

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: P332493-927

Luminaire Tested: **S124DIP-S350D365U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332493-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S350D365U927-4F0-1E-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: 2300.4 lumens  
Efficiency: N/A  
Efficacy: 113.3 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

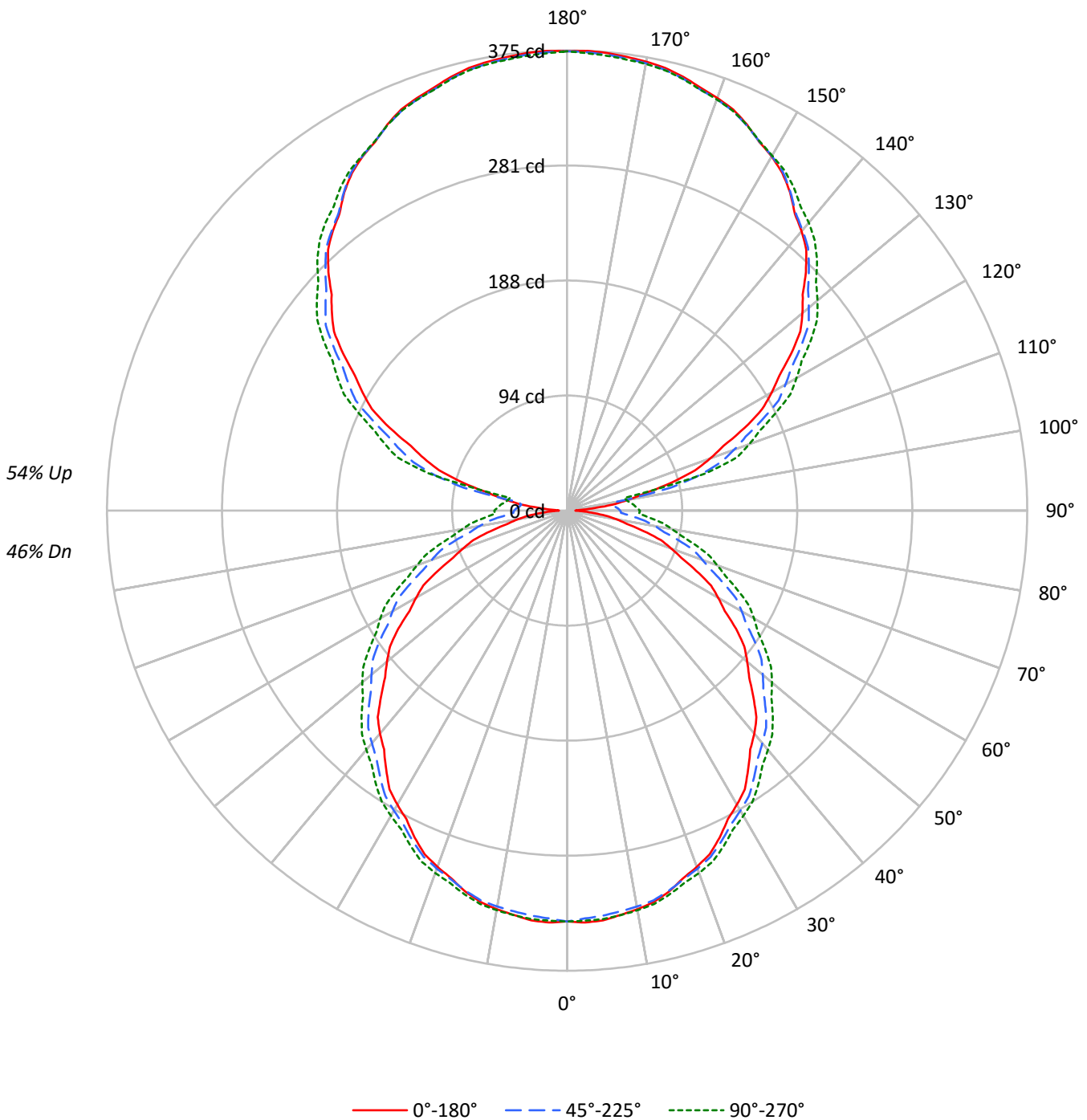
Input Watts (W): 20.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332493-927

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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°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.7	1.4
10°-20°	90.8	3.9
20°-30°	137.4	6.0
30°-40°	166.2	7.2
40°-50°	175.7	7.6
50°-60°	165.4	7.2
60°-70°	137.2	6.0
70°-80°	96.4	4.2
80°-90°	55.6	2.4
90°-100°	45.2	2.0
100°-110°	105.6	4.6
110°-120°	172.2	7.5
120°-130°	207.3	9.0
130°-140°	216.0	9.4
140°-150°	199.1	8.7
150°-160°	159.9	7.0
160°-170°	103.2	4.5
170°-180°	35.6	1.5
0°-30°	259.9	11.3
0°-40°	426.1	18.5
0°-60°	767.2	33.4
0°-90°	1056.4	45.9
90°-120°	323.0	14.0
90°-150°	945.4	41.1
90°-180°	1244.0	54.1
0°-180°	2300.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	7	25	43	55	59	5
95°	20	24	39	50	54	24
105°	88	97	112	123	117	92
115°	160	164	176	184	187	157
125°	223	224	232	240	243	199
135°	275	275	279	285	288	212
145°	317	317	317	320	322	198
155°	347	347	346	347	347	160
165°	366	365	364	366	364	103
175°	374	373	373	375	372	36
180°	374	374	374	374	374	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.2	14.8	18.4	21.9	25.4	29.1	32.8	36.5	40.3	44.0	46.6
90°	6.8	10.9	14.9	18.9	22.9	26.9	31.1	35.1	39.2	43.3	46.1
92.5°	9.2	12.3	15.3	18.3	21.4	25.0	29.0	33.1	37.2	41.3	44.0
95°	20.3	20.9	21.5	22.2	22.8	24.9	28.4	31.8	35.3	38.8	41.4
97.5°	37.2	40.8	44.5	48.2	51.9	52.0	48.4	44.8	41.3	37.7	39.9
100°	50.1	53.3	56.6	59.9	63.2	62.2	56.8	51.5	46.2	40.8	42.0
102.5°	64.8	67.6	70.3	73.0	75.7	78.1	80.2	82.2	84.3	86.3	77.2
105°	87.6	89.7	91.7	93.8	95.8	98.5	102.0	105.3	108.7	112.1	114.7
107.5°	109.5	111.0	112.6	114.2	115.7	118.1	121.4	124.8	128.2	131.5	133.8
110°	124.0	125.3	126.7	128.0	129.4	131.7	135.0	138.2	141.6	144.8	146.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.0	139.3	140.7	142.1	143.5	145.6	148.6	151.5	154.5	157.5	159.3
115°	159.6	160.5	161.4	162.4	163.3	165.1	167.7	170.3	172.9	175.5	177.4
117.5°	179.4	180.1	180.8	181.5	182.2	183.9	186.5	189.1	191.7	194.3	196.1
120°	192.5	193.1	193.5	194.0	194.6	196.0	198.3	200.7	203.0	205.3	207.2
122.5°	205.1	205.3	205.5	205.7	205.9	207.2	209.5	211.9	214.3	216.7	218.4
125°	222.7	222.8	223.0	223.2	223.3	224.4	226.3	228.3	230.3	232.3	234.0
127.5°	239.6	239.6	239.6	239.6	239.6	240.5	242.3	244.2	246.1	248.0	249.5
130°	250.3	250.3	250.3	250.3	250.3	251.0	252.5	254.0	255.6	257.1	258.6
132.5°	260.4	260.4	260.5	260.5	260.5	261.2	262.4	263.8	265.1	266.3	267.8
135°	275.1	275.0	275.0	275.0	274.9	275.3	276.1	276.9	277.7	278.6	280.0
137.5°	288.5	288.4	288.4	288.4	288.3	288.5	289.1	289.6	290.2	290.7	292.1
140°	297.2	297.3	297.3	297.4	297.4	297.5	297.7	297.9	298.2	298.3	299.6
142.5°	304.8	305.0	305.2	305.4	305.6	305.7	305.8	305.8	305.8	305.8	306.9
145°	316.7	316.9	317.0	317.0	317.2	317.2	317.2	317.2	317.2	317.2	317.7
147.5°	326.3	326.6	326.9	327.1	327.4	327.5	327.4	327.3	327.3	327.3	327.3
150°	333.3	333.4	333.6	333.7	333.9	334.0	333.9	333.8	333.7	333.7	333.7
152.5°	338.8	339.0	339.1	339.3	339.5	339.5	339.5	339.3	339.2	339.1	339.2
155°	346.9	347.0	347.0	347.1	347.1	347.1	346.9	346.7	346.5	346.3	346.6
157.5°	353.8	353.7	353.7	353.6	353.6	353.5	353.3	353.1	352.8	352.7	353.0
160°	357.8	357.6	357.4	357.3	357.0	357.0	356.9	356.8	356.7	356.6	357.0
162.5°	361.4	361.2	360.9	360.7	360.4	360.3	360.2	360.1	360.1	360.0	360.4
165°	365.9	365.6	365.3	365.0	364.6	364.5	364.5	364.5	364.5	364.5	365.0
167.5°	369.5	369.2	368.8	368.5	368.2	368.0	368.0	368.0	367.9	367.9	368.4
170°	371.5	371.1	370.7	370.4	370.0	369.9	369.9	370.0	370.0	370.1	370.6
172.5°	372.9	372.5	372.1	371.8	371.4	371.2	371.3	371.4	371.4	371.5	371.9
175°	374.3	373.9	373.6	373.2	372.8	372.6	372.7	372.8	372.9	372.9	373.5
177.5°	375.0	374.6	374.3	373.9	373.6	373.4	373.6	373.7	373.8	373.8	374.3
180°	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	49.0	51.5	54.0	55.6	56.4	57.2	57.9	58.7
90°	48.9	51.7	54.4	56.2	57.0	57.8	58.6	59.4
92.5°	46.7	49.4	52.1	53.9	54.6	55.2	55.9	56.6
95°	44.0	46.7	49.3	51.0	51.8	52.6	53.4	54.3
97.5°	42.1	44.4	46.6	48.1	48.9	49.6	50.4	51.2
100°	43.2	44.4	45.6	46.5	47.1	47.8	48.4	49.1
102.5°	67.9	58.7	49.4	45.2	45.8	46.5	47.1	47.8
105°	117.4	120.0	122.7	123.2	121.6	120.1	118.5	116.9
107.5°	136.1	138.5	140.8	142.4	143.2	144.0	144.9	145.7
110°	148.9	151.0	153.0	154.5	155.3	156.1	157.0	157.9





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CATALOG NUMBER: S124DIP-S350D365U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	161.1	163.0	164.8	166.1	167.0	167.9	168.8	169.7
115°	179.4	181.4	183.4	184.7	185.2	185.8	186.4	187.0
117.5°	197.7	199.5	201.1	202.3	203.0	203.6	204.2	204.9
120°	209.0	210.7	212.5	213.7	214.2	214.8	215.3	215.9
122.5°	220.1	221.9	223.6	224.7	225.2	225.7	226.2	226.6
125°	235.8	237.6	239.3	240.5	241.1	241.6	242.2	242.7
127.5°	251.0	252.4	253.9	254.8	255.4	255.9	256.4	256.9
130°	260.2	261.7	263.3	264.4	264.8	265.3	265.9	266.3
132.5°	269.3	270.8	272.4	273.3	273.8	274.3	274.6	275.1
135°	281.5	283.0	284.4	285.4	286.1	286.7	287.3	288.0
137.5°	293.4	294.8	296.2	297.0	297.4	297.8	298.2	298.6
140°	300.9	302.1	303.4	304.3	304.8	305.2	305.8	306.3
142.5°	308.0	309.1	310.1	310.9	311.2	311.6	312.0	312.4
145°	318.3	318.9	319.5	320.0	320.4	320.9	321.3	321.8
147.5°	327.5	327.6	327.7	327.9	328.3	328.6	328.9	329.2
150°	333.7	333.7	333.7	333.7	333.8	333.9	333.9	334.0
152.5°	339.3	339.4	339.5	339.5	339.5	339.5	339.5	339.4
155°	346.8	347.1	347.3	347.4	347.1	347.0	346.8	346.6
157.5°	353.3	353.6	353.9	353.9	353.6	353.3	353.0	352.7
160°	357.4	357.8	358.1	358.1	357.8	357.4	357.0	356.6
162.5°	360.8	361.2	361.6	361.5	361.1	360.7	360.2	359.8
165°	365.5	366.0	366.5	366.5	365.9	365.4	364.8	364.2
167.5°	369.0	369.6	370.0	370.0	369.4	368.8	368.1	367.6
170°	371.1	371.6	372.1	372.0	371.5	370.8	370.2	369.6
172.5°	372.5	373.0	373.4	373.4	372.7	372.0	371.4	370.7
175°	374.1	374.6	375.2	375.1	374.3	373.6	372.8	372.1
177.5°	374.7	375.1	375.5	375.3	374.8	374.1	373.6	373.0
180°	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3

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