

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: P331328-935

Luminaire Tested: **SA2XXDIP-C485D1080U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331328-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D1080U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

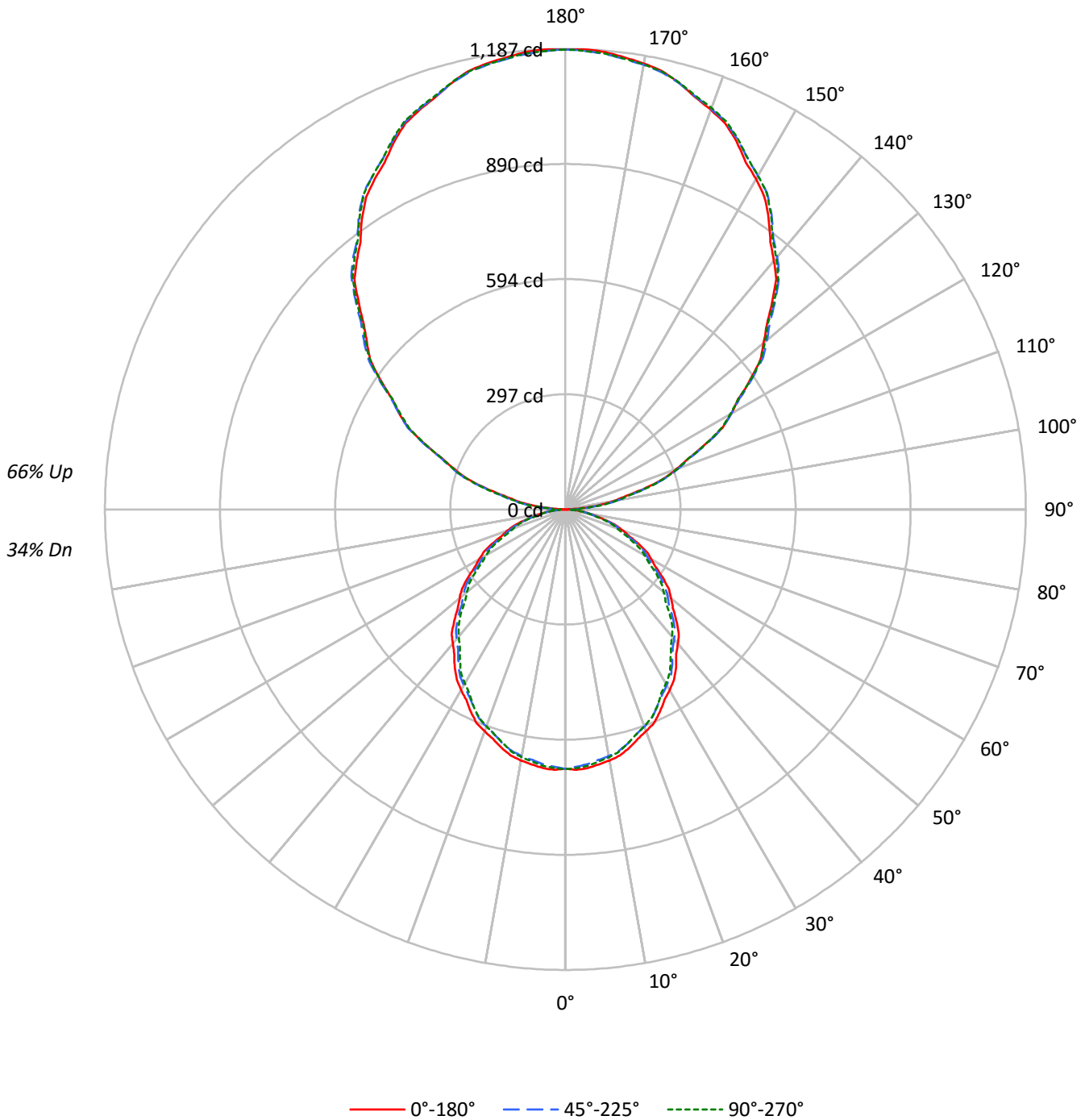
Lumens per Lamp: N/A  
Luminaire Lumens: 5020.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 49.4  
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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34				
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	37	36	35	29				
2	86	78	73	67	77	71	66	62	57	53	50	44	42	40	32	31	29	24				
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	27	25	20				
4	71	61	53	47	64	55	49	44	45	40	36	35	31	29	25	23	22	17				
5	65	54	46	40	59	49	42	37	40	35	31	31	28	25	23	21	19	15				
6	60	48	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13				
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15	12				
8	52	40	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13	11				
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12	10				
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.3
10°-20°	176.9	3.5
20°-30°	260.1	5.2
30°-40°	302.1	6.0
40°-50°	301.8	6.0
50°-60°	263.2	5.2
60°-70°	194.6	3.9
70°-80°	110.2	2.2
80°-90°	34.4	0.7
90°-100°	75.1	1.5
100°-110°	233.2	4.6
110°-120°	398.7	7.9
120°-130°	524.3	10.4
130°-140°	588.5	11.7
140°-150°	577.0	11.5
150°-160°	484.0	9.6
160°-170°	321.0	6.4
170°-180°	112.2	2.2
0°-30°	499.9	10.0
0°-40°	802.0	16.0
0°-60°	1366.9	27.2
0°-90°	1706.1	34.0
90°-120°	707.0	14.1
90°-150°	2396.8	47.7
90°-180°	3314.0	66.0
0°-180°	5020.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
90°	1	14	35	33	34	4
95°	52	62	64	64	62	60
105°	215	218	220	222	222	227
115°	400	406	404	403	400	396
125°	582	590	588	585	584	520
135°	753	764	766	765	762	582
145°	914	921	927	928	924	571
155°	1045	1048	1051	1056	1053	481
165°	1137	1136	1136	1142	1138	321
175°	1183	1180	1178	1184	1179	112
180°	1185	1185	1185	1185	1185	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.5	9.7	10.1	10.3	10.7	11.2	12.0	12.7	13.4	14.2	13.8
90°	1.0	3.7	6.4	9.0	11.7	15.4	20.3	25.2	30.1	35.0	34.5
92.5°	17.8	19.7	21.7	23.7	25.7	27.2	28.3	29.5	30.7	31.8	31.9
95°	52.0	54.2	56.5	58.6	60.9	62.3	62.7	63.1	63.5	64.0	64.0
97.5°	95.1	96.9	98.9	100.9	102.8	104.3	105.0	105.9	106.8	107.6	107.6
100°	127.0	128.8	130.6	132.3	134.1	135.3	136.0	136.6	137.3	138.0	138.0
102.5°	160.7	162.0	163.5	164.9	166.3	167.5	168.3	169.1	170.0	170.8	171.0
105°	215.0	215.7	216.4	217.1	217.7	218.3	218.7	219.1	219.6	220.0	220.5
107.5°	269.8	270.8	271.8	272.8	273.7	274.2	274.2	274.2	274.2	274.2	274.4
110°	305.1	306.3	307.7	309.0	310.4	311.1	311.1	311.1	311.1	311.1	311.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.5	344.7	346.1	347.4	348.8	349.4	349.1	349.0	348.8	348.6	348.1
115°	400.0	401.4	402.7	404.1	405.4	405.8	405.4	404.9	404.5	404.1	403.8
117.5°	456.4	458.2	460.0	461.8	463.6	463.8	462.6	461.3	460.1	458.8	458.3
120°	494.0	495.8	497.7	499.4	501.2	501.2	499.4	497.7	495.8	494.0	494.0
122.5°	528.5	530.6	532.7	534.9	537.0	537.4	536.2	534.9	533.7	532.4	531.9
125°	582.0	584.1	586.1	588.1	590.0	590.7	590.0	589.4	588.8	588.1	587.4
127.5°	634.3	636.8	639.4	641.9	644.4	645.3	644.5	643.7	642.9	642.0	641.3
130°	667.1	669.9	672.9	675.7	678.6	679.8	679.4	679.0	678.6	678.1	677.6
132.5°	703.9	706.3	708.6	710.9	713.3	714.5	714.6	714.7	714.8	714.9	713.9
135°	753.1	755.5	758.0	760.4	762.8	764.3	764.7	765.2	765.7	766.1	765.9
137.5°	804.9	806.9	808.9	810.9	812.9	814.2	814.8	815.4	815.9	816.5	816.3
140°	836.1	838.1	840.1	842.1	844.1	845.7	846.8	847.9	849.0	850.1	850.1
142.5°	868.1	870.1	872.1	874.1	876.1	877.4	878.2	879.0	879.8	880.5	880.7
145°	914.1	915.7	917.2	918.8	920.3	921.8	923.1	924.5	925.7	927.1	927.3
147.5°	955.1	957.0	958.8	960.7	962.6	964.0	964.8	965.8	966.6	967.5	968.0
150°	983.1	984.5	985.8	987.1	988.4	989.5	990.5	991.4	992.2	993.2	993.8
152.5°	1007.9	1009.3	1010.6	1011.9	1013.2	1014.4	1015.5	1016.6	1017.7	1018.7	1019.6
155°	1045.2	1045.8	1046.5	1047.1	1047.8	1048.4	1049.1	1049.8	1050.5	1051.1	1052.2
157.5°	1076.9	1077.4	1077.8	1078.2	1078.7	1079.1	1079.5	1080.0	1080.3	1080.7	1082.3
160°	1096.1	1096.6	1097.0	1097.4	1097.9	1098.2	1098.5	1098.7	1098.9	1099.2	1100.4
162.5°	1113.7	1113.8	1113.9	1114.0	1114.1	1114.2	1114.5	1114.7	1114.9	1115.2	1116.6
165°	1137.1	1137.0	1136.7	1136.4	1136.3	1136.2	1136.2	1136.2	1136.2	1136.2	1137.7
167.5°	1156.8	1156.1	1155.4	1154.8	1154.1	1153.7	1153.7	1153.7	1153.6	1153.6	1155.1
170°	1167.2	1166.5	1165.8	1165.1	1164.5	1164.1	1163.8	1163.6	1163.4	1163.1	1164.7
172.5°	1174.3	1173.7	1173.0	1172.3	1171.6	1171.2	1171.0	1170.8	1170.5	1170.4	1171.9
175°	1183.2	1182.5	1181.8	1181.1	1180.5	1179.9	1179.5	1179.1	1178.6	1178.1	1179.7
177.5°	1186.7	1186.2	1185.7	1185.2	1184.6	1184.1	1183.8	1183.4	1183.1	1182.8	1183.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	13.3	12.9	12.5	12.2	12.1	12.1	12.1	12.0
90°	34.1	33.7	33.2	33.1	33.3	33.6	33.8	34.0
92.5°	31.9	32.0	32.2	32.2	32.3	32.3	32.4	32.4
95°	64.0	64.0	64.0	63.8	63.4	62.9	62.4	62.0
97.5°	107.6	107.6	107.6	107.6	107.5	107.5	107.5	107.5
100°	138.0	138.0	138.0	137.9	137.7	137.5	137.2	137.0
102.5°	171.2	171.3	171.5	171.5	171.3	171.1	170.8	170.7
105°	220.9	221.4	221.8	222.1	222.1	222.1	222.1	222.1
107.5°	274.6	274.7	274.9	274.5	273.5	272.5	271.5	270.4
110°	311.1	311.1	311.1	310.7	310.0	309.4	308.7	308.1





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CATALOG NUMBER: SA2XXDIP-C485D1080U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	347.6	347.1	346.6	346.0	345.5	345.0	344.6	344.1
115°	403.6	403.4	403.1	402.7	402.1	401.4	400.7	400.0
117.5°	457.8	457.3	456.8	456.2	455.5	454.8	454.1	453.5
120°	494.0	494.0	494.0	493.7	493.1	492.4	491.7	491.0
122.5°	531.4	530.9	530.3	529.9	529.3	528.8	528.4	527.9
125°	586.8	586.1	585.4	585.0	584.7	584.5	584.3	584.1
127.5°	640.5	639.6	638.9	638.1	637.4	636.7	636.0	635.2
130°	677.2	676.7	676.3	675.6	674.8	673.8	673.0	672.1
132.5°	712.9	712.0	711.0	710.2	709.5	708.7	708.0	707.3
135°	765.7	765.4	765.2	764.7	764.1	763.4	762.8	762.1
137.5°	816.1	816.0	815.8	815.3	814.3	813.5	812.6	811.7
140°	850.1	850.1	850.1	849.6	848.8	847.9	847.0	846.1
142.5°	880.9	881.1	881.2	880.9	879.9	879.1	878.2	877.3
145°	927.6	927.8	928.0	927.6	926.8	925.9	925.0	924.1
147.5°	968.5	969.0	969.5	969.3	968.5	967.6	966.7	966.0
150°	994.5	995.1	995.8	995.8	995.1	994.5	993.8	993.2
152.5°	1020.5	1021.2	1022.1	1022.1	1021.2	1020.5	1019.6	1018.7
155°	1053.3	1054.5	1055.6	1055.8	1055.2	1054.5	1053.8	1053.1
157.5°	1083.7	1085.3	1086.8	1087.0	1085.9	1084.9	1083.8	1082.7
160°	1101.8	1103.1	1104.5	1104.7	1103.8	1102.9	1102.0	1101.1
162.5°	1118.2	1119.6	1121.2	1121.4	1120.3	1119.3	1118.2	1117.1
165°	1139.3	1140.8	1142.4	1142.5	1141.5	1140.4	1139.3	1138.2
167.5°	1156.7	1158.2	1159.8	1159.9	1158.8	1157.6	1156.5	1155.4
170°	1166.2	1167.8	1169.3	1169.5	1168.1	1166.8	1165.4	1164.2
172.5°	1173.5	1175.0	1176.6	1176.6	1175.4	1174.0	1172.7	1171.3
175°	1181.3	1182.8	1184.4	1184.5	1183.2	1181.8	1180.5	1179.1
177.5°	1184.9	1185.9	1187.0	1187.0	1185.9	1184.9	1183.8	1182.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2

(END OF REPORT)