

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: P331325-935

Luminaire Tested: **SA2XXDIP-C485D1080U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

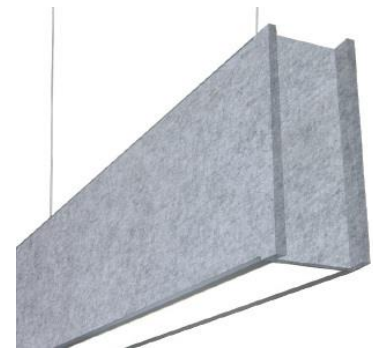
Test Information

Test Method: LM-79-08
Report Number: P331325-935
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-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP 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: 5011.3 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

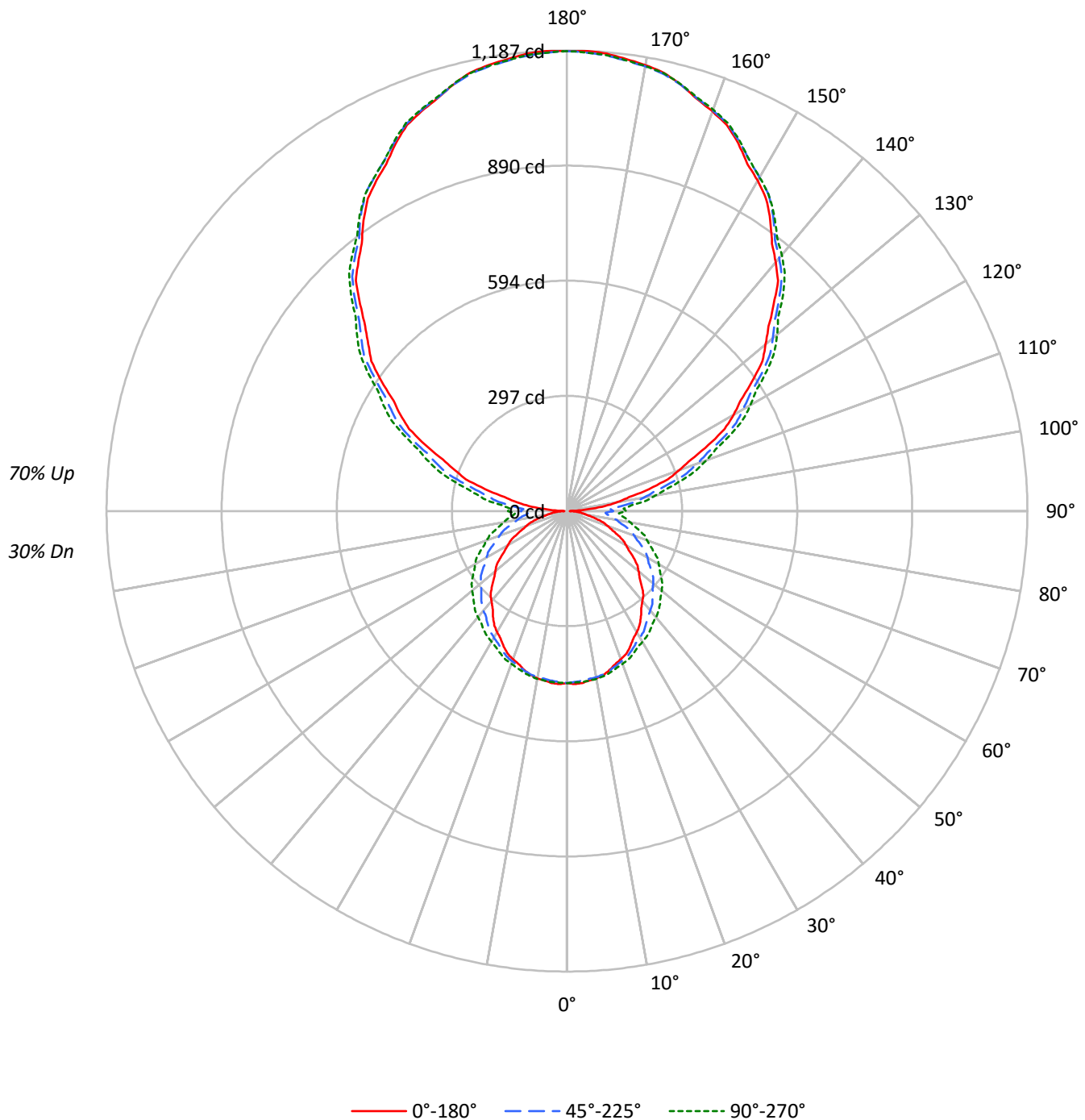
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38
1	92	88	84	80	83	79	75	72	62	59	57	46	45	43	32	31	30
2	84	76	70	65	75	68	63	58	54	50	47	40	38	35	28	26	25
3	76	67	59	53	68	60	53	48	47	42	39	35	32	29	24	22	21
4	69	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17
5	64	52	44	38	57	47	40	34	37	32	28	28	24	21	19	17	15
6	58	46	38	33	52	42	35	30	33	28	24	25	21	18	17	15	13
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	13	11
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10
9	46	34	27	22	41	31	24	20	25	20	16	19	15	13	13	11	9
10	43	31	24	19	39	28	22	18	23	18	15	17	14	11	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	0.8
10°-20°	120.6	2.4
20°-30°	182.7	3.6
30°-40°	222.5	4.4
40°-50°	239.4	4.8
50°-60°	232.5	4.6
60°-70°	203.0	4.1
70°-80°	156.3	3.1
80°-90°	109.6	2.2
90°-100°	147.3	2.9
100°-110°	286.0	5.7
110°-120°	433.5	8.7
120°-130°	543.7	10.9
130°-140°	596.6	11.9
140°-150°	578.4	11.5
150°-160°	484.0	9.7
160°-170°	321.0	6.4
170°-180°	112.2	2.2
0°-30°	345.3	6.9
0°-40°	567.8	11.3
0°-60°	1039.7	20.7
0°-90°	1508.5	30.1
90°-120°	866.9	17.3
90°-150°	2585.6	51.6
90°-180°	3503.0	69.9
0°-180°	5011.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	57	120	143	152	7
95°	57	97	138	161	168	64
105°	218	241	275	299	307	231
115°	403	416	443	460	465	398
125°	583	593	610	624	629	521
135°	754	765	773	785	788	582
145°	914	921	927	932	931	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°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.8	21.9	30.9	40.0	49.0	58.5	68.7	78.9	88.9	99.1	104.8
90°	7.4	18.4	29.4	40.3	51.2	63.7	77.7	91.8	105.8	119.9	125.2
92.5°	23.7	33.4	43.0	52.7	62.4	72.2	82.1	92.1	102.1	112.0	117.8
95°	57.2	66.1	75.0	83.9	92.9	101.9	110.9	119.9	129.0	137.9	143.4
97.5°	99.5	107.5	115.4	123.3	131.2	139.7	148.8	157.9	166.9	176.0	181.3
100°	131.5	138.6	145.7	152.7	159.8	167.6	176.3	184.9	193.6	202.3	207.6
102.5°	164.6	170.8	177.1	183.4	189.6	197.1	205.7	214.3	222.9	231.5	236.9
105°	218.3	223.1	227.8	232.6	237.5	243.8	251.7	259.6	267.4	275.3	280.8
107.5°	272.9	277.2	281.5	285.8	290.1	295.8	302.9	310.0	317.1	324.3	329.2
110°	307.6	311.8	316.0	320.2	324.3	329.9	337.0	344.0	350.9	358.0	362.6

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	346.0	349.7	353.4	357.2	360.9	366.1	372.6	379.0	385.5	392.0	396.1
115°	402.6	405.5	408.5	411.3	414.2	418.7	424.6	430.7	436.6	442.6	446.7
117.5°	458.4	461.2	464.0	466.8	469.6	473.4	478.0	482.8	487.5	492.1	495.8
120°	496.0	498.3	500.7	503.0	505.4	508.5	512.5	516.4	520.4	524.3	528.3
122.5°	530.4	532.8	535.1	537.5	539.8	543.1	547.3	551.4	555.4	559.6	562.9
125°	583.3	585.4	587.4	589.4	591.3	594.3	598.2	602.1	606.1	609.9	613.1
127.5°	635.6	637.9	640.3	642.7	645.1	647.7	650.7	653.5	656.4	659.4	662.0
130°	668.4	671.1	673.8	676.6	679.3	682.0	684.6	687.1	689.7	692.2	695.3
132.5°	705.2	707.4	709.6	711.8	714.0	716.4	718.8	721.2	723.6	725.9	728.3
135°	753.7	756.2	758.6	761.0	763.5	765.7	767.6	769.4	771.3	773.2	775.9
137.5°	805.6	807.5	809.5	811.5	813.4	815.0	816.2	817.4	818.6	819.8	822.3
140°	836.7	838.6	840.4	842.3	844.2	845.8	847.2	848.6	850.0	851.4	853.7
142.5°	868.7	870.6	872.5	874.3	876.2	877.5	878.3	879.2	879.9	880.8	882.8
145°	914.1	915.7	917.2	918.8	920.3	921.8	923.1	924.5	925.7	927.1	928.2
147.5°	955.1	957.0	958.8	960.7	962.6	964.0	964.8	965.8	966.6	967.5	968.1
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°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	110.6	116.3	122.0	125.9	127.7	129.6	131.5	133.4
90°	130.4	135.7	140.9	144.6	146.5	148.4	150.4	152.3
92.5°	123.5	129.2	134.8	138.5	140.3	142.1	143.8	145.6
95°	148.8	154.2	159.7	163.0	164.3	165.6	166.9	168.1
97.5°	186.6	191.9	197.2	200.6	202.2	203.9	205.6	207.2
100°	212.9	218.2	223.4	226.8	228.2	229.5	230.8	232.2
102.5°	242.2	247.5	253.0	256.2	257.6	259.0	260.4	261.7
105°	286.2	291.7	297.1	300.7	302.2	303.8	305.3	306.9
107.5°	334.2	339.2	344.1	347.0	347.5	348.0	348.6	349.1
110°	367.1	371.7	376.3	379.0	379.9	380.8	381.7	382.6

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CATALOG NUMBER: SA2XXDIP-C485D1080U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.0	404.1	408.1	410.7	411.8	412.8	414.0	415.0
115°	450.7	454.9	458.9	461.4	462.3	463.2	464.1	465.0
117.5°	499.6	503.3	507.0	509.2	510.0	510.7	511.6	512.4
120°	532.3	536.3	540.3	542.8	543.6	544.6	545.4	546.4
122.5°	566.3	569.6	573.0	575.1	576.0	576.8	577.6	578.5
125°	616.3	619.5	622.7	624.8	625.9	627.0	628.0	629.0
127.5°	664.8	667.5	670.3	671.9	672.4	673.0	673.6	674.1
130°	698.2	701.2	704.2	705.8	706.0	706.3	706.5	706.8
132.5°	730.6	733.0	735.3	736.7	737.1	737.5	738.0	738.4
135°	778.7	781.5	784.3	785.9	786.4	786.9	787.3	787.8
137.5°	824.8	827.2	829.7	831.0	831.0	831.1	831.1	831.2
140°	856.0	858.2	860.6	861.7	861.6	861.6	861.6	861.5
142.5°	884.8	886.7	888.8	889.8	889.6	889.4	889.3	889.2
145°	929.3	930.3	931.4	931.9	931.7	931.5	931.3	931.2
147.5°	968.7	969.3	969.9	970.0	969.5	969.0	968.5	967.9
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)