

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: P334621

Luminaire Tested: **S123IP-S585U835-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334621  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123IP-S585U835-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 585 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

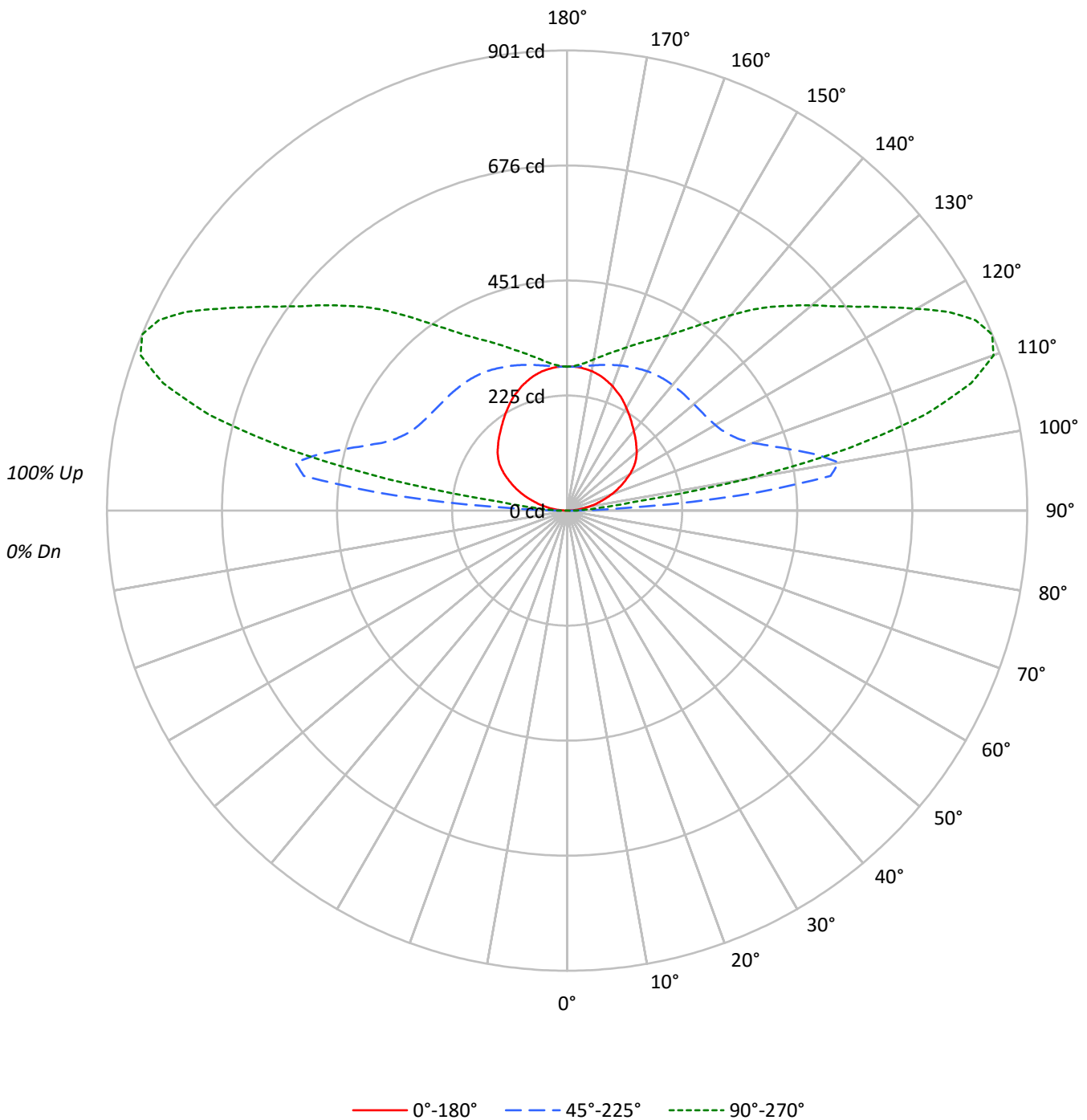
Lumens per Lamp: N/A  
Luminaire Lumens: 2121.0 lumens  
Efficiency: N/A  
Efficacy: 112.8 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

Input Watts (W): 18.8  
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: P334621  
CATALOG NUMBER: S123IP-S585U835-4F0-1E-UDD-4

### Luminous Intensity Polar Plot





TEST NUMBER: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-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: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-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°	1.6	0.1
90°-100°	152.9	7.2
100°-110°	447.6	21.1
110°-120°	437.1	20.6
120°-130°	348.1	16.4
130°-140°	274.7	12.9
140°-150°	204.9	9.7
150°-160°	142.9	6.7
160°-170°	83.9	4.0
170°-180°	27.3	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.6	0.1
90°-120°	1037.7	48.9
90°-150°	1865.4	87.9
90°-180°	2119.0	99.9
0°-180°	2121.0	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	7	14	16	16	1
95°	19	63	338	99	66	21
105°	66	98	459	802	726	70
115°	117	146	351	769	882	116
125°	163	192	327	593	696	144
135°	190	227	323	489	564	147
145°	217	249	319	401	441	136
155°	247	266	309	351	366	114
165°	270	278	296	313	319	76
175°	281	282	284	288	287	27
180°	282	282	282	282	282	



TEST NUMBER: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-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°	1.1	2.3	3.4	5.1	6.3	7.4	9.1	10.8	12.5	14.3	13.7
92.5°	8.6	12.5	18.3	23.4	29.1	39.4	57.6	87.8	117.5	106.1	79.3
95°	19.4	21.1	27.4	37.1	51.9	74.1	122.6	207.6	301.2	338.2	274.3
97.5°	30.8	31.4	36.5	45.1	59.9	84.4	132.3	231.0	388.4	520.2	537.9
100°	42.2	42.8	46.8	54.8	68.4	90.7	130.6	215.0	365.0	540.1	652.5
102.5°	54.2	55.3	58.7	66.2	78.1	98.1	132.9	201.3	330.8	503.1	658.2
105°	66.2	67.9	71.3	78.1	89.0	106.7	137.5	196.2	304.0	458.6	622.3
107.5°	78.7	80.4	83.8	90.7	101.0	117.5	144.9	195.1	284.6	419.2	570.9
110°	92.4	94.1	97.0	103.2	112.9	128.9	154.6	197.9	274.3	386.7	523.0



TEST NUMBER: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.9	106.7	109.5	115.8	125.5	140.9	164.3	203.6	268.6	365.0	481.4
115°	116.9	119.2	122.6	128.3	138.0	153.4	175.1	209.9	268.1	350.8	449.5
117.5°	128.9	131.8	134.6	139.7	150.6	164.8	186.5	217.9	268.6	341.1	428.4
120°	141.5	143.2	146.0	151.7	162.6	176.8	197.3	227.0	270.9	334.8	412.4
122.5°	152.3	154.0	156.9	163.1	173.4	188.8	208.8	235.6	274.9	330.8	399.3
125°	162.6	163.7	167.1	173.4	184.2	199.6	219.6	244.7	278.9	327.4	388.4
127.5°	170.5	172.3	176.2	182.5	194.5	209.9	229.3	252.1	283.5	325.7	378.2
130°	178.0	179.7	184.8	191.6	203.6	219.0	237.8	259.5	288.0	324.0	370.2
132.5°	183.7	185.9	191.6	200.2	212.2	227.0	245.3	266.4	291.5	323.4	362.8
135°	190.5	192.8	199.1	207.6	219.6	235.0	252.7	272.1	294.9	322.8	356.5
137.5°	196.8	199.1	205.3	214.5	226.4	240.7	257.8	276.6	297.2	321.7	350.8
140°	203.1	205.9	211.6	220.7	232.1	246.4	262.9	280.1	299.4	321.1	345.6
142.5°	209.9	212.2	218.5	226.4	237.8	251.0	266.9	283.5	301.2	320.0	341.1
145°	217.3	219.0	224.2	232.7	242.4	255.5	270.4	285.8	301.7	318.8	337.1
147.5°	224.7	225.9	231.0	238.4	248.1	259.5	273.2	287.5	301.7	317.1	333.1
150°	232.1	232.7	237.3	244.7	252.7	262.9	276.1	288.0	301.7	314.8	329.1
152.5°	239.6	239.6	244.1	250.4	257.2	266.9	277.8	289.2	300.0	312.0	324.5
155°	247.0	247.0	250.4	256.1	262.4	270.4	280.1	289.2	298.9	308.6	320.0
157.5°	252.7	253.2	256.1	261.2	266.9	273.2	281.2	289.8	297.2	305.7	314.8
160°	259.5	259.5	261.8	266.4	270.4	276.1	282.9	289.8	296.0	302.3	309.7
162.5°	264.7	264.7	266.4	269.8	273.2	277.8	283.5	289.2	293.7	298.9	304.6
165°	269.8	269.2	270.4	273.2	275.5	279.5	284.0	288.0	291.5	295.5	300.0
167.5°	273.8	273.2	273.8	276.1	277.8	280.6	284.0	287.5	289.2	292.0	295.5
170°	277.2	276.1	276.6	278.3	279.5	280.6	283.5	285.8	286.9	288.6	291.5
172.5°	279.5	278.9	278.9	280.1	280.6	281.2	283.5	285.2	285.2	285.8	287.5
175°	281.2	280.6	280.1	281.2	281.2	281.8	282.9	284.0	283.5	283.5	284.6
177.5°	282.3	281.8	281.2	281.8	281.8	281.8	282.3	283.5	282.3	281.8	282.3
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



TEST NUMBER: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-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°	14.3	14.8	15.4	16.5	16.0	16.5	17.1	16.5
92.5°	56.5	43.9	38.2	34.2	33.1	30.8	31.4	30.2
95°	205.3	139.2	108.9	88.4	77.6	72.4	68.4	66.2
97.5°	471.7	355.9	280.6	215.6	177.4	155.7	142.0	135.7
100°	672.5	626.3	559.5	478.5	420.9	379.3	357.1	357.6
102.5°	739.2	748.9	717.0	673.0	631.4	600.6	582.9	566.4
105°	741.5	798.5	809.4	794.5	768.3	746.6	728.4	725.5
107.5°	707.3	796.8	841.3	856.7	853.3	843.0	835.6	829.3
110°	653.6	758.6	830.5	870.4	886.4	890.9	889.8	888.6





TEST NUMBER: P334621

CATALOG NUMBER: S123IP-S585U835-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	600.6	708.4	791.1	845.3	877.8	894.3	900.1	900.6
115°	555.0	654.2	738.1	800.2	843.0	868.1	879.5	882.4
117.5°	519.6	607.4	684.4	748.9	793.4	821.3	838.4	842.4
120°	492.8	569.8	638.2	695.9	740.9	772.9	786.5	790.0
122.5°	471.7	539.6	601.7	654.2	693.0	721.0	736.4	740.9
125°	453.4	515.6	570.4	616.0	652.5	677.6	691.9	695.9
127.5°	436.9	493.4	543.6	585.8	618.9	640.5	653.6	657.1
130°	421.5	472.8	519.0	557.8	588.1	608.6	620.6	625.1
132.5°	407.2	453.4	495.7	532.2	560.1	580.6	590.9	593.8
135°	394.7	435.2	472.3	504.8	532.7	549.8	560.1	564.1
137.5°	382.7	416.9	450.0	479.1	503.1	520.8	529.3	532.7
140°	372.5	401.5	428.9	453.4	475.1	491.1	500.2	499.6
142.5°	362.8	386.7	409.5	430.1	447.7	461.4	469.4	468.8
145°	355.3	374.2	392.4	409.0	423.2	435.2	439.8	440.9
147.5°	349.1	364.5	379.9	391.8	403.3	411.8	416.4	416.9
150°	342.2	355.3	367.3	378.2	386.7	393.0	396.4	396.4
152.5°	336.0	346.8	357.1	365.6	371.9	377.6	379.3	379.3
155°	329.7	338.8	347.4	354.2	359.3	363.9	365.0	365.6
157.5°	322.8	330.8	337.7	343.4	347.9	351.4	352.5	352.5
160°	317.1	323.4	329.1	333.1	337.1	340.5	340.5	339.9
162.5°	310.3	315.4	320.6	324.0	326.3	329.1	329.1	328.5
165°	304.6	308.0	312.0	314.8	317.1	319.4	318.8	318.8
167.5°	299.4	302.3	304.6	306.9	308.0	309.7	309.1	309.1
170°	294.3	296.0	298.3	299.4	300.0	301.2	300.6	300.6
172.5°	289.8	290.9	292.6	293.2	293.2	294.3	293.2	292.6
175°	285.8	286.3	287.5	287.5	287.5	288.0	287.5	286.9
177.5°	282.9	283.5	284.0	284.0	283.5	284.0	282.9	282.9
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8

(END OF REPORT)