

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: P334812

Luminaire Tested: **S124IP-S810U930-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334812
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124IP-S810U930-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 810 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

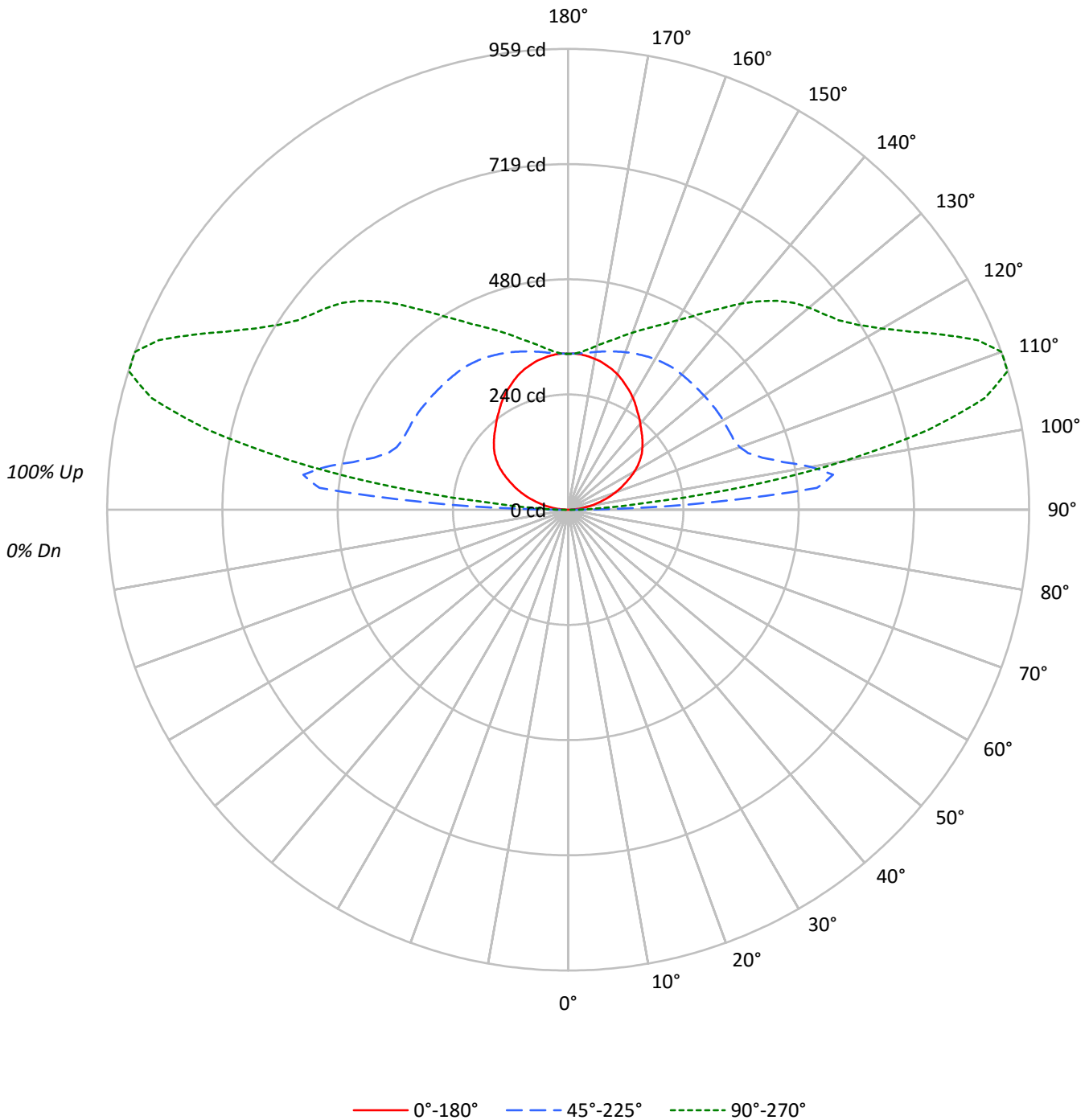
Lumens per Lamp: N/A
Luminaire Lumens: 2364.6 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 26.4
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



TEST NUMBER: P334812
CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

Luminous Intensity Polar Plot





TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	1.3	0.1
90°-100°	235.2	9.9
100°-110°	491.0	20.8
110°-120°	436.5	18.5
120°-130°	367.4	15.5
130°-140°	306.5	13.0
140°-150°	234.0	9.9
150°-160°	164.5	7.0
160°-170°	96.8	4.1
170°-180°	31.5	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.3	0.1
90°-120°	1162.6	49.2
90°-150°	2070.6	87.6
90°-180°	2363.0	99.9
0°-180°	2364.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	5	12	13	13	1
95°	21	66	520	257	156	23
105°	75	108	418	900	897	79
115°	131	165	373	717	861	130
125°	183	217	371	610	687	163
135°	217	259	368	541	615	168
145°	250	287	366	456	502	157
155°	285	308	356	403	420	131
165°	310	320	341	361	367	88
175°	324	324	327	332	330	31
180°	324	324	324	324	324	



TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.6	1.9	3.8	4.5	5.1	5.1	8.9	8.9	10.2	11.5	10.8
92.5°	8.9	12.8	19.8	29.3	40.8	57.4	96.9	158.7	218.7	249.9	207.8
95°	21.0	23.0	29.3	37.6	52.9	79.7	135.2	239.7	392.1	519.6	534.2
97.5°	35.1	35.1	40.8	48.5	61.8	84.8	128.8	218.7	375.5	555.9	670.0
100°	48.5	48.5	52.9	60.6	72.7	93.1	130.7	202.7	332.8	512.6	675.8
102.5°	61.2	62.5	66.3	73.3	84.8	103.9	137.1	198.3	304.1	458.4	627.9
105°	74.6	76.5	79.7	87.3	98.8	117.3	147.9	200.8	290.1	418.2	568.0
107.5°	89.3	90.5	93.7	102.0	112.8	131.3	159.4	208.5	286.2	392.1	518.9
110°	103.9	105.2	108.4	116.0	127.5	144.7	172.8	217.4	287.5	380.0	483.9



TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.9	119.2	123.0	130.1	141.5	158.7	185.5	227.0	291.3	374.2	464.1
115°	131.3	133.2	137.7	144.1	156.2	173.4	198.9	237.2	296.4	372.9	453.3
117.5°	145.4	147.3	151.1	158.1	169.6	187.4	211.7	247.4	301.5	372.3	447.5
120°	159.4	160.7	165.1	172.1	183.0	200.8	225.0	258.2	307.3	372.3	443.1
122.5°	172.1	173.4	177.9	184.2	196.4	213.6	237.8	268.4	313.0	371.7	438.0
125°	183.0	185.5	189.3	196.4	208.5	226.3	249.3	278.6	318.8	371.0	432.2
127.5°	193.2	195.1	199.5	207.2	219.9	237.8	260.1	287.5	323.2	369.8	424.6
130°	201.5	204.0	209.1	218.7	230.8	249.3	270.9	295.8	328.3	369.1	417.6
132.5°	209.7	211.7	218.7	227.6	241.0	258.2	279.9	304.1	332.8	368.5	411.2
135°	217.4	219.9	226.3	237.2	250.5	267.1	288.2	311.1	337.2	367.8	404.8
137.5°	225.0	227.6	234.6	244.8	258.8	274.8	294.5	316.2	339.8	367.8	399.1
140°	233.3	235.2	242.3	253.1	266.5	281.8	300.9	321.3	343.0	367.2	394.6
142.5°	242.3	244.2	250.5	260.7	273.5	288.2	306.6	325.1	345.5	367.2	390.8
145°	250.5	252.5	258.8	267.8	279.9	293.9	310.5	327.7	346.2	365.9	386.3
147.5°	260.1	260.7	266.5	276.0	286.2	299.0	314.9	330.2	346.8	364.0	382.5
150°	269.0	269.7	274.8	282.4	292.0	304.1	318.1	332.1	346.8	362.1	378.0
152.5°	277.3	277.3	282.4	289.4	297.7	308.6	320.7	333.4	345.5	358.9	372.9
155°	285.0	285.6	289.4	295.8	302.8	312.4	323.2	334.1	344.3	355.7	367.8
157.5°	292.6	292.6	296.4	301.5	307.9	315.6	325.1	334.1	343.0	352.5	362.7
160°	299.6	299.6	302.2	306.6	311.7	318.8	326.4	334.1	341.1	348.7	357.0
162.5°	306.0	305.4	307.3	311.1	315.6	320.7	327.7	334.1	339.2	344.9	351.9
165°	310.5	310.5	311.7	314.9	318.1	321.9	327.7	332.8	336.6	341.1	346.2
167.5°	315.6	314.9	315.6	318.1	320.0	323.2	327.7	331.5	334.1	337.2	341.1
170°	318.8	318.1	318.8	320.7	321.9	323.9	327.0	330.2	331.5	333.4	336.0
172.5°	321.9	321.3	321.3	322.6	323.2	324.5	326.4	329.0	329.0	329.6	331.5
175°	323.9	323.2	323.2	323.9	324.5	324.5	325.8	327.7	327.0	327.0	328.3
177.5°	325.1	324.5	323.9	324.5	324.5	324.5	325.1	326.4	325.1	325.1	325.8
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5



TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	11.5	12.1	12.8	12.8	13.4	14.0	13.4	13.4
92.5°	153.6	114.8	90.5	74.6	65.0	60.6	58.0	58.0
95°	472.4	373.6	288.2	226.3	195.1	175.3	163.8	155.6
97.5°	680.2	631.1	561.0	489.6	446.3	408.0	388.9	373.6
100°	768.8	781.6	750.3	703.2	647.7	608.8	589.7	584.6
102.5°	764.4	840.2	859.4	846.6	817.9	792.4	772.0	768.2
105°	714.0	824.3	887.4	913.5	914.8	909.7	900.8	897.0
107.5°	652.2	771.4	859.4	912.9	941.0	952.4	957.5	958.2
110°	597.3	707.6	800.1	870.2	915.5	942.2	953.7	959.4



TEST NUMBER: P334812

CATALOG NUMBER: S124IP-S810U930-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	557.2	651.5	737.6	807.7	860.6	894.4	911.6	921.8
115°	533.0	611.4	686.0	747.2	797.5	835.8	856.2	861.3
117.5°	518.9	585.2	645.8	699.3	744.0	777.1	798.8	802.0
120°	510.0	569.3	620.3	665.6	701.9	729.9	746.5	753.5
122.5°	502.4	559.1	604.4	642.6	671.9	694.9	708.3	715.3
125°	493.4	548.3	592.2	627.3	652.8	671.3	683.4	687.2
127.5°	483.2	536.1	580.1	613.3	638.8	655.4	665.6	669.4
130°	470.5	520.8	564.2	598.0	624.1	640.1	650.3	654.1
132.5°	457.1	503.6	545.7	579.5	605.0	623.5	633.0	636.9
135°	445.0	486.4	525.3	557.2	582.7	600.5	610.7	614.6
137.5°	433.5	469.8	503.6	533.0	557.2	575.7	584.0	588.4
140°	423.9	453.9	482.6	509.4	531.7	545.7	554.6	559.7
142.5°	415.0	440.5	464.1	486.4	505.5	518.3	525.9	529.1
145°	406.7	428.4	447.5	465.4	481.3	492.2	498.5	501.7
147.5°	399.7	417.6	433.5	448.2	460.3	469.8	474.9	476.2
150°	393.3	408.0	420.8	432.2	442.4	450.7	454.5	455.2
152.5°	386.3	398.4	409.9	418.8	427.1	433.5	435.4	436.1
155°	379.3	389.5	399.1	406.7	413.1	418.2	420.1	420.1
157.5°	371.7	380.6	388.9	395.3	400.4	404.2	405.5	405.5
160°	364.7	371.7	378.7	383.8	387.6	391.4	392.1	392.1
162.5°	357.6	363.4	368.5	372.9	375.5	379.3	380.0	379.3
165°	351.3	355.1	359.6	362.7	365.3	367.8	367.2	366.6
167.5°	344.9	348.1	351.9	353.8	355.1	357.0	357.0	356.4
170°	339.2	341.1	343.6	345.5	346.8	347.4	346.8	346.8
172.5°	334.1	335.3	336.6	337.9	338.5	339.2	338.5	337.2
175°	329.6	330.2	331.5	331.5	331.5	332.8	331.5	330.2
177.5°	326.4	327.0	327.0	327.7	327.0	327.7	326.4	325.1
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5

(END OF REPORT)