

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: P331324-927

Luminaire Tested: **SA2XXDIP-C485D1080U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331324-927
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-C485D1080U927-4F0-1E-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: 4970.9 lumens
Efficiency: N/A
Efficacy: 100.6 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

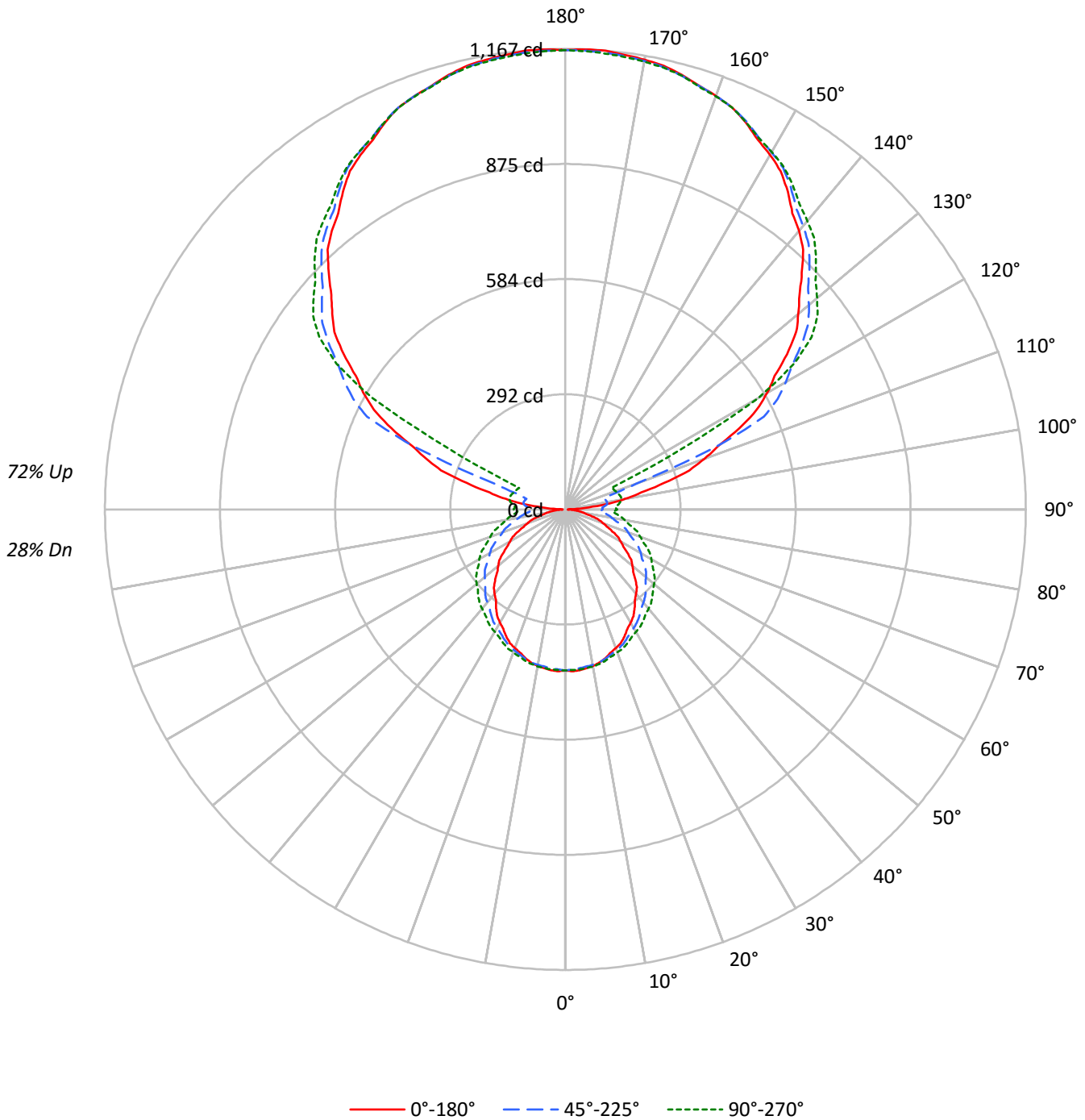
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.8
10°-20°	110.9	2.2
20°-30°	168.1	3.4
30°-40°	204.7	4.1
40°-50°	220.3	4.4
50°-60°	213.9	4.3
60°-70°	186.8	3.8
70°-80°	143.8	2.9
80°-90°	99.4	2.0
90°-100°	105.3	2.1
100°-110°	190.9	3.8
110°-120°	412.6	8.3
120°-130°	646.1	13.0
130°-140°	675.6	13.6
140°-150°	622.2	12.5
150°-160°	499.2	10.0
160°-170°	321.7	6.5
170°-180°	110.7	2.2
0°-30°	317.7	6.4
0°-40°	522.4	10.5
0°-60°	956.6	19.2
0°-90°	1386.5	27.9
90°-120°	708.8	14.3
90°-150°	2652.7	53.4
90°-180°	3584.0	72.1
0°-180°	4970.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	50	95	122	132	7
95°	60	62	101	126	134	71
105°	259	288	102	131	142	277
115°	487	509	555	201	129	479
125°	686	698	732	753	761	611
135°	848	861	875	895	899	655
145°	983	983	996	1005	1004	615
155°	1082	1076	1085	1089	1083	498
165°	1140	1136	1138	1143	1138	322
175°	1166	1161	1162	1167	1160	111
180°	1164	1164	1164	1164	1164	



TEST NUMBER: P331324-927

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.8	20.0	28.3	36.5	44.8	53.2	61.9	70.7	79.4	88.1	93.6
90°	6.7	16.5	26.1	35.8	45.5	55.3	65.2	75.1	85.0	94.9	101.2
92.5°	22.4	29.4	36.3	43.2	50.1	58.0	66.9	75.7	84.5	93.4	99.0
95°	59.5	59.5	59.5	59.5	59.5	64.1	73.3	82.5	91.7	100.8	106.8
97.5°	112.8	100.8	89.0	77.1	65.1	64.5	75.1	85.7	96.3	106.9	112.5
100°	153.2	132.5	111.6	90.9	70.1	65.0	75.5	86.1	96.6	107.2	113.5
102.5°	197.2	196.2	195.2	194.2	193.3	183.1	163.6	144.1	124.7	105.2	111.9
105°	259.0	268.4	277.8	287.2	296.7	279.2	235.0	190.8	146.5	102.3	108.9
107.5°	330.1	337.7	345.2	352.8	360.4	336.8	282.1	227.4	172.7	118.0	120.3
110°	375.4	382.0	388.6	395.1	401.6	381.1	333.5	285.8	238.2	190.6	176.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	418.5	424.2	429.9	435.6	441.3	440.5	433.3	426.0	418.8	411.6	347.5
115°	486.6	491.2	495.8	500.5	505.1	512.7	523.3	533.9	544.5	555.1	472.4
117.5°	546.8	551.3	555.8	560.3	564.8	571.4	580.1	588.7	597.5	606.2	589.1
120°	591.3	594.6	597.9	601.3	604.6	610.5	619.2	627.8	636.4	645.1	651.0
122.5°	629.0	632.2	635.3	638.5	641.7	647.5	656.2	664.8	673.4	682.0	686.9
125°	685.8	688.2	690.7	693.2	695.5	700.7	708.4	716.2	724.0	731.7	736.6
127.5°	737.8	740.5	743.0	745.6	748.1	752.4	758.5	764.5	770.6	776.7	781.8
130°	770.9	773.7	776.6	779.5	782.4	786.2	791.0	795.8	800.7	805.5	810.6
132.5°	804.5	807.0	809.4	811.8	814.2	817.5	821.7	825.9	830.1	834.2	839.1
135°	847.8	850.7	853.7	856.7	859.8	862.8	865.8	868.7	871.7	874.7	879.4
137.5°	892.1	894.1	896.2	898.3	900.3	902.6	905.1	907.6	910.1	912.6	916.8
140°	921.1	922.4	923.8	925.1	926.5	928.4	930.7	933.0	935.3	937.6	941.4
142.5°	945.3	946.5	947.7	949.0	950.1	952.0	954.3	956.8	959.2	961.6	964.8
145°	982.8	982.5	982.4	982.2	982.0	983.5	986.7	989.8	993.1	996.2	998.3
147.5°	1016.0	1015.3	1014.5	1013.8	1013.1	1014.3	1017.5	1020.6	1023.7	1026.9	1027.9
150°	1037.5	1036.2	1034.9	1033.6	1032.3	1033.1	1036.1	1039.1	1042.1	1045.0	1046.2
152.5°	1055.7	1054.2	1052.7	1051.3	1049.9	1050.5	1053.4	1056.2	1059.1	1061.9	1063.0
155°	1082.1	1080.5	1078.8	1077.1	1075.4	1075.7	1077.9	1080.1	1082.4	1084.7	1085.8
157.5°	1102.9	1101.5	1100.0	1098.6	1097.2	1097.3	1098.8	1100.3	1101.9	1103.5	1104.8
160°	1115.0	1113.9	1112.7	1111.6	1110.5	1110.5	1111.6	1112.7	1113.9	1115.0	1116.1
162.5°	1125.8	1124.7	1123.5	1122.4	1121.3	1121.2	1122.1	1123.2	1124.1	1125.1	1126.3
165°	1140.3	1139.1	1138.0	1136.9	1135.8	1135.4	1136.0	1136.6	1137.2	1137.7	1139.0
167.5°	1151.0	1149.9	1148.7	1147.6	1146.5	1146.2	1146.8	1147.2	1147.8	1148.3	1149.6
170°	1157.1	1156.0	1154.8	1153.7	1152.6	1152.2	1152.6	1152.9	1153.3	1153.7	1155.0
172.5°	1161.1	1160.0	1158.9	1157.8	1156.7	1156.3	1156.7	1157.0	1157.4	1157.8	1159.0
175°	1166.3	1165.1	1163.7	1162.4	1161.1	1160.6	1161.0	1161.4	1161.7	1162.1	1163.5
177.5°	1167.2	1166.2	1165.1	1164.0	1163.0	1162.5	1162.7	1162.8	1163.0	1163.2	1164.2
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	99.2	104.7	110.3	113.9	115.7	117.5	119.2	121.0
90°	107.3	113.5	119.7	123.8	125.7	127.7	129.7	131.6
92.5°	104.6	110.3	115.9	119.6	121.4	123.3	125.1	126.8
95°	112.7	118.7	124.6	128.3	129.7	131.0	132.5	133.8
97.5°	118.1	123.7	129.4	133.1	134.8	136.6	138.4	140.1
100°	119.9	126.3	132.6	136.7	138.6	140.4	142.2	144.0
102.5°	118.6	125.3	132.1	136.3	138.3	140.3	142.3	144.3
105°	115.6	122.2	128.9	133.3	135.5	137.7	139.9	142.1
107.5°	122.6	124.9	127.2	129.5	131.7	133.9	136.1	138.2
110°	161.5	147.0	132.5	126.4	128.6	130.8	132.9	135.1



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CATALOG NUMBER: SA2XXDIP-C485D1080U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.4	219.4	155.3	124.4	126.4	128.4	130.5	132.5
115°	389.7	307.0	224.3	176.9	164.9	152.9	140.9	128.8
117.5°	572.0	554.9	537.9	507.9	464.9	422.0	379.1	336.1
120°	657.0	662.9	668.8	659.8	636.0	612.2	588.4	564.6
122.5°	691.8	696.7	701.7	702.3	698.6	695.0	691.3	687.6
125°	741.4	746.3	751.1	754.5	756.2	758.0	759.7	761.4
127.5°	787.0	792.1	797.3	800.5	801.8	803.0	804.3	805.6
130°	815.9	821.1	826.3	829.3	830.2	831.1	831.9	832.8
132.5°	843.9	848.7	853.5	856.3	857.2	858.1	859.0	859.8
135°	884.0	888.7	893.3	896.0	896.6	897.3	897.9	898.7
137.5°	921.1	925.3	929.5	931.8	932.1	932.3	932.6	932.9
140°	945.2	949.0	952.8	954.6	954.4	954.3	954.2	954.0
142.5°	968.0	971.3	974.5	976.0	975.7	975.5	975.2	974.9
145°	1000.4	1002.5	1004.6	1005.5	1005.3	1005.0	1004.7	1004.4
147.5°	1029.0	1030.2	1031.2	1031.5	1031.0	1030.5	1030.1	1029.6
150°	1047.3	1048.5	1049.6	1049.6	1048.7	1047.8	1046.9	1045.9
152.5°	1064.1	1065.3	1066.4	1066.4	1065.1	1063.9	1062.6	1061.4
155°	1086.9	1088.1	1089.2	1088.9	1087.4	1086.0	1084.5	1083.0
157.5°	1106.0	1107.3	1108.6	1108.5	1107.1	1105.6	1104.1	1102.6
160°	1117.2	1118.3	1119.4	1119.4	1118.1	1116.7	1115.5	1114.1
162.5°	1127.6	1128.9	1130.2	1130.0	1128.4	1126.8	1125.1	1123.6
165°	1140.3	1141.6	1143.0	1143.0	1141.6	1140.3	1139.0	1137.7
167.5°	1151.0	1152.2	1153.6	1153.3	1151.7	1150.0	1148.3	1146.6
170°	1156.3	1157.6	1159.0	1158.7	1157.1	1155.4	1153.7	1152.0
172.5°	1160.4	1161.7	1163.0	1162.8	1161.1	1159.4	1157.8	1156.0
175°	1164.7	1166.1	1167.4	1167.1	1165.2	1163.3	1161.5	1159.6
177.5°	1165.2	1166.3	1167.4	1167.2	1165.9	1164.5	1163.2	1161.8
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8

(END OF REPORT)