

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: P332511-927

Luminaire Tested: **SA4XXDIP-C350D810U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332511-927
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-C350D810U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

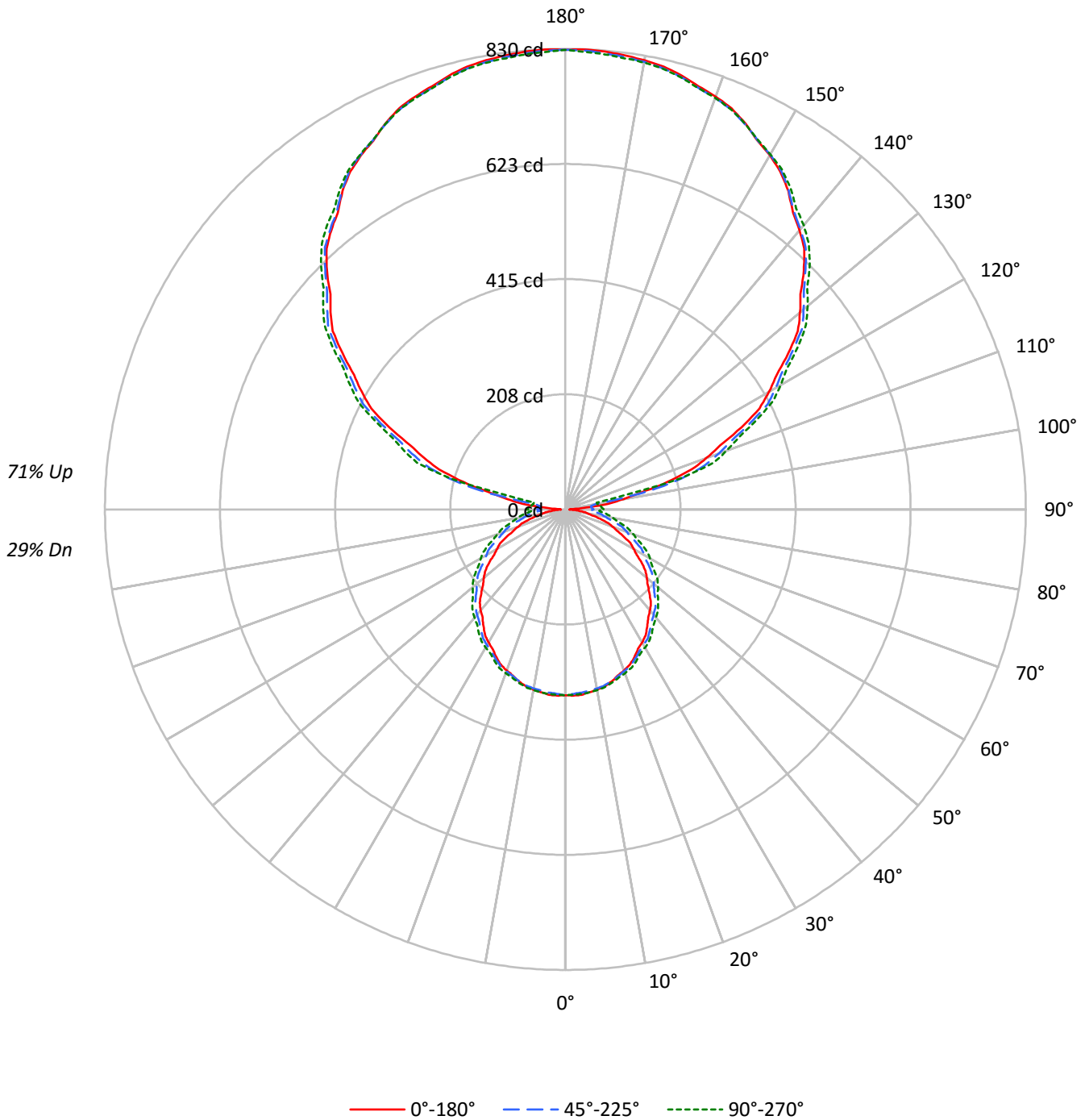
Lumens per Lamp: N/A
Luminaire Lumens: 3705.5 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 31.2
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: P332511-927

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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29
1	92	88	84	80	82	79	75	72	62	59	57	46	44	43	31	30	30	23
2	84	76	70	65	75	68	63	59	54	50	47	40	37	35	27	26	24	19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	20	15
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	19	17	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	16	13	12	9
8	50	38	30	25	45	34	28	23	27	22	19	20	17	14	14	12	10	8
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7
10	43	31	24	20	39	28	22	18	23	18	15	17	14	12	12	10	8	6

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	0.9
10°-20°	90.8	2.5
20°-30°	137.4	3.7
30°-40°	166.2	4.5
40°-50°	175.7	4.7
50°-60°	165.4	4.5
60°-70°	137.2	3.7
70°-80°	96.4	2.6
80°-90°	56.9	1.5
90°-100°	60.7	1.6
100°-110°	204.5	5.5
110°-120°	361.5	9.8
120°-130°	447.6	12.1
130°-140°	473.1	12.8
140°-150°	439.6	11.9
150°-160°	353.9	9.5
160°-170°	228.2	6.2
170°-180°	78.7	2.1
0°-30°	259.9	7.0
0°-40°	426.1	11.5
0°-60°	767.2	20.7
0°-90°	1057.7	28.5
90°-120°	626.8	16.9
90°-150°	1987.1	53.6
90°-180°	2648.0	71.5
0°-180°	3705.5	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°	8	30	51	65	70	6
95°	39	32	46	60	64	48
105°	190	201	218	231	214	199
115°	350	356	367	376	379	345
125°	491	493	501	510	513	438
135°	608	607	612	619	623	468
145°	700	702	702	705	707	437
155°	768	768	766	768	767	354
165°	810	807	806	811	806	229
175°	828	825	825	830	823	79
180°	828	828	828	828	828	



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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°	11.5	15.2	18.9	22.6	26.3	30.1	33.9	37.8	41.7	45.6	48.2
90°	7.8	12.7	17.6	22.4	27.3	32.0	36.7	41.4	46.0	50.8	54.0
92.5°	13.5	16.6	19.6	22.7	25.8	29.7	34.4	39.1	43.8	48.5	51.7
95°	39.0	37.0	35.1	33.1	31.2	32.0	35.6	39.1	42.7	46.3	49.4
97.5°	76.8	82.1	87.4	92.6	97.9	94.6	82.5	70.6	58.6	46.7	48.9
100°	105.7	110.4	115.0	119.6	124.3	118.7	103.0	87.2	71.5	55.8	55.7
102.5°	138.4	142.1	145.8	149.6	153.3	155.5	156.2	156.9	157.6	158.3	135.2
105°	189.8	192.3	194.8	197.3	199.8	202.9	206.7	210.5	214.2	218.0	221.3
107.5°	238.2	240.0	241.8	243.5	245.3	248.1	252.0	255.8	259.7	263.6	266.2
110°	270.6	272.2	273.8	275.3	276.9	279.6	283.3	287.0	290.8	294.5	296.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	302.0	303.8	305.5	307.3	309.1	311.6	314.7	317.9	321.1	324.2	326.1
115°	350.4	351.5	352.7	353.9	355.0	356.9	359.4	361.9	364.4	366.9	369.1
117.5°	394.3	395.2	396.2	397.3	398.2	400.1	402.9	405.8	408.5	411.3	413.0
120°	423.7	424.5	425.3	426.1	426.9	428.4	430.7	433.0	435.2	437.5	439.5
122.5°	451.5	451.8	452.2	452.6	453.0	454.4	456.9	459.3	461.8	464.3	466.1
125°	490.8	491.3	491.8	492.3	492.7	493.8	495.7	497.4	499.2	501.1	503.0
127.5°	528.4	528.5	528.5	528.5	528.6	529.7	532.0	534.2	536.5	538.7	540.1
130°	552.4	552.5	552.5	552.5	552.6	553.5	555.2	557.0	558.7	560.5	562.1
132.5°	574.7	574.9	575.0	575.2	575.4	576.2	577.8	579.4	581.0	582.6	584.2
135°	607.8	607.6	607.5	607.4	607.2	607.7	608.9	610.0	611.1	612.3	613.9
137.5°	637.4	637.3	637.3	637.3	637.2	637.7	638.6	639.4	640.3	641.3	642.8
140°	656.7	656.9	657.1	657.3	657.4	657.7	658.1	658.5	658.8	659.2	660.7
142.5°	673.8	674.2	674.7	675.2	675.7	676.0	676.0	676.2	676.3	676.4	677.6
145°	700.3	700.6	700.9	701.3	701.6	701.8	701.8	701.8	701.8	701.8	702.4
147.5°	721.5	722.2	722.9	723.6	724.2	724.5	724.4	724.2	724.1	724.0	724.1
150°	736.8	737.3	737.8	738.2	738.7	738.9	738.7	738.6	738.5	738.3	738.3
152.5°	749.4	749.9	750.3	750.7	751.1	751.2	751.0	750.8	750.4	750.2	750.4
155°	767.5	767.5	767.7	767.9	768.0	767.9	767.5	767.0	766.6	766.2	766.8
157.5°	782.7	782.6	782.5	782.4	782.4	782.0	781.6	781.2	780.7	780.2	780.9
160°	791.6	791.2	790.8	790.4	790.0	789.6	789.6	789.4	789.3	789.1	790.0
162.5°	799.5	799.0	798.4	798.0	797.4	797.1	796.9	796.9	796.7	796.5	797.4
165°	809.5	808.9	808.2	807.5	806.8	806.4	806.4	806.4	806.4	806.4	807.6
167.5°	817.5	816.7	816.0	815.3	814.6	814.2	814.1	814.0	814.0	813.9	815.1
170°	822.0	821.1	820.3	819.4	818.6	818.3	818.4	818.6	818.7	818.9	819.9
172.5°	824.9	824.1	823.2	822.4	821.7	821.3	821.4	821.6	821.7	821.8	822.9
175°	828.1	827.3	826.5	825.7	824.8	824.5	824.7	824.7	824.9	825.1	826.2
177.5°	829.7	828.9	828.1	827.3	826.6	826.2	826.5	826.7	827.0	827.1	828.0
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1



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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°	50.7	53.3	55.8	57.6	58.4	59.1	59.9	60.7
90°	57.2	60.4	63.7	65.8	66.8	67.7	68.6	69.6
92.5°	54.8	58.0	61.2	63.1	63.8	64.6	65.3	66.0
95°	52.4	55.5	58.5	60.5	61.4	62.3	63.2	64.1
97.5°	51.2	53.5	55.7	57.3	58.1	59.0	59.8	60.7
100°	55.5	55.5	55.4	55.7	56.4	57.1	57.8	58.6
102.5°	112.2	89.1	66.1	54.9	55.5	56.2	56.9	57.6
105°	224.7	228.0	231.3	230.8	226.5	222.2	217.9	213.7
107.5°	268.9	271.5	274.2	276.0	277.2	278.3	279.4	280.5
110°	298.9	301.1	303.3	304.9	306.0	307.1	308.2	309.3



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CATALOG NUMBER: SA4XXDIP-C350D810U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.8	329.6	331.4	333.0	334.1	335.3	336.5	337.7
115°	371.2	373.3	375.4	376.8	377.3	378.0	378.5	379.1
117.5°	414.6	416.3	418.0	419.1	419.8	420.4	421.0	421.6
120°	441.4	443.4	445.3	446.5	446.9	447.3	447.7	448.1
122.5°	467.9	469.8	471.6	472.7	473.0	473.3	473.6	474.0
125°	505.1	507.1	509.1	510.4	511.0	511.7	512.3	512.9
127.5°	541.5	543.0	544.4	545.3	545.7	546.2	546.7	547.2
130°	563.8	565.4	567.0	568.1	568.6	569.1	569.6	570.1
132.5°	585.7	587.3	588.8	589.9	590.3	590.7	591.0	591.4
135°	615.4	617.1	618.7	619.9	620.7	621.4	622.2	623.0
137.5°	644.3	645.8	647.3	648.2	648.6	648.9	649.3	649.6
140°	662.2	663.7	665.2	666.1	666.7	667.3	667.8	668.4
142.5°	678.9	680.2	681.4	682.2	682.6	683.0	683.3	683.7
145°	703.1	703.7	704.3	705.0	705.6	706.2	706.8	707.4
147.5°	724.3	724.5	724.7	724.9	725.3	725.8	726.2	726.6
150°	738.3	738.3	738.3	738.4	738.6	738.6	738.8	738.9
152.5°	750.7	750.9	751.1	751.1	751.1	751.0	750.9	750.8
155°	767.3	767.9	768.4	768.5	768.0	767.6	767.2	766.8
157.5°	781.6	782.4	783.1	783.1	782.4	781.6	780.9	780.2
160°	790.8	791.6	792.4	792.4	791.6	790.8	790.0	789.1
162.5°	798.2	799.0	799.9	799.8	798.8	797.9	797.0	796.1
165°	808.7	809.8	810.9	810.8	809.5	808.3	807.1	805.8
167.5°	816.3	817.5	818.7	818.6	817.3	815.9	814.5	813.2
170°	821.0	822.1	823.2	823.1	821.7	820.4	819.0	817.6
172.5°	824.0	825.1	826.2	826.0	824.6	823.1	821.6	820.1
175°	827.5	828.8	830.0	829.8	828.1	826.5	824.8	823.2
177.5°	828.9	829.8	830.7	830.4	829.1	827.8	826.5	825.1
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1

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