883.7	883.3	883.5	883.7	883.8	884.0	884.8
172.5°	892.3	891.7	891.0	890.4	889.7	889.4	889.5	889.5	889.5	889.6	890.6
175°	900.0	899.2	898.4	897.7	896.9	896.4	896.3	896.1	896.0	895.8	896.9
177.5°	902.5	901.9	901.3	900.6	900.0	899.7	899.7	899.7	899.7	899.7	900.5
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	16.8	16.9	17.1	17.3	17.3	17.4	17.5	17.5
90°	17.2	18.1	19.1	19.7	20.0	20.3	20.6	21.0
92.5°	28.7	29.2	29.9	30.2	30.4	30.6	30.8	30.9
95°	53.9	54.4	54.8	55.1	55.1	55.1	55.1	55.1
97.5°	84.9	85.4	86.1	86.3	86.3	86.3	86.3	86.3
100°	107.3	107.6	107.9	108.1	108.1	108.1	108.1	108.1
102.5°	131.0	131.3	131.8	132.1	132.2	132.3	132.5	132.6
105°	166.8	167.3	167.7	168.3	168.7	169.2	169.6	170.1
107.5°	205.7	206.1	206.5	206.8	206.7	206.7	206.7	206.6
110°	231.5	231.2	230.9	231.0	231.5	231.9	232.4	232.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	259.3	259.3	259.2	259.2	259.3	259.4	259.5	259.6
115°	302.2	302.1	301.9	301.8	301.7	301.5	301.3	301.1
117.5°	343.5	343.0	342.4	342.0	341.7	341.3	341.1	340.7
120°	371.4	370.6	369.9	369.6	370.0	370.2	370.6	370.9
122.5°	399.8	399.3	398.8	398.2	397.6	397.1	396.5	396.0
125°	441.4	441.0	440.8	440.4	440.1	439.8	439.5	439.2
127.5°	481.1	480.8	480.5	480.2	479.9	479.7	479.5	479.2
130°	509.0	508.6	508.4	507.9	507.3	506.7	506.0	505.4
132.5°	535.2	534.8	534.6	534.3	534.0	533.8	533.5	533.3
135°	574.5	574.2	573.9	573.5	573.0	572.6	572.1	571.7
137.5°	612.5	612.2	611.7	611.5	611.6	611.7	611.8	612.0
140°	637.6	637.4	637.2	637.1	636.9	636.8	636.6	636.5
142.5°	661.2	661.2	661.2	661.1	661.1	661.1	661.0	661.0
145°	696.8	696.7	696.5	696.2	695.7	695.3	694.8	694.4
147.5°	729.1	729.0	728.8	728.7	728.5	728.3	728.3	728.1
150°	749.4	749.4	749.4	749.3	749.2	749.0	748.9	748.7
152.5°	768.6	768.9	769.3	769.3	768.9	768.5	768.1	767.7
155°	795.2	795.9	796.5	796.5	795.9	795.2	794.6	794.1
157.5°	818.8	819.3	819.7	819.7	819.2	818.7	818.1	817.6
160°	833.3	833.7	834.2	834.1	833.3	832.5	831.8	831.0
162.5°	846.3	847.1	848.0	848.0	847.2	846.5	845.7	844.9
165°	863.5	864.4	865.4	865.5	864.9	864.2	863.6	863.1
167.5°	878.0	879.0	879.9	879.9	878.9	877.9	877.0	876.0
170°	885.8	886.7	887.7	887.6	886.5	885.5	884.3	883.2
172.5°	891.6	892.7	893.8	893.8	892.7	891.5	890.5	889.4
175°	898.0	899.0	900.2	900.2	899.0	898.0	896.9	895.8
177.5°	901.4	902.3	903.2	903.1	902.1	901.2	900.2	899.1
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3

(END OF REPORT)