

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: P332559-840

Luminaire Tested: **SA4XXDIP-C575D810U840-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332559-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C575D810U840-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

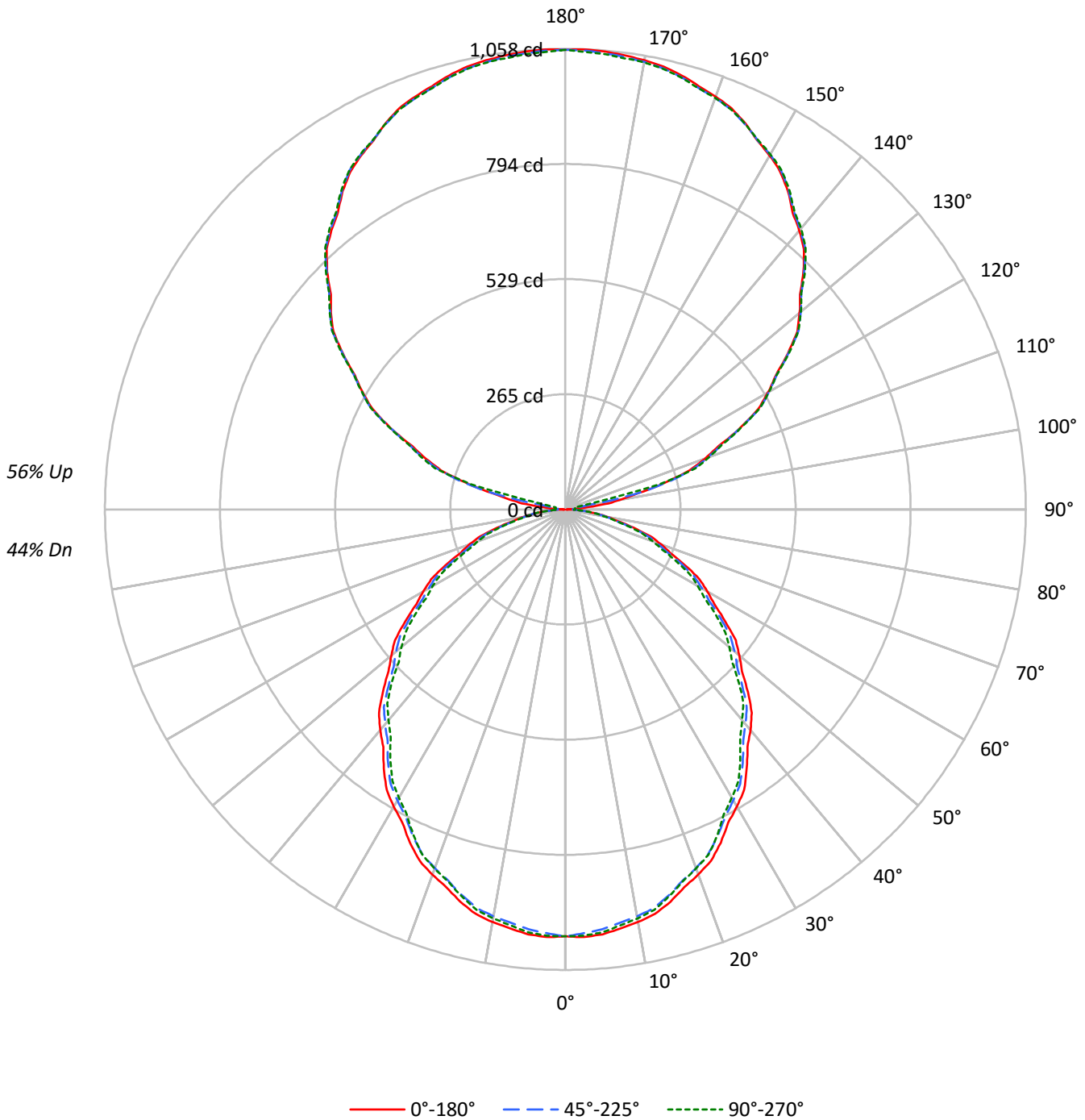
Lumens per Lamp: N/A  
Luminaire Lumens: 5785.3 lumens  
Efficiency: N/A  
Efficacy: 150.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44	44	44	44	
1	96	92	88	85	88	84	81	78	70	67	65	57	55	53	44	43	42	37	37	37	37	
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36	31	31	31	31	
3	80	71	63	58	73	65	58	53	54	49	45	44	41	38	35	32	30	26	26	26	26	
4	73	62	55	49	67	57	51	45	48	43	39	39	35	32	31	28	26	22	22	22	22	
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	28	25	23	19	19	19	19	
6	62	50	42	36	56	46	39	34	39	33	29	32	28	24	25	22	20	17	17	17	17	
7	57	45	37	32	52	41	34	29	35	29	26	29	25	22	23	20	18	15	15	15	15	
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13	13	13	13	
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	17	14	12	12	12	12	
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11	11	11	11	

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

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	1.6
10°-20°	260.2	4.5
20°-30°	383.0	6.6
30°-40°	445.3	7.7
40°-50°	445.3	7.7
50°-60°	389.5	6.7
60°-70°	289.3	5.0
70°-80°	164.3	2.8
80°-90°	50.5	0.9
90°-100°	36.1	0.6
100°-110°	230.2	4.0
110°-120°	440.4	7.6
120°-130°	559.1	9.7
130°-140°	598.2	10.3
140°-150°	559.3	9.7
150°-160°	451.1	7.8
160°-170°	290.9	5.0
170°-180°	100.3	1.7
0°-30°	735.6	12.7
0°-40°	1180.9	20.4
0°-60°	2015.7	34.8
0°-90°	2519.7	43.6
90°-120°	706.7	12.2
90°-150°	2423.3	41.9
90°-180°	3266.0	56.5
0°-180°	5785.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	2	11	17	22	24	4
95°	43	18	17	22	23	56
105°	238	242	246	252	225	249
115°	444	446	445	447	447	437
125°	624	627	625	628	628	557
135°	774	773	776	778	779	596
145°	892	894	895	895	897	557
155°	978	979	977	980	978	451
165°	1032	1028	1028	1034	1027	292
175°	1056	1051	1052	1058	1049	100
180°	1056	1056	1056	1056	1056	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	16.9	17.1	17.3	17.6	17.8	18.0	18.2	18.3	18.4	18.6	18.8
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°	10.0	10.1	10.2	10.3	10.4	11.1	12.5	13.9	15.3	16.8	17.8
95°	43.4	37.5	31.5	25.5	19.6	16.7	16.9	17.1	17.2	17.4	18.4
97.5°	92.2	95.9	99.7	103.4	107.1	99.2	79.6	60.0	40.4	20.8	20.9
100°	129.5	132.7	135.8	139.0	142.1	131.6	107.3	83.2	59.0	34.7	31.7
102.5°	171.2	173.5	175.8	178.1	180.5	180.1	176.8	173.7	170.6	167.4	135.2
105°	237.6	238.7	239.7	240.9	241.9	242.9	243.7	244.6	245.5	246.3	247.9
107.5°	299.4	299.9	300.4	301.0	301.5	302.4	303.6	304.8	306.0	307.2	307.9
110°	341.1	341.6	342.1	342.6	343.3	344.0	345.1	346.1	347.2	348.2	348.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	381.5	382.4	383.4	384.4	385.4	386.1	386.6	387.0	387.5	388.0	388.0
115°	443.7	444.2	444.8	445.4	445.9	446.1	445.9	445.7	445.6	445.4	445.7
117.5°	499.8	500.5	501.2	501.9	502.6	503.2	503.5	503.9	504.3	504.7	504.6
120°	537.8	538.5	539.2	539.9	540.5	540.8	540.6	540.5	540.3	540.1	540.5
122.5°	573.1	573.5	573.9	574.3	574.8	575.1	575.3	575.6	575.8	576.1	576.3
125°	623.8	624.5	625.2	625.9	626.6	626.7	626.4	626.1	625.7	625.4	625.9
127.5°	671.8	672.0	672.2	672.4	672.5	673.0	673.8	674.6	675.4	676.2	676.1
130°	702.8	703.0	703.1	703.3	703.5	703.8	704.3	704.9	705.4	705.9	706.1
132.5°	731.1	731.4	731.8	732.2	732.5	733.0	733.6	734.3	734.9	735.6	735.8
135°	773.9	773.7	773.5	773.3	773.2	773.4	774.1	774.8	775.5	776.2	776.5
137.5°	811.5	811.6	811.7	811.7	811.8	812.2	813.0	813.9	814.6	815.4	815.8
140°	836.2	836.6	836.9	837.3	837.6	838.0	838.3	838.7	839.0	839.3	839.9
142.5°	858.3	858.9	859.6	860.2	860.8	861.2	861.4	861.7	861.9	862.1	862.5
145°	892.2	892.8	893.3	893.8	894.3	894.6	894.6	894.6	894.6	894.6	894.8
147.5°	919.3	920.3	921.2	922.2	923.2	923.6	923.4	923.2	923.0	922.9	923.0
150°	938.9	939.6	940.3	941.0	941.6	941.9	941.7	941.6	941.4	941.2	941.2
152.5°	955.2	955.8	956.3	956.9	957.6	957.7	957.4	957.0	956.6	956.3	956.6
155°	978.4	978.5	978.7	978.9	979.1	978.9	978.4	977.8	977.2	976.7	977.4
157.5°	997.7	997.6	997.5	997.4	997.3	996.9	996.3	995.8	995.2	994.6	995.5
160°	1009.2	1008.6	1008.0	1007.5	1007.0	1006.6	1006.5	1006.3	1006.1	1005.9	1007.0
162.5°	1019.3	1018.5	1017.8	1017.2	1016.5	1016.1	1015.9	1015.8	1015.6	1015.4	1016.5
165°	1032.0	1031.2	1030.3	1029.4	1028.5	1028.0	1028.0	1028.0	1028.0	1028.0	1029.5
167.5°	1042.1	1041.2	1040.3	1039.4	1038.4	1037.9	1037.8	1037.7	1037.6	1037.5	1039.1
170°	1047.8	1046.7	1045.7	1044.6	1043.6	1043.2	1043.3	1043.5	1043.7	1043.9	1045.2
172.5°	1051.6	1050.6	1049.5	1048.4	1047.4	1046.9	1047.1	1047.3	1047.4	1047.6	1049.0
175°	1055.7	1054.6	1053.6	1052.6	1051.5	1051.1	1051.3	1051.4	1051.6	1051.8	1053.3
177.5°	1057.6	1056.6	1055.6	1054.6	1053.7	1053.3	1053.6	1053.9	1054.2	1054.4	1055.5
180°	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	19.0	19.2	19.4	19.6	19.6	19.7	19.8	19.8
90°	19.5	20.5	21.6	22.3	22.6	23.0	23.3	23.7
92.5°	18.9	19.9	20.9	21.5	21.6	21.6	21.7	21.8
95°	19.5	20.5	21.6	22.2	22.4	22.5	22.7	22.9
97.5°	21.1	21.2	21.3	21.4	21.6	21.7	21.9	22.1
100°	28.8	25.8	22.8	21.4	21.6	21.7	21.9	22.1
102.5°	103.0	70.9	38.7	22.6	22.6	22.6	22.7	22.7
105°	249.5	251.1	252.7	250.3	244.0	237.6	231.4	225.0
107.5°	308.7	309.4	310.2	310.9	311.6	312.3	313.0	313.7
110°	348.9	349.3	349.6	350.0	350.6	351.1	351.6	352.1





TEST NUMBER: P332559-840

CATALOG NUMBER: SA4XXDIP-C575D810U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	387.9	387.8	387.7	388.0	388.7	389.4	390.0	390.7
115°	446.1	446.4	446.8	447.0	447.0	447.0	447.0	447.0
117.5°	504.5	504.5	504.4	504.3	504.3	504.2	504.1	504.1
120°	540.8	541.2	541.5	541.5	541.2	540.8	540.5	540.1
122.5°	576.5	576.7	576.9	576.8	576.5	576.1	575.8	575.4
125°	626.4	626.9	627.4	627.8	628.0	628.1	628.3	628.5
127.5°	676.0	675.9	675.8	675.7	675.5	675.4	675.3	675.1
130°	706.3	706.4	706.6	706.7	706.7	706.7	706.7	706.7
132.5°	736.0	736.1	736.3	736.3	736.2	736.0	735.9	735.8
135°	776.9	777.2	777.6	777.9	778.3	778.6	779.0	779.3
137.5°	816.1	816.5	816.9	817.0	816.9	816.8	816.7	816.6
140°	840.4	840.9	841.4	841.8	842.0	842.1	842.3	842.5
142.5°	862.8	863.2	863.6	863.8	863.8	863.9	863.9	863.9
145°	894.9	895.1	895.3	895.5	896.0	896.3	896.7	897.0
147.5°	923.2	923.3	923.4	923.6	923.8	923.9	924.1	924.3
150°	941.2	941.2	941.2	941.3	941.5	941.6	941.8	942.0
152.5°	956.9	957.3	957.5	957.6	957.5	957.4	957.3	957.2
155°	978.2	978.9	979.6	979.7	979.1	978.6	978.1	977.5
157.5°	996.4	997.3	998.3	998.3	997.3	996.4	995.5	994.6
160°	1008.0	1009.2	1010.2	1010.2	1009.2	1008.0	1007.0	1005.9
162.5°	1017.5	1018.5	1019.7	1019.6	1018.3	1017.1	1016.0	1014.8
165°	1030.9	1032.3	1033.7	1033.6	1032.0	1030.5	1028.9	1027.2
167.5°	1040.7	1042.2	1043.7	1043.6	1041.9	1040.1	1038.3	1036.6
170°	1046.6	1048.0	1049.5	1049.2	1047.5	1045.8	1044.0	1042.3
172.5°	1050.5	1051.9	1053.3	1053.0	1051.2	1049.2	1047.3	1045.4
175°	1054.9	1056.5	1058.0	1057.8	1055.7	1053.6	1051.5	1049.4
177.5°	1056.7	1057.8	1058.9	1058.6	1056.9	1055.3	1053.6	1051.9
180°	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7

(END OF REPORT)