

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: P332911-840

Luminaire Tested: **SA4XXRDIP-C575D810U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332911-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D810U840-4F0-1E-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

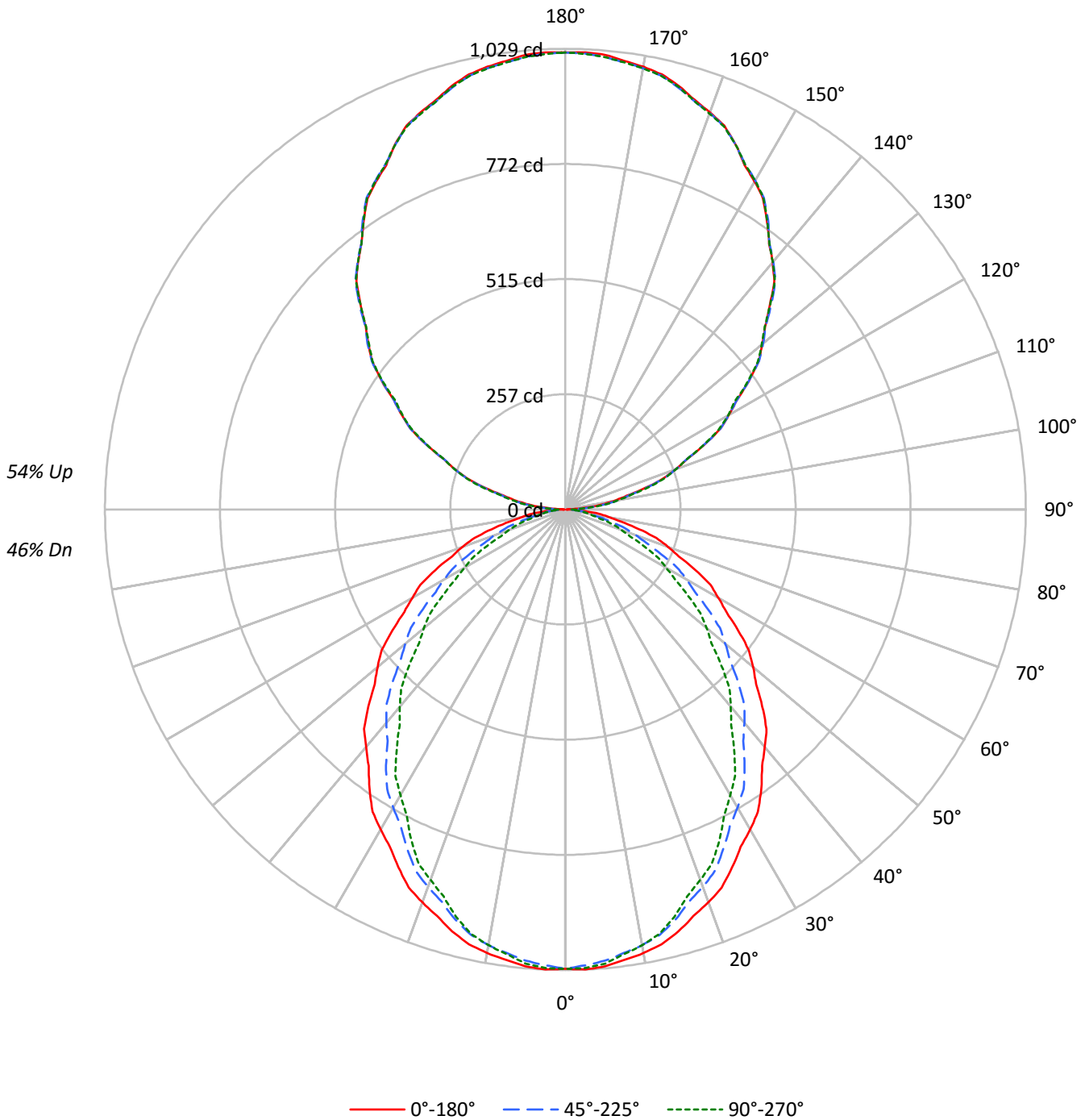
Lumens per Lamp: N/A
Luminaire Lumens: 5206.4 lumens
Efficiency: N/A
Efficacy: 135.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46				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°	8285	8285	8285
5°	8304	8203	8253
10°	8252	8104	8104
15°	8157	7934	7875
20°	8027	7710	7568
25°	7861	7448	7259
30°	7699	7171	6871
35°	7521	6885	6482
40°	7304	6559	6062
45°	7106	6235	5634
50°	6880	5863	5181
55°	6636	5475	4690
60°	6370	5050	4187
65°	6124	4518	3692
70°	5769	3932	3135
75°	5321	3260	2548
80°	4640	2483	2338
85°	3927	2251	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	1.9
10°-20°	268.8	5.2
20°-30°	388.2	7.5
30°-40°	440.0	8.5
40°-50°	424.9	8.2
50°-60°	353.4	6.8
60°-70°	244.0	4.7
70°-80°	123.7	2.4
80°-90°	34.8	0.7
90°-100°	67.3	1.3
100°-110°	199.5	3.8
110°-120°	338.5	6.5
120°-130°	446.4	8.6
130°-140°	501.3	9.6
140°-150°	492.6	9.5
150°-160°	414.3	8.0
160°-170°	275.7	5.3
170°-180°	96.5	1.9
0°-30°	753.5	14.5
0°-40°	1193.5	22.9
0°-60°	1971.8	37.9
0°-90°	2374.2	45.6
90°-120°	605.4	11.6
90°-150°	2045.7	39.3
90°-180°	2832.0	54.4
0°-180°	5206.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1025	1021	1012	1020	1018	97
15°	976	968	949	948	942	275
25°	882	867	836	823	815	406
35°	763	737	699	673	658	477
45°	622	592	546	509	494	480
55°	472	439	389	350	333	422
65°	321	286	236	204	193	317
75°	171	141	104	87	82	180
85°	42	28	24	23	23	48
90°	2	11	17	22	24	5
95°	47	54	60	62	62	53
105°	184	185	188	190	193	195
115°	344	344	343	342	341	339
125°	501	501	501	499	497	447
135°	647	651	651	650	647	500
145°	786	789	790	789	786	491
155°	900	900	899	902	899	414
165°	980	977	976	980	977	276
175°	1019	1015	1014	1020	1014	97
180°	1021	1021	1021	1021	1021	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1028.9	1028.2	1027.7	1027.1	1026.6	1025.5	1024.0	1022.5	1020.9	1019.4	1020.9
5°	1024.7	1024.0	1023.3	1022.6	1022.0	1020.6	1018.4	1016.3	1014.2	1012.2	1013.9
7.5°	1015.4	1014.7	1014.0	1013.3	1012.5	1010.8	1008.0	1005.3	1002.6	999.9	1001.0
10°	1006.6	1005.8	1004.9	1004.0	1003.2	1001.2	998.0	994.8	991.7	988.6	989.3
12.5°	995.3	994.3	993.3	992.3	991.3	989.0	985.2	981.5	977.9	974.1	974.5
15°	976.0	974.4	972.9	971.3	969.7	966.7	962.4	958.1	953.6	949.3	949.0
17.5°	952.6	950.3	948.1	945.7	943.5	939.8	934.5	929.3	924.0	918.8	917.9
20°	934.3	932.1	929.8	927.6	925.2	921.2	915.2	909.3	903.3	897.5	896.1
22.5°	914.2	911.7	909.2	906.6	904.0	899.6	893.2	886.9	880.5	874.1	872.0
25°	882.5	879.4	876.2	873.0	869.9	864.7	857.6	850.4	843.2	836.2	833.1
27.5°	849.2	845.3	841.3	837.4	833.3	827.6	819.9	812.3	804.7	797.0	793.3
30°	825.9	821.5	817.2	812.8	808.5	802.1	794.0	785.8	777.5	769.3	765.0
32.5°	801.4	796.5	791.5	786.6	781.7	775.0	766.5	758.0	749.5	741.0	736.0
35°	763.1	757.5	751.8	746.3	740.7	733.6	724.8	716.1	707.3	698.6	692.7
37.5°	722.1	716.3	710.5	704.8	698.9	691.3	681.6	671.9	662.3	652.6	645.9
40°	693.1	687.3	681.6	675.8	670.0	662.2	652.3	642.3	632.4	622.4	615.0
42.5°	665.4	659.4	653.4	647.3	641.3	633.1	622.7	612.3	602.0	591.6	584.1
45°	622.4	615.9	609.5	603.0	596.5	588.0	577.5	567.1	556.6	546.1	537.6
47.5°	577.9	571.3	564.5	557.8	551.2	542.4	531.5	520.7	509.8	498.9	490.0
50°	547.8	540.9	534.1	527.3	520.5	511.5	500.3	489.2	478.0	466.8	458.1
52.5°	516.9	510.3	503.6	497.0	490.2	481.2	469.7	458.3	446.8	435.4	426.5
55°	471.5	464.5	457.6	450.5	443.5	434.3	423.0	411.7	400.3	389.0	379.9
57.5°	426.6	419.3	412.0	404.8	397.5	388.3	377.1	365.9	354.8	343.6	334.4
60°	394.5	387.5	380.5	373.5	366.6	357.5	346.3	335.1	324.0	312.8	303.7
62.5°	365.6	358.3	351.0	343.8	336.5	327.2	315.7	304.3	292.8	281.3	273.0
65°	320.6	313.2	305.6	298.1	290.5	281.2	270.0	258.9	247.7	236.5	229.0
67.5°	274.0	266.7	259.5	252.4	245.2	236.4	226.0	215.6	205.3	194.9	188.4
70°	244.4	237.0	229.7	222.4	215.1	206.4	196.4	186.5	176.5	166.6	160.9
72.5°	213.0	206.3	199.7	193.1	186.4	178.4	169.1	159.7	150.2	140.8	135.9
75°	170.6	164.1	157.6	151.2	144.7	137.3	129.2	120.9	112.7	104.5	100.5
77.5°	127.4	122.0	116.5	111.0	105.5	99.5	92.8	86.2	79.6	72.9	70.6
80°	99.8	94.7	89.7	84.6	79.6	74.4	69.2	63.9	58.7	53.4	52.9
82.5°	75.9	71.3	66.7	62.0	57.4	53.5	50.5	47.5	44.5	41.5	41.1
85°	42.4	39.0	35.4	31.9	28.5	26.5	26.0	25.4	24.8	24.3	24.0
87.5°	14.9	14.2	13.4	12.7	12.0	11.7	11.8	12.0	12.1	12.3	12.3
90°	2.3	4.3	6.3	8.2	10.1	11.7	13.1	14.5	16.0	17.4	18.4
92.5°	16.9	19.1	21.3	23.5	25.8	27.4	28.3	29.3	30.3	31.3	31.9
95°	47.4	49.0	50.5	52.1	53.7	55.1	56.4	57.6	58.8	60.0	60.5
97.5°	82.7	84.0	85.2	86.5	87.8	89.2	90.6	92.0	93.4	94.9	95.5
100°	110.6	111.2	111.9	112.6	113.3	114.5	116.0	117.6	119.2	120.8	121.2
102.5°	139.6	139.9	140.2	140.5	140.7	141.6	143.0	144.4	145.9	147.3	147.8
105°	184.0	184.1	184.3	184.5	184.7	185.1	185.8	186.5	187.2	187.9	188.4
107.5°	230.6	230.8	231.0	231.2	231.4	231.6	231.7	231.8	231.9	232.0	232.5
110°	262.2	262.5	262.8	263.2	263.5	263.6	263.5	263.3	263.1	262.9	262.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.0	295.0	295.1	295.2	295.3	295.1	294.8	294.5	294.2	293.9	293.8
115°	344.3	344.3	344.3	344.3	344.3	344.1	343.7	343.4	343.0	342.6	342.4
117.5°	390.6	390.8	390.9	391.0	391.2	391.1	390.9	390.6	390.4	390.2	389.6
120°	421.6	422.3	423.0	423.7	424.4	424.4	423.9	423.4	422.9	422.4	421.5
122.5°	453.8	454.0	454.3	454.6	454.9	454.9	454.7	454.4	454.2	453.9	453.3
125°	501.3	501.3	501.3	501.3	501.3	501.2	501.1	500.9	500.7	500.6	500.2
127.5°	544.4	544.9	545.5	546.0	546.5	546.6	546.3	546.1	545.8	545.5	545.2
130°	574.7	575.3	575.8	576.3	576.8	577.1	577.1	577.1	577.1	577.1	576.7
132.5°	605.7	606.1	606.5	606.8	607.2	607.3	607.2	607.1	606.9	606.8	606.4
135°	646.6	647.6	648.7	649.7	650.9	651.4	651.4	651.4	651.4	651.4	651.0
137.5°	691.2	691.7	692.1	692.6	693.1	693.5	693.8	694.1	694.3	694.6	694.2
140°	720.8	721.1	721.5	721.9	722.3	722.4	722.4	722.4	722.4	722.4	722.3
142.5°	748.0	748.3	748.7	749.0	749.4	749.5	749.3	749.2	749.0	748.9	748.9
145°	785.6	786.3	787.0	787.7	788.4	788.8	789.0	789.1	789.3	789.5	789.3
147.5°	822.8	823.6	824.5	825.4	826.2	826.6	826.4	826.3	826.1	826.0	825.9
150°	845.6	846.3	847.0	847.7	848.4	848.7	848.7	848.7	848.7	848.7	848.7
152.5°	867.1	867.5	867.9	868.3	868.7	869.0	869.1	869.3	869.4	869.6	870.0
155°	900.0	900.0	900.0	900.0	900.0	899.9	899.8	899.6	899.4	899.3	899.9
157.5°	927.9	927.5	927.2	926.9	926.6	926.3	926.3	926.3	926.2	926.2	926.8
160°	944.2	944.0	943.9	943.7	943.5	943.3	943.2	943.0	942.8	942.7	943.2
162.5°	959.4	959.0	958.5	958.1	957.6	957.3	957.0	956.9	956.7	956.5	957.6
165°	979.8	979.3	978.8	978.2	977.7	977.2	976.8	976.5	976.1	975.8	976.8
167.5°	995.4	994.6	993.9	993.2	992.5	992.1	992.1	992.2	992.2	992.2	993.3
170°	1004.2	1003.4	1002.5	1001.6	1000.8	1000.4	1000.6	1000.8	1000.9	1001.1	1002.1
172.5°	1010.6	1009.9	1009.1	1008.4	1007.6	1007.2	1007.3	1007.3	1007.3	1007.4	1008.6
175°	1019.3	1018.3	1017.4	1016.6	1015.7	1015.2	1015.0	1014.8	1014.7	1014.5	1015.7
177.5°	1022.1	1021.4	1020.7	1020.0	1019.3	1019.0	1019.0	1019.0	1019.0	1019.0	1019.9
180°	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1022.5	1024.0	1025.5	1026.2	1026.1	1025.9	1025.8	1025.7
5°	1015.6	1017.4	1019.2	1019.9	1019.5	1019.2	1018.8	1018.4
7.5°	1002.1	1003.2	1004.4	1004.6	1004.1	1003.5	1003.0	1002.4
10°	990.0	990.7	991.4	991.4	990.7	990.0	989.3	988.6
12.5°	974.9	975.3	975.8	975.5	974.5	973.6	972.6	971.6
15°	948.6	948.3	947.9	947.2	945.8	944.6	943.4	942.2
17.5°	916.9	915.8	914.8	913.4	911.6	909.8	907.9	906.1
20°	894.6	893.2	891.8	890.0	887.8	885.4	883.2	880.9
22.5°	870.0	867.9	865.8	863.8	861.9	860.1	858.3	856.4
25°	830.2	827.2	824.3	821.9	820.1	818.4	816.7	814.9
27.5°	789.6	786.0	782.3	779.2	776.7	774.2	771.7	769.2
30°	760.6	756.2	751.8	748.3	745.5	742.7	739.9	737.1
32.5°	730.9	725.9	720.7	716.9	714.3	711.7	708.9	706.3
35°	686.7	680.8	674.9	670.3	667.2	664.0	660.9	657.7
37.5°	639.2	632.7	626.0	621.2	617.9	614.8	611.7	608.5
40°	607.7	600.4	593.0	587.8	584.6	581.5	578.3	575.2
42.5°	576.6	569.2	561.7	556.3	553.0	549.8	546.4	543.2
45°	529.1	520.5	511.9	506.0	502.9	499.8	496.7	493.5
47.5°	481.1	472.2	463.3	457.2	453.7	450.3	446.9	443.3
50°	449.3	440.6	431.8	425.9	422.5	419.2	415.9	412.5
52.5°	417.6	408.7	399.9	393.7	390.2	386.8	383.3	379.9
55°	370.8	361.7	352.6	346.5	343.2	339.8	336.5	333.2
57.5°	325.1	315.9	306.7	300.8	298.3	295.8	293.3	290.7
60°	294.6	285.5	276.4	270.5	267.7	264.9	262.2	259.3
62.5°	264.6	256.2	247.8	242.5	240.2	238.0	235.8	233.6
65°	221.6	214.0	206.5	201.7	199.7	197.5	195.4	193.3
67.5°	182.0	175.5	169.1	164.7	162.4	160.1	157.7	155.4
70°	155.1	149.4	143.5	139.8	138.0	136.3	134.5	132.8
72.5°	131.0	126.0	121.1	117.9	116.2	114.6	113.0	111.4
75°	96.4	92.5	88.5	85.9	84.8	83.8	82.8	81.7
77.5°	68.3	65.9	63.5	62.2	61.9	61.6	61.3	61.0
80°	52.4	51.9	51.3	51.0	50.8	50.6	50.5	50.3
82.5°	40.7	40.3	40.0	39.7	39.5	39.3	39.2	39.0
85°	23.6	23.3	22.9	22.8	22.8	22.8	22.8	22.8
87.5°	12.4	12.5	12.5	12.7	12.9	13.1	13.3	13.5
90°	19.5	20.5	21.6	22.3	22.6	23.0	23.3	23.7
92.5°	32.5	33.1	33.8	34.2	34.4	34.6	34.8	35.0
95°	61.1	61.6	62.1	62.4	62.4	62.4	62.4	62.4
97.5°	96.1	96.7	97.5	97.8	97.8	97.8	97.8	97.8
100°	121.5	121.9	122.2	122.4	122.4	122.4	122.4	122.4
102.5°	148.3	148.8	149.3	149.6	149.8	149.9	150.1	150.2
105°	188.9	189.5	190.0	190.6	191.1	191.6	192.1	192.7
107.5°	233.0	233.4	233.9	234.2	234.1	234.1	234.1	234.0
110°	262.2	261.9	261.5	261.6	262.2	262.7	263.2	263.7



TEST NUMBER: P332911-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	293.7	293.7	293.6	293.6	293.7	293.8	293.9	294.0
115°	342.2	342.1	341.9	341.7	341.6	341.4	341.2	341.0
117.5°	389.0	388.4	387.8	387.3	387.0	386.6	386.3	385.9
120°	420.6	419.7	418.9	418.6	419.0	419.3	419.7	420.0
122.5°	452.7	452.2	451.6	451.0	450.3	449.7	449.1	448.5
125°	499.9	499.5	499.2	498.8	498.5	498.1	497.8	497.4
127.5°	544.8	544.5	544.1	543.8	543.5	543.3	543.0	542.7
130°	576.4	576.0	575.7	575.2	574.5	573.8	573.1	572.4
132.5°	606.1	605.7	605.4	605.1	604.8	604.5	604.2	604.0
135°	650.7	650.3	649.9	649.4	648.9	648.4	647.9	647.4
137.5°	693.7	693.3	692.8	692.6	692.7	692.8	692.9	693.1
140°	722.1	721.9	721.6	721.5	721.3	721.1	720.9	720.8
142.5°	748.8	748.8	748.8	748.7	748.7	748.7	748.6	748.6
145°	789.1	789.0	788.8	788.4	787.9	787.4	786.9	786.4
147.5°	825.7	825.6	825.4	825.3	825.1	824.9	824.8	824.6
150°	848.7	848.7	848.7	848.6	848.5	848.3	848.1	847.9
152.5°	870.4	870.8	871.2	871.2	870.8	870.3	869.9	869.4
155°	900.6	901.3	902.0	902.0	901.3	900.6	899.9	899.3
157.5°	927.3	927.9	928.4	928.3	927.8	927.2	926.6	925.9
160°	943.7	944.2	944.7	944.6	943.7	942.8	942.0	941.1
162.5°	958.5	959.4	960.4	960.4	959.5	958.7	957.8	956.8
165°	978.0	979.0	980.1	980.2	979.5	978.8	978.1	977.4
167.5°	994.3	995.4	996.4	996.4	995.3	994.2	993.2	992.1
170°	1003.2	1004.2	1005.3	1005.2	1004.0	1002.8	1001.5	1000.3
172.5°	1009.8	1011.0	1012.2	1012.2	1011.0	1009.7	1008.5	1007.2
175°	1016.9	1018.1	1019.5	1019.5	1018.1	1016.9	1015.7	1014.5
177.5°	1020.9	1021.9	1022.9	1022.8	1021.7	1020.6	1019.5	1018.2
180°	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8	1020.8

(END OF REPORT)