

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: P334615

Luminaire Tested: **S123IP-S365U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334615  
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-S365U830-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 365 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

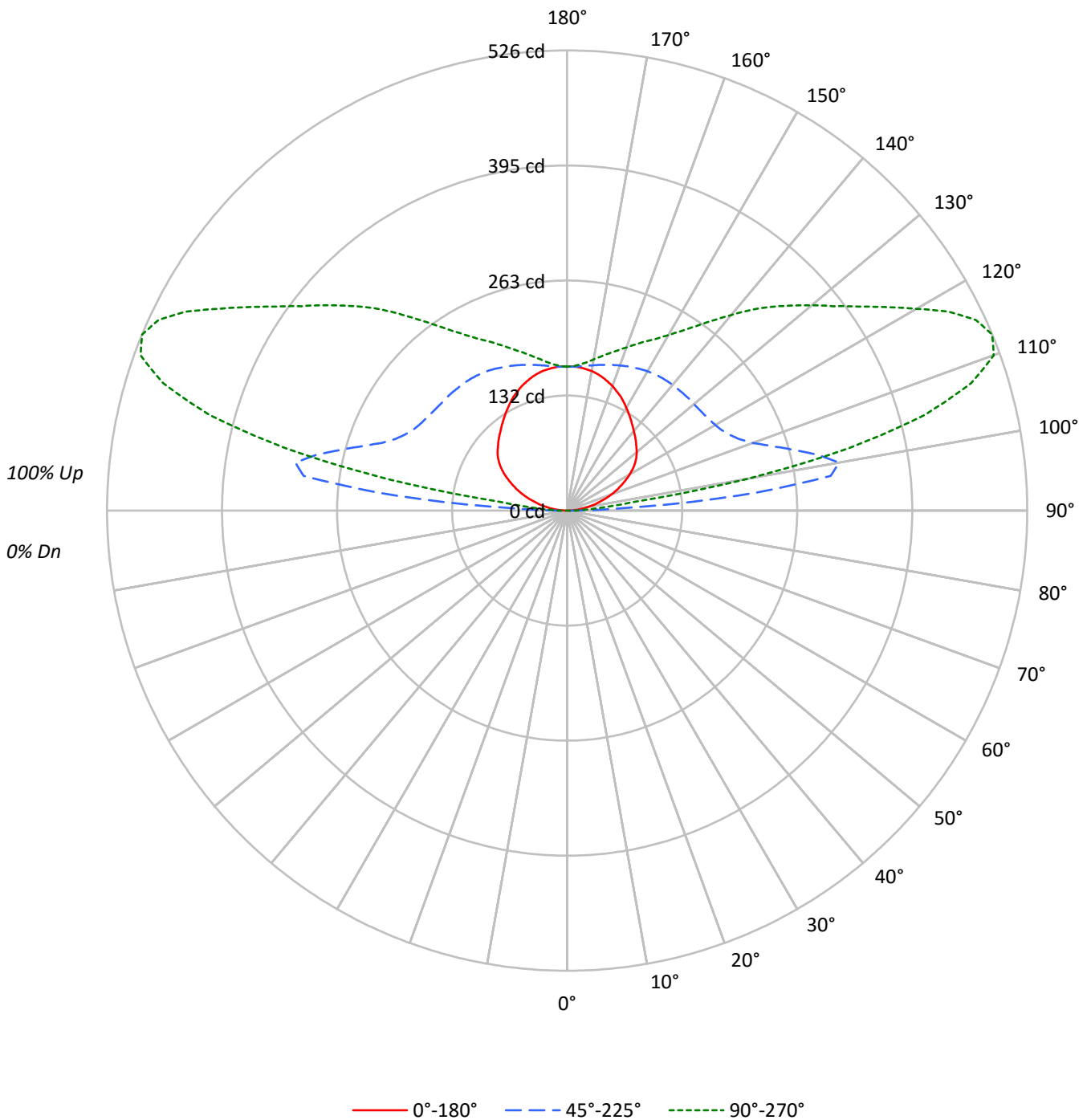
Lumens per Lamp: N/A  
Luminaire Lumens: 1238.6 lumens  
Efficiency: N/A  
Efficacy: 108.6 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

Input Watts (W): 11.4  
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	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



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**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°	0.9	0.1
90°-100°	89.3	7.2
100°-110°	261.4	21.1
110°-120°	255.3	20.6
120°-130°	203.3	16.4
130°-140°	160.4	12.9
140°-150°	119.7	9.7
150°-160°	83.4	6.7
160°-170°	49.0	4.0
170°-180°	15.9	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	0.9	0.1
90°-120°	606.0	48.9
90°-150°	1089.3	87.9
90°-180°	1238.0	100.0
0°-180°	1238.6	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	4	8	9	10	1
95°	11	37	198	58	39	12
105°	39	57	268	468	424	41
115°	68	85	205	449	515	68
125°	95	112	191	346	406	84
135°	111	133	188	285	329	86
145°	127	145	186	234	258	80
155°	144	156	180	205	214	66
165°	158	162	172	183	186	44
175°	164	164	166	168	168	16
180°	164	164	164	164	164	



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**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°	0.7	1.3	2.0	3.0	3.7	4.3	5.3	6.3	7.3	8.3	8.0
92.5°	5.0	7.3	10.7	13.7	17.0	23.0	33.6	51.3	68.6	62.0	46.3
95°	11.3	12.3	16.0	21.6	30.3	43.3	71.6	121.2	175.9	197.5	160.2
97.5°	18.0	18.3	21.3	26.3	35.0	49.3	77.3	134.9	226.8	303.8	314.1
100°	24.6	25.0	27.3	32.0	40.0	53.0	76.3	125.6	213.2	315.4	381.0
102.5°	31.6	32.3	34.3	38.6	45.6	57.3	77.6	117.6	193.2	293.8	384.4
105°	38.6	39.6	41.6	45.6	52.0	62.3	80.3	114.6	177.5	267.8	363.4
107.5°	46.0	47.0	49.0	53.0	59.0	68.6	84.6	113.9	166.2	244.8	333.4
110°	54.0	55.0	56.6	60.3	65.9	75.3	90.3	115.6	160.2	225.8	305.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	61.3	62.3	64.0	67.6	73.3	82.3	95.9	118.9	156.9	213.2	281.1
115°	68.3	69.6	71.6	74.9	80.6	89.6	102.3	122.6	156.5	204.8	262.5
117.5°	75.3	76.9	78.6	81.6	87.9	96.3	108.9	127.2	156.9	199.2	250.1
120°	82.6	83.6	85.3	88.6	94.9	103.3	115.2	132.6	158.2	195.5	240.8
122.5°	88.9	89.9	91.6	95.3	101.3	110.2	121.9	137.6	160.5	193.2	233.2
125°	94.9	95.6	97.6	101.3	107.6	116.6	128.2	142.9	162.9	191.2	226.8
127.5°	99.6	100.6	102.9	106.6	113.6	122.6	133.9	147.2	165.5	190.2	220.8
130°	103.9	104.9	107.9	111.9	118.9	127.9	138.9	151.5	168.2	189.2	216.2
132.5°	107.3	108.6	111.9	116.9	123.9	132.6	143.2	155.5	170.2	188.9	211.8
135°	111.2	112.6	116.2	121.2	128.2	137.2	147.6	158.9	172.2	188.5	208.2
137.5°	114.9	116.2	119.9	125.2	132.2	140.6	150.6	161.5	173.5	187.9	204.8
140°	118.6	120.2	123.6	128.9	135.6	143.9	153.5	163.5	174.9	187.5	201.8
142.5°	122.6	123.9	127.6	132.2	138.9	146.6	155.9	165.5	175.9	186.9	199.2
145°	126.9	127.9	130.9	135.9	141.6	149.2	157.9	166.9	176.2	186.2	196.8
147.5°	131.2	131.9	134.9	139.2	144.9	151.5	159.5	167.9	176.2	185.2	194.5
150°	135.6	135.9	138.6	142.9	147.6	153.5	161.2	168.2	176.2	183.9	192.2
152.5°	139.9	139.9	142.6	146.2	150.2	155.9	162.2	168.9	175.2	182.2	189.5
155°	144.2	144.2	146.2	149.6	153.2	157.9	163.5	168.9	174.5	180.2	186.9
157.5°	147.6	147.9	149.6	152.5	155.9	159.5	164.2	169.2	173.5	178.5	183.9
160°	151.5	151.5	152.9	155.5	157.9	161.2	165.2	169.2	172.9	176.5	180.9
162.5°	154.5	154.5	155.5	157.5	159.5	162.2	165.5	168.9	171.5	174.5	177.9
165°	157.5	157.2	157.9	159.5	160.9	163.2	165.9	168.2	170.2	172.5	175.2
167.5°	159.9	159.5	159.9	161.2	162.2	163.9	165.9	167.9	168.9	170.5	172.5
170°	161.9	161.2	161.5	162.5	163.2	163.9	165.5	166.9	167.5	168.5	170.2
172.5°	163.2	162.9	162.9	163.5	163.9	164.2	165.5	166.5	166.5	166.9	167.9
175°	164.2	163.9	163.5	164.2	164.2	164.5	165.2	165.9	165.5	165.5	166.2
177.5°	164.9	164.5	164.2	164.5	164.5	164.5	164.9	165.5	164.9	164.5	164.9
180°	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5



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**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°	8.3	8.7	9.0	9.7	9.3	9.7	10.0	9.7
92.5°	33.0	25.6	22.3	20.0	19.3	18.0	18.3	17.7
95°	119.9	81.3	63.6	51.6	45.3	42.3	40.0	38.6
97.5°	275.5	207.8	163.9	125.9	103.6	90.9	82.9	79.3
100°	392.7	365.7	326.7	279.5	245.8	221.5	208.5	208.8
102.5°	431.7	437.3	418.7	393.0	368.7	350.7	340.4	330.7
105°	433.0	466.3	472.6	464.0	448.7	436.0	425.3	423.7
107.5°	413.0	465.3	491.3	500.3	498.3	492.3	488.0	484.3
110°	381.7	443.0	485.0	508.3	517.6	520.3	519.6	518.9





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CATALOG NUMBER: S123IP-S365U830-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	350.7	413.7	462.0	493.6	512.6	522.3	525.6	525.9
115°	324.1	382.0	431.0	467.3	492.3	506.9	513.6	515.3
117.5°	303.4	354.7	399.7	437.3	463.3	479.6	489.6	492.0
120°	287.8	332.7	372.7	406.4	432.7	451.3	459.3	461.3
122.5°	275.5	315.1	351.4	382.0	404.7	421.0	430.0	432.7
125°	264.8	301.1	333.1	359.7	381.0	395.7	404.0	406.4
127.5°	255.1	288.1	317.4	342.1	361.4	374.0	381.7	383.7
130°	246.1	276.1	303.1	325.7	343.4	355.4	362.4	365.1
132.5°	237.8	264.8	289.4	310.8	327.1	339.1	345.1	346.7
135°	230.5	254.1	275.8	294.8	311.1	321.1	327.1	329.4
137.5°	223.5	243.5	262.8	279.8	293.8	304.1	309.1	311.1
140°	217.5	234.5	250.5	264.8	277.5	286.8	292.1	291.8
142.5°	211.8	225.8	239.1	251.1	261.5	269.5	274.1	273.8
145°	207.5	218.5	229.2	238.8	247.1	254.1	256.8	257.5
147.5°	203.8	212.8	221.8	228.8	235.5	240.5	243.1	243.5
150°	199.8	207.5	214.5	220.8	225.8	229.5	231.5	231.5
152.5°	196.2	202.5	208.5	213.5	217.2	220.5	221.5	221.5
155°	192.5	197.8	202.8	206.8	209.8	212.5	213.2	213.5
157.5°	188.5	193.2	197.2	200.5	203.2	205.2	205.8	205.8
160°	185.2	188.9	192.2	194.5	196.8	198.8	198.8	198.5
162.5°	181.2	184.2	187.2	189.2	190.5	192.2	192.2	191.9
165°	177.9	179.9	182.2	183.9	185.2	186.5	186.2	186.2
167.5°	174.9	176.5	177.9	179.2	179.9	180.9	180.5	180.5
170°	171.9	172.9	174.2	174.9	175.2	175.9	175.5	175.5
172.5°	169.2	169.9	170.9	171.2	171.2	171.9	171.2	170.9
175°	166.9	167.2	167.9	167.9	167.9	168.2	167.9	167.5
177.5°	165.2	165.5	165.9	165.9	165.5	165.9	165.2	165.2
180°	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5

(END OF REPORT)