

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: P332493-930

Luminaire Tested: **SA4XXDIP-C350D365U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332493-930
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-C350D365U930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

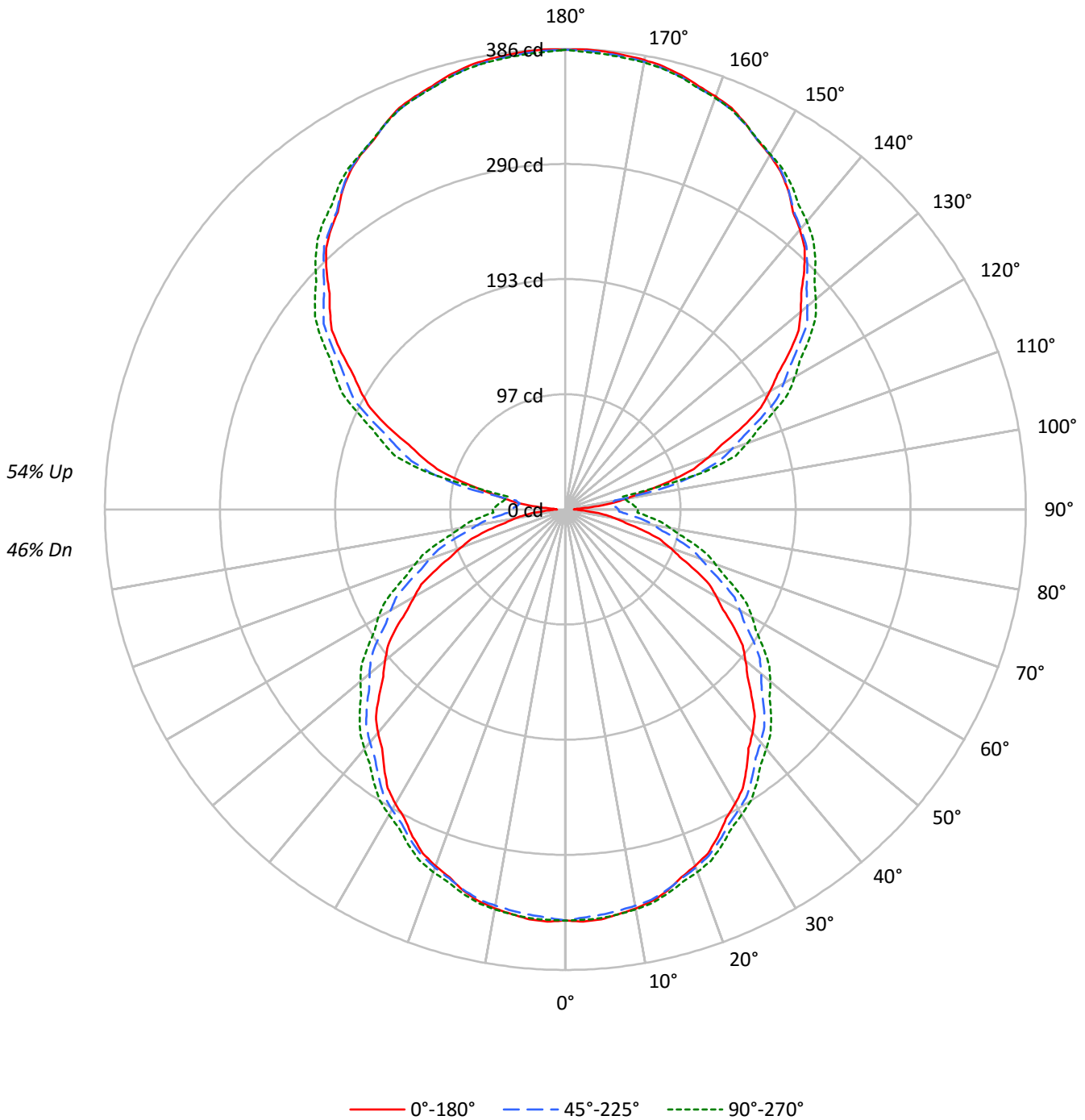
Lumens per Lamp: N/A
Luminaire Lumens: 2367.5 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 20.3
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	42	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	37	32	27	31	26	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	29	25	31	25	21	25	21	18	20	17	15	12
9	48	36	28	23	44	33	26	22	28	23	19	23	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2782	2782	2782
5°	2791	2719	2726
10°	2774	2675	2673
15°	2749	2623	2608
20°	2711	2566	2547
25°	2669	2503	2478
30°	2623	2439	2408
35°	2571	2374	2347
40°	2530	2313	2282
45°	2468	2256	2228
50°	2417	2190	2169
55°	2363	2129	2101
60°	2280	2049	2039
65°	2187	1965	1962
70°	2076	1868	1874
75°	1922	1763	1793
80°	1750	1660	1713
85°	1534	1571	1669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	1.4
10°-20°	93.5	3.9
20°-30°	141.4	6.0
30°-40°	171.1	7.2
40°-50°	180.8	7.6
50°-60°	170.2	7.2
60°-70°	141.2	6.0
70°-80°	99.2	4.2
80°-90°	57.2	2.4
90°-100°	46.5	2.0
100°-110°	108.7	4.6
110°-120°	177.3	7.5
120°-130°	213.4	9.0
130°-140°	222.3	9.4
140°-150°	204.9	8.7
150°-160°	164.6	7.0
160°-170°	106.2	4.5
170°-180°	36.6	1.5
0°-30°	267.5	11.3
0°-40°	438.6	18.5
0°-60°	789.6	33.4
0°-90°	1087.2	45.9
90°-120°	332.4	14.0
90°-150°	973.0	41.1
90°-180°	1280.0	54.1
0°-180°	2367.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	345	344	341	344	344	33
15°	331	331	330	333	333	93
25°	303	305	306	310	311	139
35°	265	269	273	278	280	166
45°	221	228	235	242	244	171
55°	173	181	193	200	203	154
65°	120	132	145	154	158	119
75°	66	81	97	107	111	71
85°	20	37	54	65	70	22
90°	7	26	44	57	61	5
95°	21	25	40	52	56	24
105°	90	100	115	127	120	95
115°	164	169	181	189	192	162
125°	229	230	239	247	250	205
135°	283	283	287	293	296	218
145°	326	326	326	329	331	204
155°	357	357	356	357	357	165
165°	377	375	375	377	375	106
175°	385	384	384	386	383	37
180°	385	385	385	385	385	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	345.8	345.6	345.4	345.2	345.0	344.6	344.1	343.6	343.0	342.4	342.9
5°	345.0	344.7	344.5	344.2	344.0	343.6	342.9	342.3	341.8	341.1	341.9
7.5°	342.1	341.9	341.8	341.6	341.4	341.1	340.6	340.1	339.7	339.2	339.9
10°	339.6	339.5	339.4	339.3	339.2	339.0	338.6	338.1	337.7	337.3	338.0
12.5°	336.2	336.1	336.1	336.1	336.1	336.0	335.7	335.4	335.1	334.8	335.5
15°	330.7	330.8	330.9	331.0	331.1	331.0	330.7	330.4	330.2	330.0	330.7
17.5°	323.3	323.5	323.8	324.0	324.2	324.4	324.3	324.2	324.2	324.2	325.0
20°	318.0	318.2	318.5	318.8	319.0	319.2	319.3	319.4	319.4	319.5	320.4
22.5°	312.1	312.4	312.7	313.1	313.4	313.6	313.8	314.0	314.1	314.3	315.1
25°	302.6	303.0	303.6	304.1	304.6	305.0	305.2	305.5	305.7	306.1	307.0
27.5°	291.9	292.7	293.4	294.2	294.9	295.5	295.9	296.3	296.7	297.1	297.9
30°	284.8	285.5	286.2	286.8	287.6	288.2	288.8	289.3	290.0	290.6	291.6
32.5°	277.1	277.9	278.8	279.6	280.4	281.1	281.8	282.4	283.2	283.8	284.9
35°	264.7	265.8	266.8	267.8	268.9	269.8	270.7	271.5	272.4	273.2	274.4
37.5°	252.3	253.5	254.7	255.8	257.1	258.1	259.3	260.3	261.4	262.4	263.7
40°	244.3	245.4	246.5	247.6	248.7	249.9	251.1	252.3	253.5	254.7	256.0
42.5°	235.1	236.3	237.5	238.8	240.0	241.3	242.8	244.2	245.6	247.0	248.4
45°	220.7	222.3	224.0	225.6	227.2	228.9	230.5	232.1	233.7	235.4	236.8
47.5°	207.1	208.8	210.4	212.1	213.8	215.6	217.4	219.4	221.3	223.1	224.6
50°	197.2	199.1	201.0	202.8	204.7	206.6	208.6	210.4	212.3	214.2	215.9
52.5°	187.4	189.2	191.1	193.0	194.9	196.9	199.0	201.2	203.3	205.5	207.2
55°	172.9	174.7	176.5	178.3	180.1	182.3	184.8	187.4	190.0	192.6	194.3
57.5°	156.8	159.0	161.2	163.5	165.7	168.0	170.6	173.2	175.7	178.3	180.3
60°	146.3	148.5	150.7	153.0	155.2	157.7	160.5	163.4	166.2	169.0	171.0
62.5°	136.1	138.5	141.0	143.4	145.8	148.5	151.2	154.1	156.9	159.8	161.8
65°	119.6	122.4	125.1	127.8	130.6	133.5	136.3	139.3	142.2	145.1	147.2
67.5°	103.8	106.7	109.7	112.6	115.4	118.5	121.6	124.7	127.8	130.9	133.1
70°	93.0	95.9	98.8	101.7	104.7	107.8	111.0	114.3	117.6	120.8	123.1
72.5°	82.5	85.5	88.5	91.5	94.4	97.7	101.1	104.6	108.0	111.5	113.7
75°	66.4	69.5	72.7	75.9	79.1	82.4	86.1	89.7	93.3	96.9	99.3
77.5°	51.4	54.7	58.0	61.4	64.7	68.3	72.1	75.9	79.7	83.4	85.9
80°	42.1	45.5	48.9	52.3	55.8	59.4	63.2	66.9	70.7	74.5	77.0
82.5°	32.8	36.4	39.9	43.5	47.0	50.7	54.5	58.3	62.0	65.9	68.5
85°	20.5	24.1	27.6	31.2	34.9	38.6	42.5	46.3	50.1	54.1	56.6
87.5°	11.6	15.2	18.9	22.5	26.2	29.9	33.8	37.6	41.5	45.3	47.9
90°	7.0	11.2	15.3	19.4	23.6	27.7	32.0	36.1	40.4	44.5	47.5
92.5°	9.5	12.6	15.7	18.8	22.0	25.7	29.8	34.1	38.2	42.5	45.2
95°	20.9	21.5	22.2	22.8	23.5	25.6	29.2	32.8	36.4	39.9	42.6
97.5°	38.2	42.0	45.8	49.6	53.4	53.5	49.8	46.1	42.5	38.8	41.1
100°	51.5	54.9	58.3	61.6	65.1	64.0	58.5	53.0	47.5	42.0	43.2
102.5°	66.7	69.5	72.3	75.1	77.9	80.4	82.5	84.6	86.7	88.9	79.4
105°	90.2	92.3	94.4	96.5	98.6	101.4	104.9	108.4	111.9	115.4	118.1
107.5°	112.7	114.2	115.9	117.5	119.0	121.6	125.0	128.4	131.9	135.3	137.7
110°	127.6	129.0	130.4	131.8	133.1	135.5	138.9	142.3	145.7	149.0	151.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.0	143.4	144.8	146.3	147.7	149.9	153.0	156.0	159.0	162.1	164.0
115°	164.3	165.2	166.2	167.1	168.1	169.9	172.6	175.3	178.0	180.7	182.6
117.5°	184.7	185.3	186.1	186.8	187.5	189.2	191.9	194.6	197.3	200.0	201.8
120°	198.1	198.7	199.2	199.7	200.2	201.7	204.1	206.5	209.0	211.3	213.2
122.5°	211.1	211.2	211.5	211.7	211.9	213.2	215.6	218.1	220.5	223.0	224.8
125°	229.2	229.3	229.5	229.7	229.8	231.0	232.9	235.0	237.0	239.0	240.8
127.5°	246.6	246.6	246.5	246.5	246.5	247.5	249.4	251.4	253.3	255.3	256.7
130°	257.6	257.6	257.6	257.6	257.6	258.3	259.8	261.4	263.0	264.6	266.1
132.5°	268.0	268.0	268.1	268.1	268.1	268.8	270.1	271.5	272.8	274.1	275.7
135°	283.2	283.1	283.0	283.0	282.9	283.3	284.1	285.0	285.8	286.7	288.2
137.5°	296.9	296.9	296.8	296.8	296.7	296.9	297.5	298.1	298.6	299.2	300.6
140°	305.9	306.0	306.0	306.1	306.1	306.2	306.4	306.6	306.9	307.0	308.3
142.5°	313.6	313.9	314.1	314.3	314.5	314.6	314.7	314.7	314.7	314.7	315.8
145°	326.0	326.1	326.2	326.3	326.4	326.4	326.4	326.4	326.4	326.4	327.0
147.5°	335.8	336.1	336.4	336.6	337.0	337.0	337.0	336.9	336.8	336.8	336.9
150°	343.0	343.2	343.3	343.5	343.6	343.7	343.6	343.6	343.5	343.5	343.5
152.5°	348.7	348.9	349.0	349.2	349.4	349.4	349.4	349.2	349.1	349.0	349.1
155°	357.0	357.1	357.1	357.2	357.3	357.2	357.0	356.8	356.6	356.4	356.7
157.5°	364.1	364.0	364.0	363.9	363.9	363.8	363.6	363.4	363.1	363.0	363.3
160°	368.3	368.0	367.9	367.7	367.5	367.4	367.3	367.2	367.1	367.0	367.5
162.5°	371.9	371.7	371.5	371.2	371.0	370.8	370.7	370.6	370.6	370.6	371.0
165°	376.6	376.3	375.9	375.6	375.3	375.1	375.1	375.1	375.1	375.1	375.7
167.5°	380.3	379.9	379.6	379.3	379.0	378.8	378.7	378.7	378.6	378.6	379.2
170°	382.4	382.0	381.6	381.2	380.8	380.7	380.7	380.8	380.8	380.9	381.4
172.5°	383.8	383.4	382.9	382.6	382.2	382.0	382.1	382.2	382.2	382.3	382.8
175°	385.2	384.8	384.5	384.1	383.7	383.5	383.6	383.7	383.8	383.8	384.4
177.5°	386.0	385.6	385.2	384.8	384.5	384.3	384.5	384.6	384.7	384.7	385.2
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	343.4	343.9	344.4	344.5	344.5	344.5	344.4	344.3
5°	342.5	343.2	343.9	344.2	344.1	344.0	343.9	343.8
7.5°	340.7	341.4	342.3	342.6	342.5	342.4	342.3	342.3
10°	338.8	339.6	340.4	340.7	340.6	340.6	340.5	340.4
12.5°	336.2	337.0	337.6	337.9	337.9	337.9	337.9	337.9
15°	331.5	332.2	333.0	333.4	333.3	333.2	333.1	333.0
17.5°	325.7	326.5	327.3	327.7	327.6	327.5	327.5	327.4
20°	321.2	322.1	322.9	323.4	323.4	323.4	323.4	323.4
22.5°	316.0	316.8	317.7	318.2	318.4	318.5	318.6	318.8
25°	307.9	308.8	309.8	310.3	310.4	310.5	310.5	310.6
27.5°	298.8	299.7	300.6	301.1	301.2	301.3	301.3	301.5
30°	292.4	293.4	294.3	294.9	295.1	295.3	295.5	295.6
32.5°	285.9	287.1	288.1	288.8	288.9	289.1	289.3	289.4
35°	275.7	276.8	278.0	278.8	279.0	279.2	279.6	279.8
37.5°	264.9	266.0	267.3	268.1	268.3	268.6	268.9	269.1
40°	257.3	258.5	259.8	260.7	261.0	261.4	261.7	262.0
42.5°	249.8	251.3	252.7	253.6	253.8	254.0	254.4	254.6
45°	238.3	239.8	241.2	242.1	242.6	243.0	243.4	243.9
47.5°	226.2	227.6	229.2	230.2	230.7	231.2	231.7	232.3
50°	217.6	219.3	221.0	222.2	222.7	223.1	223.7	224.2
52.5°	209.0	210.7	212.4	213.5	214.0	214.5	215.1	215.6
55°	196.0	197.7	199.4	200.6	201.1	201.5	202.1	202.6
57.5°	182.4	184.4	186.5	187.7	188.2	188.7	189.1	189.6
60°	173.0	175.0	176.9	178.2	179.0	179.6	180.3	181.0
62.5°	163.7	165.7	167.6	169.0	169.7	170.3	171.0	171.7
65°	149.4	151.6	153.7	155.1	155.8	156.5	157.2	157.8
67.5°	135.3	137.5	139.7	141.1	141.8	142.4	143.1	143.8
70°	125.4	127.8	130.0	131.5	132.1	132.7	133.3	133.9
72.5°	116.0	118.3	120.5	122.0	122.6	123.3	124.0	124.7
75°	101.7	104.0	106.5	108.0	108.8	109.6	110.4	111.1
77.5°	88.3	90.7	93.2	94.8	95.6	96.4	97.3	98.1
80°	79.7	82.2	84.8	86.4	87.1	87.8	88.5	89.1
82.5°	71.1	73.8	76.4	78.1	78.8	79.6	80.4	81.1
85°	59.2	61.7	64.3	66.0	66.9	67.8	68.6	69.5
87.5°	50.5	53.0	55.6	57.2	58.0	58.9	59.6	60.4
90°	50.3	53.2	56.0	57.9	58.7	59.5	60.3	61.1
92.5°	48.1	50.9	53.6	55.4	56.2	56.8	57.6	58.3
95°	45.3	48.0	50.7	52.5	53.3	54.1	55.0	55.8
97.5°	43.4	45.7	47.9	49.5	50.3	51.0	51.9	52.7
100°	44.4	45.7	46.9	47.9	48.5	49.2	49.8	50.5
102.5°	69.9	60.4	50.9	46.5	47.1	47.9	48.5	49.2
105°	120.8	123.5	126.3	126.8	125.1	123.6	122.0	120.3
107.5°	140.1	142.5	144.9	146.5	147.4	148.2	149.1	149.9
110°	153.3	155.4	157.4	159.0	159.8	160.7	161.6	162.5



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CATALOG NUMBER: SA4XXDIP-C350D365U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	165.8	167.7	169.6	171.0	171.9	172.8	173.7	174.6
115°	184.7	186.7	188.7	190.0	190.6	191.2	191.8	192.4
117.5°	203.5	205.3	207.0	208.2	208.9	209.5	210.2	210.9
120°	215.1	216.9	218.7	220.0	220.5	221.0	221.6	222.2
122.5°	226.6	228.4	230.2	231.3	231.8	232.3	232.8	233.3
125°	242.6	244.5	246.3	247.5	248.1	248.7	249.2	249.8
127.5°	258.3	259.8	261.3	262.3	262.9	263.3	263.9	264.4
130°	267.7	269.4	271.0	272.1	272.6	273.0	273.6	274.1
132.5°	277.2	278.8	280.3	281.3	281.8	282.3	282.7	283.2
135°	289.7	291.2	292.7	293.8	294.4	295.1	295.7	296.4
137.5°	302.0	303.4	304.8	305.7	306.1	306.5	306.9	307.3
140°	309.7	311.0	312.3	313.2	313.6	314.1	314.7	315.2
142.5°	317.0	318.1	319.2	319.9	320.3	320.7	321.1	321.5
145°	327.6	328.2	328.8	329.3	329.8	330.3	330.7	331.2
147.5°	337.0	337.1	337.3	337.5	337.9	338.2	338.5	338.8
150°	343.5	343.5	343.5	343.5	343.6	343.6	343.6	343.7
152.5°	349.2	349.3	349.4	349.4	349.4	349.4	349.4	349.3
155°	356.9	357.2	357.4	357.5	357.3	357.1	356.9	356.7
157.5°	363.6	363.9	364.3	364.3	363.9	363.6	363.3	363.0
160°	367.9	368.3	368.6	368.6	368.3	367.9	367.5	367.0
162.5°	371.3	371.7	372.1	372.0	371.6	371.2	370.7	370.3
165°	376.2	376.7	377.2	377.2	376.6	376.0	375.4	374.9
167.5°	379.8	380.3	380.8	380.8	380.2	379.5	378.9	378.3
170°	382.0	382.5	382.9	382.9	382.3	381.6	381.0	380.3
172.5°	383.4	383.8	384.3	384.3	383.6	382.9	382.2	381.5
175°	385.0	385.6	386.1	386.0	385.2	384.5	383.7	382.9
177.5°	385.6	386.0	386.5	386.3	385.7	385.1	384.5	383.8
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2

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