

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: P331324-940

Luminaire Tested: **SA2XXDIP-C485D1080U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331324-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D1080U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

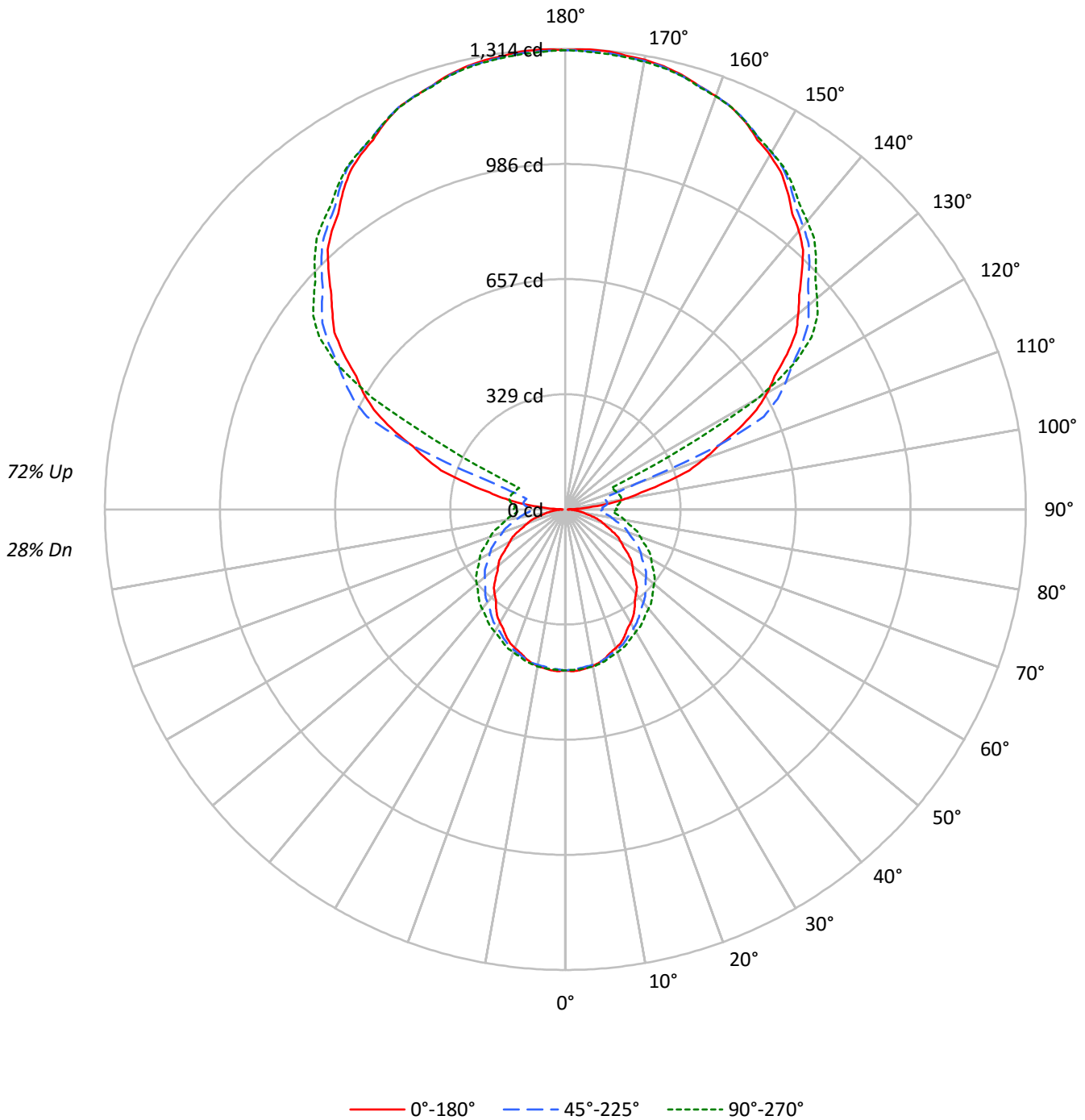
Lumens per Lamp: N/A
Luminaire Lumens: 5595.4 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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					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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	87	83	80	82	78	75	72	61	59	56	45	43	42	30	29	28	22				
2	83	76	70	64	74	68	63	58	53	49	46	39	37	34	26	25	23	18				
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	19	14				
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12				
5	63	52	44	38	56	46	39	34	36	31	27	27	23	21	18	16	14	10				
6	58	46	38	32	52	41	35	29	33	27	24	24	21	18	16	14	12	9				
7	54	41	34	28	48	37	30	26	29	24	21	22	18	16	15	13	11	8				
8	50	37	30	25	44	34	27	22	27	22	18	20	16	14	14	11	10	7				
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6				
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.8
10°-20°	124.9	2.2
20°-30°	189.2	3.4
30°-40°	230.5	4.1
40°-50°	247.9	4.4
50°-60°	240.8	4.3
60°-70°	210.2	3.8
70°-80°	161.8	2.9
80°-90°	111.8	2.0
90°-100°	118.5	2.1
100°-110°	214.9	3.8
110°-120°	464.4	8.3
120°-130°	727.3	13.0
130°-140°	760.5	13.6
140°-150°	700.4	12.5
150°-160°	562.0	10.0
160°-170°	362.1	6.5
170°-180°	124.6	2.2
0°-30°	357.6	6.4
0°-40°	588.1	10.5
0°-60°	1076.8	19.2
0°-90°	1560.7	27.9
90°-120°	797.9	14.3
90°-150°	2986.0	53.4
90°-180°	4035.0	72.1
0°-180°	5595.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	8	57	107	137	148	7
95°	67	70	114	142	151	80
105°	292	324	115	148	160	312
115°	548	573	625	226	145	539
125°	772	786	824	847	857	688
135°	954	970	985	1007	1012	737
145°	1106	1106	1121	1131	1131	692
155°	1218	1211	1221	1226	1219	561
165°	1284	1278	1281	1287	1281	362
175°	1313	1307	1308	1314	1305	125
180°	1310	1310	1310	1310	1310	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.3	22.6	31.8	41.1	50.4	59.9	69.7	79.5	89.3	99.2	105.4
90°	7.6	18.5	29.4	40.3	51.2	62.2	73.4	84.5	95.7	106.8	113.9
92.5°	25.2	33.1	40.8	48.6	56.4	65.3	75.3	85.2	95.1	105.1	111.5
95°	67.0	67.0	67.0	67.0	67.0	72.1	82.5	92.8	103.2	113.5	120.2
97.5°	127.0	113.5	100.1	86.8	73.3	72.6	84.5	96.5	108.4	120.4	126.6
100°	172.5	149.1	125.6	102.3	78.9	73.1	85.0	96.9	108.8	120.6	127.8
102.5°	221.9	220.9	219.7	218.6	217.6	206.1	184.1	162.2	140.4	118.4	126.0
105°	291.5	302.1	312.7	323.3	333.9	314.3	264.6	214.7	164.9	115.1	122.6
107.5°	371.6	380.1	388.6	397.2	405.7	379.2	317.5	255.9	194.4	132.8	135.4
110°	422.6	430.0	437.4	444.8	452.1	429.0	375.4	321.7	268.1	214.5	198.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	471.1	477.5	483.9	490.4	496.8	495.9	487.8	479.6	471.4	463.3	391.2
115°	547.7	552.9	558.1	563.4	568.6	577.1	589.1	601.0	612.9	624.8	531.7
117.5°	615.5	620.5	625.6	630.7	635.8	643.2	653.0	662.7	672.5	682.3	663.1
120°	665.6	669.3	673.1	676.8	680.6	687.2	697.0	706.7	716.4	726.1	732.8
122.5°	708.0	711.6	715.2	718.7	722.3	728.9	738.6	748.3	758.0	767.7	773.2
125°	772.0	774.7	777.5	780.2	782.9	788.7	797.5	806.2	814.9	823.7	829.1
127.5°	830.5	833.5	836.3	839.3	842.1	846.9	853.8	860.6	867.4	874.2	880.0
130°	867.7	870.9	874.1	877.4	880.7	884.9	890.4	895.8	901.3	906.7	912.5
132.5°	905.6	908.4	911.1	913.8	916.5	920.2	925.0	929.7	934.4	939.1	944.5
135°	954.3	957.6	961.0	964.4	967.8	971.2	974.6	977.9	981.2	984.6	989.9
137.5°	1004.2	1006.5	1008.8	1011.1	1013.4	1016.0	1018.9	1021.6	1024.4	1027.3	1032.0
140°	1036.8	1038.3	1039.8	1041.3	1042.9	1045.0	1047.6	1050.2	1052.8	1055.4	1059.7
142.5°	1064.1	1065.4	1066.8	1068.2	1069.5	1071.6	1074.2	1077.0	1079.7	1082.4	1086.0
145°	1106.3	1106.0	1105.8	1105.6	1105.4	1107.1	1110.6	1114.2	1117.8	1121.4	1123.7
147.5°	1143.6	1142.8	1142.0	1141.2	1140.4	1141.7	1145.3	1148.8	1152.4	1155.9	1157.1
150°	1167.9	1166.4	1164.9	1163.4	1162.0	1162.9	1166.3	1169.7	1173.0	1176.3	1177.7
152.5°	1188.3	1186.7	1185.0	1183.4	1181.8	1182.5	1185.7	1188.9	1192.1	1195.3	1196.6
155°	1218.1	1216.2	1214.3	1212.4	1210.5	1210.9	1213.4	1215.8	1218.4	1220.9	1222.2
157.5°	1241.4	1239.8	1238.2	1236.6	1235.0	1235.1	1236.9	1238.6	1240.4	1242.2	1243.6
160°	1255.1	1253.8	1252.5	1251.2	1250.0	1250.0	1251.2	1252.5	1253.8	1255.1	1256.3
162.5°	1267.2	1266.0	1264.6	1263.4	1262.1	1262.0	1263.1	1264.3	1265.3	1266.4	1267.8
165°	1283.5	1282.2	1280.9	1279.7	1278.4	1278.1	1278.7	1279.4	1280.1	1280.7	1282.1
167.5°	1295.7	1294.4	1293.1	1291.8	1290.6	1290.2	1290.8	1291.4	1292.0	1292.6	1294.1
170°	1302.4	1301.2	1299.9	1298.7	1297.4	1297.0	1297.4	1297.8	1298.2	1298.7	1300.1
172.5°	1307.0	1305.7	1304.5	1303.2	1302.0	1301.5	1302.0	1302.3	1302.8	1303.2	1304.7
175°	1312.9	1311.4	1309.9	1308.5	1307.0	1306.4	1306.9	1307.3	1307.7	1308.1	1309.7
177.5°	1313.8	1312.7	1311.4	1310.3	1309.1	1308.6	1308.8	1308.9	1309.1	1309.3	1310.5
180°	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	111.6	117.9	124.1	128.2	130.3	132.2	134.2	136.2
90°	120.8	127.8	134.7	139.4	141.5	143.7	146.0	148.1
92.5°	117.8	124.1	130.5	134.6	136.7	138.8	140.8	142.8
95°	126.9	133.6	140.3	144.4	146.0	147.5	149.1	150.6
97.5°	133.0	139.3	145.6	149.8	151.8	153.7	155.8	157.7
100°	134.9	142.1	149.3	153.9	156.0	158.0	160.1	162.1
102.5°	133.5	141.1	148.6	153.5	155.7	157.9	160.2	162.4
105°	130.1	137.6	145.1	150.1	152.6	155.0	157.5	160.0
107.5°	137.9	140.6	143.2	145.8	148.2	150.7	153.2	155.6
110°	181.8	165.5	149.2	142.2	144.7	147.2	149.6	152.1



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CATALOG NUMBER: SA2XXDIP-C485D1080U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.1	247.0	174.9	140.0	142.2	144.5	146.9	149.2
115°	438.6	345.5	252.4	199.1	185.6	172.1	158.5	145.0
117.5°	643.9	624.6	605.5	571.7	523.3	475.0	426.7	378.4
120°	739.5	746.2	752.8	742.7	716.0	689.1	662.4	635.5
122.5°	778.7	784.3	789.9	790.6	786.4	782.3	778.2	774.0
125°	834.6	840.1	845.5	849.3	851.2	853.2	855.2	857.1
127.5°	885.8	891.6	897.5	901.1	902.5	903.9	905.4	906.8
130°	918.4	924.3	930.1	933.5	934.5	935.5	936.5	937.5
132.5°	949.9	955.4	960.7	963.9	964.9	965.9	966.9	967.9
135°	995.1	1000.3	1005.5	1008.5	1009.2	1010.0	1010.8	1011.6
137.5°	1036.8	1041.6	1046.3	1048.9	1049.2	1049.5	1049.8	1050.1
140°	1064.0	1068.2	1072.5	1074.5	1074.3	1074.2	1074.1	1073.9
142.5°	1089.7	1093.3	1096.9	1098.6	1098.3	1098.1	1097.7	1097.4
145°	1126.1	1128.5	1130.9	1131.8	1131.6	1131.2	1131.0	1130.6
147.5°	1158.3	1159.6	1160.7	1161.1	1160.6	1160.0	1159.5	1159.0
150°	1178.9	1180.2	1181.4	1181.5	1180.4	1179.5	1178.4	1177.3
152.5°	1197.8	1199.2	1200.4	1200.3	1198.9	1197.6	1196.1	1194.8
155°	1223.4	1224.8	1226.0	1225.7	1224.1	1222.4	1220.8	1219.1
157.5°	1245.0	1246.4	1247.9	1247.8	1246.2	1244.5	1242.9	1241.2
160°	1257.6	1258.8	1260.1	1260.0	1258.6	1257.0	1255.6	1254.1
162.5°	1269.3	1270.7	1272.2	1271.9	1270.2	1268.4	1266.5	1264.7
165°	1283.6	1285.0	1286.6	1286.6	1285.0	1283.6	1282.1	1280.7
167.5°	1295.6	1297.0	1298.5	1298.2	1296.4	1294.5	1292.6	1290.7
170°	1301.6	1303.1	1304.6	1304.3	1302.4	1300.6	1298.7	1296.7
172.5°	1306.2	1307.6	1309.1	1308.9	1307.0	1305.1	1303.2	1301.3
175°	1311.1	1312.6	1314.0	1313.8	1311.6	1309.5	1307.4	1305.3
177.5°	1311.6	1312.8	1314.0	1313.8	1312.3	1310.8	1309.3	1307.8
180°	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0

(END OF REPORT)