

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: P332886-927

Luminaire Tested: **SA4XXRDIP-C350D1035U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332886-927
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: SA4XXRDIP-C350D1035U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4405.1 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

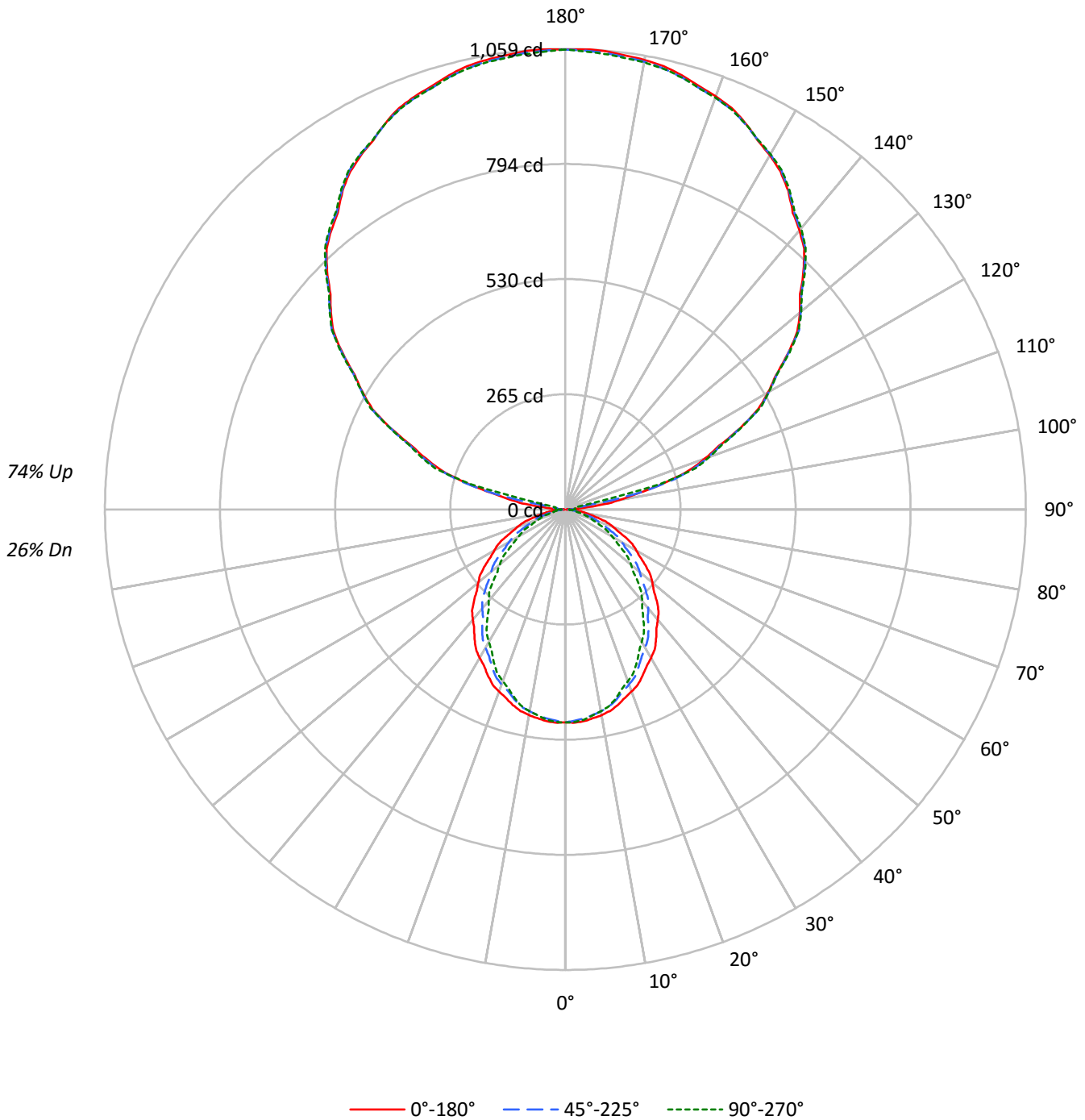
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26				
1	92	88	85	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22				
2	84	77	71	67	75	69	64	60	54	50	48	40	38	36	27	25	24	19				
3	77	68	61	55	68	61	55	50	47	43	40	35	33	30	24	22	21	16				
4	70	60	53	47	62	54	48	43	42	38	34	31	28	26	21	19	18	14				
5	64	53	46	40	57	48	41	36	38	33	29	28	25	23	19	17	16	12				
6	59	48	40	35	53	43	36	32	34	29	26	25	22	20	17	15	14	11				
7	55	43	35	30	49	39	32	28	31	26	22	23	20	17	16	14	12	9				
8	51	39	32	26	45	35	29	24	28	23	20	21	18	15	15	13	11	8				
9	47	35	28	23	42	32	26	21	25	21	18	19	16	14	13	11	10	8				
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3953	3953	3953
5°	3962	3914	3938
10°	3937	3867	3867
15°	3892	3786	3758
20°	3830	3679	3611
25°	3751	3553	3463
30°	3674	3422	3278
35°	3588	3286	3094
40°	3485	3130	2893
45°	3391	2975	2689
50°	3282	2798	2473
55°	3167	2612	2238
60°	3039	2409	1997
65°	2923	2157	1761
70°	2752	1876	1496
75°	2539	1556	1216
80°	2213	1186	1116
85°	1880	1074	1010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.0
10°-20°	128.3	2.9
20°-30°	185.2	4.2
30°-40°	210.0	4.8
40°-50°	202.8	4.6
50°-60°	168.6	3.8
60°-70°	116.4	2.6
70°-80°	59.0	1.3
80°-90°	18.2	0.4
90°-100°	36.2	0.8
100°-110°	230.6	5.2
110°-120°	441.1	10.0
120°-130°	559.9	12.7
130°-140°	599.1	13.6
140°-150°	560.2	12.7
150°-160°	451.8	10.3
160°-170°	291.4	6.6
170°-180°	100.4	2.3
0°-30°	359.5	8.2
0°-40°	569.5	12.9
0°-60°	940.8	21.4
0°-90°	1134.5	25.8
90°-120°	707.8	16.1
90°-150°	2427.0	55.1
90°-180°	3271.0	74.3
0°-180°	4405.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	489	487	483	486	486	46
15°	466	462	453	452	450	131
25°	421	414	399	393	389	194
35°	364	352	333	321	314	227
45°	297	283	261	243	236	229
55°	225	209	186	167	159	201
65°	153	136	113	97	92	151
75°	81	67	50	42	39	86
85°	20	13	12	11	11	23
90°	2	11	17	22	24	3
95°	44	18	17	22	23	56
105°	238	243	247	252	225	249
115°	444	447	446	448	448	437
125°	625	628	626	629	630	558
135°	775	774	777	779	780	597
145°	894	896	896	897	898	558
155°	980	980	978	981	979	452
165°	1034	1030	1030	1035	1029	292
175°	1057	1053	1053	1060	1051	101
180°	1057	1057	1057	1057	1057	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	490.9	490.6	490.4	490.1	489.8	489.3	488.6	487.9	487.1	486.4	487.1
5°	488.9	488.6	488.3	488.0	487.6	487.0	485.9	485.0	483.9	483.0	483.8
7.5°	484.5	484.2	483.9	483.5	483.2	482.3	481.0	479.7	478.4	477.1	477.6
10°	480.3	479.9	479.5	479.1	478.6	477.7	476.2	474.7	473.2	471.7	472.1
12.5°	474.9	474.4	474.0	473.5	473.0	471.9	470.1	468.3	466.6	464.8	465.0
15°	465.7	464.9	464.2	463.4	462.7	461.3	459.2	457.1	455.0	453.0	452.8
17.5°	454.6	453.4	452.3	451.3	450.2	448.4	445.9	443.4	440.9	438.4	437.9
20°	445.8	444.7	443.7	442.6	441.5	439.6	436.7	433.9	431.0	428.2	427.5
22.5°	436.3	435.0	433.8	432.6	431.3	429.2	426.2	423.2	420.2	417.1	416.1
25°	421.1	419.6	418.1	416.6	415.1	412.6	409.2	405.8	402.3	398.9	397.5
27.5°	405.2	403.3	401.4	399.6	397.7	394.9	391.3	387.6	384.0	380.3	378.5
30°	394.1	392.0	389.9	387.9	385.8	382.8	378.8	374.9	371.0	367.1	365.0
32.5°	382.4	380.0	377.7	375.3	373.0	369.8	365.8	361.7	357.7	353.6	351.2
35°	364.1	361.4	358.8	356.1	353.4	350.0	345.9	341.7	337.5	333.4	330.5
37.5°	344.5	341.7	339.1	336.3	333.5	329.9	325.2	320.6	316.0	311.4	308.2
40°	330.7	328.0	325.2	322.5	319.7	316.0	311.2	306.5	301.7	297.0	293.5
42.5°	317.5	314.7	311.7	308.9	306.0	302.1	297.1	292.2	287.2	282.3	278.7
45°	297.0	293.9	290.8	287.7	284.6	280.6	275.6	270.6	265.6	260.6	256.5
47.5°	275.8	272.6	269.4	266.2	263.0	258.8	253.7	248.4	243.2	238.1	233.8
50°	261.3	258.1	254.8	251.6	248.3	244.1	238.8	233.4	228.1	222.8	218.6
52.5°	246.7	243.4	240.3	237.1	233.9	229.6	224.1	218.6	213.2	207.7	203.5
55°	225.0	221.7	218.3	215.0	211.7	207.2	201.8	196.5	191.0	185.6	181.3
57.5°	203.5	200.0	196.6	193.1	189.6	185.3	179.9	174.6	169.3	163.9	159.5
60°	188.2	184.9	181.6	178.2	174.9	170.6	165.2	159.9	154.6	149.2	144.9
62.5°	174.4	171.0	167.5	164.1	160.6	156.1	150.7	145.2	139.7	134.3	130.2
65°	153.0	149.4	145.8	142.3	138.6	134.2	128.9	123.5	118.2	112.9	109.3
67.5°	130.7	127.3	123.8	120.4	117.0	112.8	107.8	102.9	97.9	93.0	89.9
70°	116.6	113.1	109.6	106.2	102.6	98.5	93.7	89.0	84.2	79.5	76.8
72.5°	101.6	98.5	95.3	92.1	89.0	85.2	80.6	76.1	71.7	67.2	64.9
75°	81.4	78.3	75.2	72.1	69.0	65.5	61.6	57.7	53.8	49.9	47.9
77.5°	60.8	58.2	55.6	53.0	50.4	47.5	44.3	41.1	37.9	34.8	33.7
80°	47.6	45.2	42.8	40.4	37.9	35.5	33.0	30.5	28.0	25.5	25.3
82.5°	36.2	34.0	31.8	29.5	27.3	25.5	24.1	22.7	21.2	19.8	19.6
85°	20.3	18.6	17.0	15.2	13.5	12.6	12.4	12.1	11.9	11.6	11.5
87.5°	7.4	7.2	7.1	7.0	6.8	6.8	7.1	7.3	7.4	7.7	7.8
90°	2.4	4.3	6.3	8.2	10.1	11.8	13.2	14.6	16.0	17.4	18.5
92.5°	10.0	10.1	10.1	10.3	10.4	11.2	12.5	13.9	15.4	16.8	17.8
95°	43.5	37.5	31.5	25.6	19.6	16.7	16.9	17.0	17.2	17.4	18.5
97.5°	92.4	96.1	99.8	103.5	107.3	99.3	79.7	60.1	40.5	20.9	21.0
100°	129.7	132.8	136.0	139.2	142.4	131.8	107.6	83.3	59.0	34.8	31.8
102.5°	171.4	173.8	176.1	178.4	180.7	180.3	177.1	174.0	170.8	167.6	135.4
105°	238.1	239.1	240.1	241.2	242.2	243.2	244.1	244.9	245.9	246.8	248.3
107.5°	299.8	300.4	301.0	301.4	302.0	302.9	304.0	305.2	306.4	307.6	308.4
110°	341.7	342.1	342.7	343.2	343.7	344.5	345.5	346.7	347.7	348.7	349.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.1	383.1	384.0	385.0	386.0	386.7	387.1	387.6	388.1	388.6	388.6
115°	444.4	445.0	445.5	446.0	446.6	446.7	446.6	446.4	446.2	446.0	446.4
117.5°	500.6	501.3	502.0	502.7	503.4	503.9	504.3	504.7	505.1	505.5	505.4
120°	538.5	539.2	540.0	540.7	541.4	541.6	541.5	541.3	541.1	540.9	541.3
122.5°	573.9	574.4	574.8	575.2	575.7	576.0	576.2	576.5	576.7	576.9	577.2
125°	624.7	625.4	626.1	626.9	627.6	627.7	627.4	627.0	626.7	626.3	626.9
127.5°	672.8	673.0	673.2	673.4	673.5	674.0	674.9	675.7	676.4	677.2	677.2
130°	703.9	704.0	704.2	704.3	704.5	704.9	705.4	705.9	706.5	707.0	707.2
132.5°	732.3	732.6	732.9	733.2	733.6	734.0	734.7	735.4	736.0	736.7	736.9
135°	775.0	774.8	774.7	774.4	774.3	774.5	775.2	775.9	776.7	777.4	777.7
137.5°	812.8	812.9	812.9	813.0	813.1	813.5	814.3	815.1	815.8	816.6	817.0
140°	837.5	837.8	838.2	838.5	838.8	839.2	839.6	840.0	840.3	840.7	841.1
142.5°	859.6	860.2	860.9	861.5	862.1	862.5	862.8	863.0	863.2	863.4	863.8
145°	893.6	894.1	894.7	895.2	895.7	896.0	896.0	896.0	896.0	896.0	896.2
147.5°	920.7	921.6	922.7	923.6	924.6	925.0	924.8	924.6	924.5	924.3	924.5
150°	940.2	941.0	941.7	942.4	943.1	943.3	943.2	943.0	942.9	942.6	942.6
152.5°	956.7	957.3	957.8	958.4	958.9	959.1	958.8	958.5	958.1	957.8	958.1
155°	979.9	980.0	980.2	980.3	980.5	980.3	979.9	979.3	978.7	978.3	978.9
157.5°	999.3	999.2	999.0	998.9	998.9	998.5	997.9	997.3	996.7	996.1	997.0
160°	1010.7	1010.1	1009.6	1009.1	1008.5	1008.2	1008.1	1007.8	1007.7	1007.5	1008.5
162.5°	1020.8	1020.1	1019.5	1018.7	1018.1	1017.7	1017.5	1017.3	1017.2	1017.0	1018.0
165°	1033.6	1032.7	1031.8	1030.9	1030.1	1029.6	1029.6	1029.6	1029.6	1029.6	1031.0
167.5°	1043.7	1042.8	1041.9	1041.0	1040.1	1039.6	1039.4	1039.3	1039.3	1039.1	1040.7
170°	1049.4	1048.4	1047.3	1046.2	1045.2	1044.7	1044.9	1045.1	1045.3	1045.4	1046.9
172.5°	1053.2	1052.2	1051.1	1050.0	1049.0	1048.5	1048.7	1048.9	1049.1	1049.2	1050.7
175°	1057.3	1056.3	1055.2	1054.2	1053.1	1052.7	1052.8	1053.0	1053.2	1053.4	1054.9
177.5°	1059.2	1058.2	1057.2	1056.3	1055.3	1054.9	1055.2	1055.5	1055.7	1056.1	1057.2
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	487.9	488.6	489.3	489.6	489.6	489.6	489.5	489.4
5°	484.7	485.4	486.3	486.6	486.5	486.3	486.1	485.9
7.5°	478.2	478.7	479.3	479.3	479.1	478.9	478.6	478.3
10°	472.4	472.7	473.0	473.0	472.7	472.4	472.1	471.7
12.5°	465.2	465.4	465.6	465.5	465.0	464.5	464.1	463.6
15°	452.7	452.5	452.3	451.9	451.3	450.8	450.2	449.6
17.5°	437.4	437.0	436.6	435.9	435.0	434.1	433.2	432.4
20°	426.9	426.2	425.6	424.7	423.6	422.5	421.4	420.3
22.5°	415.1	414.1	413.1	412.2	411.3	410.4	409.6	408.6
25°	396.1	394.7	393.3	392.2	391.3	390.5	389.7	388.8
27.5°	376.8	375.0	373.3	371.9	370.6	369.4	368.2	367.0
30°	362.9	360.8	358.8	357.0	355.7	354.4	353.1	351.7
32.5°	348.8	346.3	344.0	342.1	340.8	339.5	338.3	337.0
35°	327.6	324.9	322.0	319.9	318.4	316.9	315.4	313.9
37.5°	305.1	301.9	298.7	296.4	294.9	293.3	291.8	290.3
40°	289.9	286.5	283.0	280.5	279.0	277.5	276.0	274.5
42.5°	275.1	271.6	268.0	265.5	263.9	262.3	260.7	259.2
45°	252.5	248.3	244.2	241.5	240.0	238.4	236.9	235.5
47.5°	229.6	225.3	221.1	218.2	216.5	214.8	213.2	211.6
50°	214.4	210.2	206.0	203.2	201.6	200.0	198.4	196.9
52.5°	199.2	195.0	190.8	187.8	186.2	184.6	182.9	181.3
55°	177.0	172.6	168.3	165.3	163.7	162.2	160.6	159.0
57.5°	155.1	150.8	146.3	143.5	142.4	141.2	139.9	138.7
60°	140.5	136.3	131.9	129.0	127.7	126.4	125.1	123.7
62.5°	126.3	122.2	118.3	115.7	114.6	113.6	112.5	111.5
65°	105.7	102.1	98.5	96.3	95.2	94.3	93.2	92.2
67.5°	86.8	83.7	80.6	78.6	77.5	76.4	75.3	74.1
70°	74.0	71.2	68.5	66.7	65.8	65.0	64.2	63.4
72.5°	62.5	60.1	57.8	56.2	55.5	54.7	53.9	53.2
75°	46.0	44.1	42.2	41.0	40.5	40.0	39.5	39.0
77.5°	32.6	31.4	30.3	29.7	29.5	29.4	29.2	29.1
80°	25.0	24.7	24.5	24.3	24.2	24.2	24.1	24.0
82.5°	19.4	19.3	19.1	18.9	18.9	18.8	18.7	18.6
85°	11.3	11.1	10.9	10.9	10.9	10.9	10.9	10.9
87.5°	8.0	8.1	8.2	8.4	8.6	8.6	8.8	9.0
90°	19.5	20.6	21.6	22.3	22.7	23.1	23.4	23.7
92.5°	18.9	20.0	21.0	21.5	21.6	21.7	21.8	21.9
95°	19.5	20.6	21.6	22.3	22.4	22.6	22.7	22.9
97.5°	21.1	21.2	21.3	21.5	21.6	21.8	21.9	22.2
100°	28.8	25.8	22.8	21.5	21.6	21.8	21.9	22.2
102.5°	103.2	71.0	38.7	22.7	22.7	22.7	22.7	22.8
105°	249.9	251.4	253.0	250.7	244.4	238.1	231.7	225.4
107.5°	309.2	310.0	310.7	311.4	312.1	312.8	313.5	314.1
110°	349.4	349.8	350.1	350.6	351.1	351.6	352.2	352.7



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CATALOG NUMBER: SA4XXRDIP-C350D1035U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.5	388.4	388.3	388.6	389.3	390.0	390.6	391.3
115°	446.7	447.1	447.4	447.6	447.6	447.6	447.6	447.6
117.5°	505.3	505.3	505.2	505.2	505.1	505.0	504.9	504.9
120°	541.6	541.9	542.3	542.3	541.9	541.6	541.3	540.9
122.5°	577.4	577.6	577.8	577.7	577.4	577.0	576.7	576.3
125°	627.4	627.9	628.4	628.8	629.0	629.2	629.3	629.5
127.5°	677.1	676.9	676.8	676.7	676.6	676.4	676.3	676.1
130°	707.3	707.5	707.7	707.8	707.8	707.8	707.8	707.8
132.5°	737.0	737.3	737.4	737.4	737.3	737.1	737.0	736.9
135°	778.1	778.4	778.8	779.1	779.5	779.8	780.1	780.5
137.5°	817.4	817.8	818.2	818.2	818.2	818.1	817.9	817.8
140°	841.7	842.2	842.7	843.1	843.3	843.4	843.6	843.8
142.5°	864.2	864.6	865.0	865.1	865.2	865.2	865.3	865.3
145°	896.4	896.5	896.7	897.0	897.3	897.6	898.0	898.3
147.5°	924.6	924.7	924.9	925.0	925.2	925.3	925.6	925.7
150°	942.6	942.6	942.6	942.7	942.9	943.1	943.3	943.4
152.5°	958.4	958.7	958.9	959.0	958.9	958.9	958.7	958.6
155°	979.6	980.3	981.0	981.1	980.6	980.1	979.5	979.1
157.5°	997.9	998.9	999.7	999.7	998.9	997.9	997.0	996.1
160°	1009.6	1010.7	1011.7	1011.7	1010.7	1009.6	1008.5	1007.5
162.5°	1019.1	1020.2	1021.2	1021.1	1019.9	1018.7	1017.6	1016.4
165°	1032.5	1033.9	1035.2	1035.1	1033.6	1032.0	1030.4	1028.8
167.5°	1042.2	1043.8	1045.3	1045.2	1043.5	1041.7	1039.9	1038.2
170°	1048.3	1049.6	1051.1	1050.9	1049.2	1047.4	1045.6	1043.9
172.5°	1052.1	1053.4	1054.9	1054.6	1052.7	1050.8	1048.9	1047.0
175°	1056.5	1058.1	1059.7	1059.4	1057.3	1055.2	1053.1	1051.0
177.5°	1058.3	1059.4	1060.6	1060.3	1058.6	1056.9	1055.2	1053.5
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3

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