

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: P331327-830

Luminaire Tested: **SA2XXDIP-C485D1080U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331327-830
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-C485D1080U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

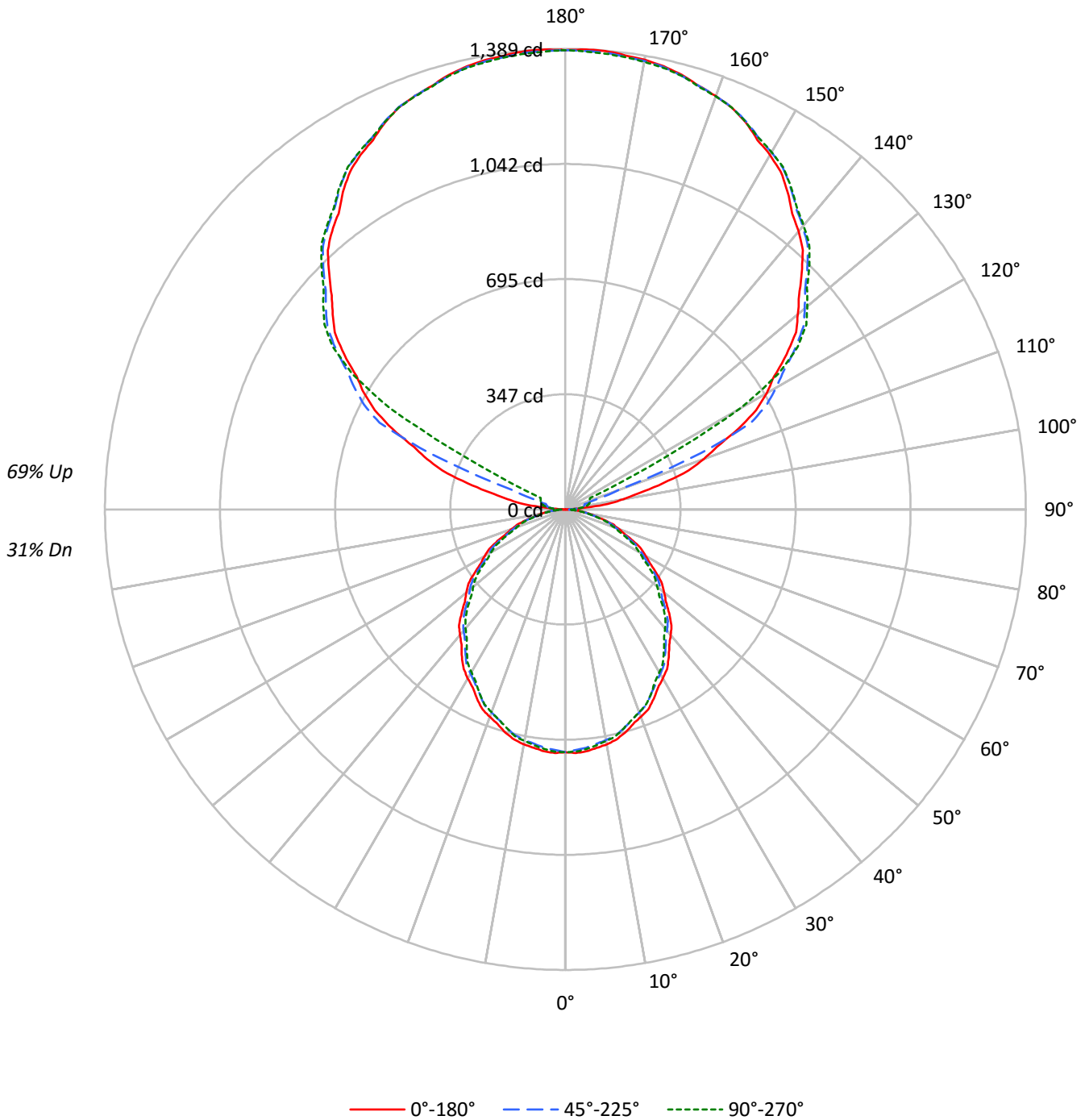
Lumens per Lamp: N/A
Luminaire Lumens: 5923.9 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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	92	92	92	92	73	73	73	55	55	55	39	39	39	31				
1	94	89	86	82	84	81	77	74	64	62	60	49	47	46	35	34	33	26				
2	85	78	72	67	76	70	65	61	56	52	49	43	40	38	30	29	28	22				
3	78	69	61	56	70	62	56	51	49	45	42	38	35	32	27	25	24	19				
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	16				
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	19	18	14				
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	17	16	12				
7	55	43	36	30	50	39	33	28	32	27	23	25	21	18	18	16	14	11				
8	51	39	32	27	46	36	29	25	29	24	20	22	19	16	16	14	12	10				
9	48	36	28	24	43	33	26	22	26	22	18	21	17	15	15	13	11	9				
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	1.2
10°-20°	193.7	3.3
20°-30°	284.7	4.8
30°-40°	330.7	5.6
40°-50°	330.4	5.6
50°-60°	288.1	4.9
60°-70°	213.0	3.6
70°-80°	120.7	2.0
80°-90°	35.9	0.6
90°-100°	46.2	0.8
100°-110°	169.4	2.9
110°-120°	452.8	7.6
120°-130°	747.4	12.6
130°-140°	794.9	13.4
140°-150°	738.8	12.5
150°-160°	594.0	10.0
160°-170°	382.8	6.5
170°-180°	131.8	2.2
0°-30°	547.2	9.2
0°-40°	878.0	14.8
0°-60°	1496.4	25.3
0°-90°	1865.9	31.5
90°-120°	668.4	11.3
90°-150°	2949.4	49.8
90°-180°	4058.0	68.5
0°-180°	5923.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	1	12	20	25	27	4
95°	65	34	39	44	43	80
105°	305	318	61	72	76	325
115°	576	594	618	176	82	567
125°	815	828	847	853	857	726
135°	1008	1024	1033	1042	1041	778
145°	1169	1169	1185	1192	1187	731
155°	1288	1280	1290	1296	1288	593
165°	1357	1351	1354	1360	1354	383
175°	1388	1381	1383	1389	1380	132
180°	1385	1385	1385	1385	1385	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.4	10.6	10.8	11.0	11.3	11.5	11.6	11.7	11.8	11.9	11.8
90°	1.0	3.5	5.9	8.4	10.8	12.9	14.7	16.5	18.3	20.1	21.1
92.5°	20.3	20.0	19.8	19.6	19.3	19.7	20.5	21.5	22.3	23.3	23.8
95°	65.1	57.8	50.4	43.1	35.7	32.8	34.4	36.0	37.5	39.1	40.2
97.5°	129.2	108.6	87.8	67.1	46.5	37.9	41.5	45.1	48.7	52.3	53.2
100°	177.4	146.8	116.3	85.9	55.3	41.9	45.7	49.6	53.3	57.1	58.9
102.5°	230.3	223.8	217.4	210.8	204.4	185.4	153.7	122.1	90.4	58.7	61.1
105°	304.6	311.3	317.9	324.6	331.3	304.3	243.5	182.7	121.9	61.1	63.5
107.5°	389.4	394.7	400.1	405.5	410.9	377.2	304.3	231.4	158.4	85.6	83.0
110°	443.8	448.6	453.3	457.9	462.6	432.7	368.3	304.1	239.7	175.3	153.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	495.2	499.4	503.4	507.6	511.7	505.9	489.9	474.1	458.2	442.2	361.1
115°	576.2	579.9	583.7	587.5	591.3	596.0	601.5	607.1	612.7	618.2	515.1
117.5°	648.5	652.7	657.0	661.2	665.4	669.4	673.3	677.1	680.9	684.8	659.8
120°	701.3	704.7	708.0	711.4	714.7	718.4	722.5	726.4	730.5	734.4	737.1
122.5°	746.3	749.8	753.3	756.9	760.3	764.3	768.6	773.0	777.4	781.7	783.3
125°	814.6	817.5	820.4	823.3	826.1	829.7	834.0	838.2	842.4	846.7	848.2
127.5°	876.6	879.8	883.0	886.2	889.4	892.5	895.7	898.8	902.0	905.2	907.5
130°	915.8	919.4	922.9	926.5	930.0	933.0	935.5	937.9	940.4	942.8	945.3
132.5°	955.8	958.9	962.0	965.0	968.0	970.7	973.2	975.6	978.1	980.5	982.6
135°	1008.0	1011.5	1015.1	1018.7	1022.2	1025.0	1027.0	1029.0	1031.0	1033.0	1035.3
137.5°	1060.6	1063.2	1065.6	1068.2	1070.6	1073.0	1075.3	1077.6	1079.9	1082.1	1084.3
140°	1095.1	1096.9	1098.7	1100.5	1102.3	1104.4	1106.8	1109.3	1111.7	1114.2	1116.2
142.5°	1124.0	1125.6	1127.2	1128.8	1130.4	1132.7	1135.4	1138.2	1141.0	1143.9	1145.7
145°	1169.3	1169.0	1168.8	1168.7	1168.4	1170.2	1173.9	1177.7	1181.6	1185.3	1186.8
147.5°	1208.8	1208.0	1207.1	1206.3	1205.4	1206.8	1210.6	1214.3	1218.0	1221.8	1222.9
150°	1234.4	1232.8	1231.3	1229.7	1228.2	1229.2	1232.8	1236.3	1239.9	1243.4	1244.8
152.5°	1256.0	1254.3	1252.5	1250.8	1249.2	1249.9	1253.3	1256.7	1260.1	1263.5	1264.8
155°	1287.5	1285.5	1283.6	1281.5	1279.5	1279.9	1282.5	1285.2	1287.9	1290.5	1291.8
157.5°	1312.2	1310.5	1308.8	1307.1	1305.4	1305.5	1307.4	1309.2	1311.1	1313.0	1314.5
160°	1326.6	1325.3	1323.9	1322.6	1321.3	1321.3	1322.6	1323.9	1325.3	1326.6	1327.9
162.5°	1339.4	1338.1	1336.7	1335.4	1334.1	1334.0	1335.1	1336.3	1337.5	1338.6	1340.1
165°	1356.7	1355.3	1354.0	1352.6	1351.3	1350.9	1351.6	1352.4	1353.0	1353.7	1355.2
167.5°	1369.5	1368.2	1366.8	1365.5	1364.1	1363.8	1364.4	1365.0	1365.6	1366.3	1367.8
170°	1376.7	1375.4	1374.0	1372.7	1371.4	1370.9	1371.4	1371.8	1372.2	1372.7	1374.2
172.5°	1381.5	1380.2	1378.8	1377.5	1376.2	1375.7	1376.2	1376.6	1377.1	1377.5	1379.0
175°	1387.7	1386.2	1384.6	1383.1	1381.5	1380.9	1381.4	1381.9	1382.2	1382.7	1384.3
177.5°	1388.7	1387.5	1386.2	1385.0	1383.7	1383.2	1383.4	1383.6	1383.7	1383.9	1385.2
180°	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	11.6	11.4	11.3	11.2	11.1	11.1	11.1	11.0
90°	22.2	23.4	24.5	25.3	25.7	26.2	26.6	27.1
92.5°	24.4	25.0	25.5	26.0	26.3	26.5	26.8	27.1
95°	41.3	42.4	43.5	44.0	43.7	43.5	43.3	43.1
97.5°	54.1	55.0	55.9	56.5	56.7	57.0	57.2	57.5
100°	60.7	62.5	64.3	65.3	65.8	66.3	66.7	67.1
102.5°	63.3	65.7	68.0	69.5	70.0	70.7	71.4	71.9
105°	66.0	68.4	70.9	72.6	73.5	74.4	75.2	76.2
107.5°	80.6	78.0	75.6	74.8	75.7	76.5	77.5	78.3
110°	130.8	108.6	86.2	75.6	76.4	77.4	78.2	79.2



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CATALOG NUMBER: SA2XXDIP-C485D1080U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.8	198.6	117.3	77.1	77.9	78.5	79.3	79.9
115°	412.0	309.0	205.9	146.3	130.3	114.2	98.2	82.2
117.5°	634.9	609.9	585.0	546.2	493.5	440.8	388.1	335.5
120°	739.8	742.4	745.2	731.4	701.3	671.3	641.2	611.2
122.5°	784.9	786.6	788.2	786.0	780.2	774.4	768.5	762.7
125°	849.8	851.3	852.9	854.0	854.7	855.4	856.0	856.7
127.5°	909.7	912.0	914.3	915.5	915.6	915.8	915.9	916.0
130°	947.7	950.2	952.6	953.8	953.6	953.3	953.1	952.9
132.5°	984.7	986.8	988.9	989.9	989.6	989.4	989.2	988.9
135°	1037.5	1039.7	1041.9	1042.8	1042.4	1041.9	1041.5	1041.0
137.5°	1086.5	1088.6	1090.8	1091.6	1090.8	1090.1	1089.3	1088.5
140°	1118.2	1120.2	1122.2	1122.7	1121.5	1120.4	1119.3	1118.2
142.5°	1147.5	1149.3	1151.1	1151.5	1150.4	1149.2	1148.2	1147.1
145°	1188.5	1190.0	1191.6	1191.8	1190.7	1189.6	1188.5	1187.3
147.5°	1224.1	1225.3	1226.4	1226.5	1225.6	1224.6	1223.7	1222.8
150°	1246.1	1247.5	1248.8	1248.9	1247.7	1246.7	1245.6	1244.4
152.5°	1266.1	1267.5	1268.9	1268.8	1267.2	1265.8	1264.3	1262.9
155°	1293.2	1294.6	1295.9	1295.6	1293.8	1292.1	1290.3	1288.5
157.5°	1316.0	1317.5	1319.0	1318.9	1317.2	1315.4	1313.7	1311.9
160°	1329.3	1330.6	1331.9	1331.8	1330.3	1328.7	1327.2	1325.6
162.5°	1341.6	1343.1	1344.7	1344.4	1342.6	1340.7	1338.7	1336.8
165°	1356.8	1358.3	1359.9	1359.9	1358.3	1356.8	1355.2	1353.7
167.5°	1369.4	1370.9	1372.5	1372.2	1370.3	1368.3	1366.3	1364.2
170°	1375.8	1377.3	1378.9	1378.7	1376.7	1374.7	1372.7	1370.6
172.5°	1380.6	1382.1	1383.7	1383.6	1381.5	1379.5	1377.5	1375.5
175°	1385.8	1387.4	1388.9	1388.6	1386.4	1384.1	1382.0	1379.7
177.5°	1386.4	1387.6	1388.9	1388.7	1387.1	1385.5	1383.9	1382.3
180°	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7	1384.7

(END OF REPORT)