

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: P331324-930

Luminaire Tested: **SA2XXDIP-C485D1080U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331324-930
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-C485D1080U930-4F0-1E-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

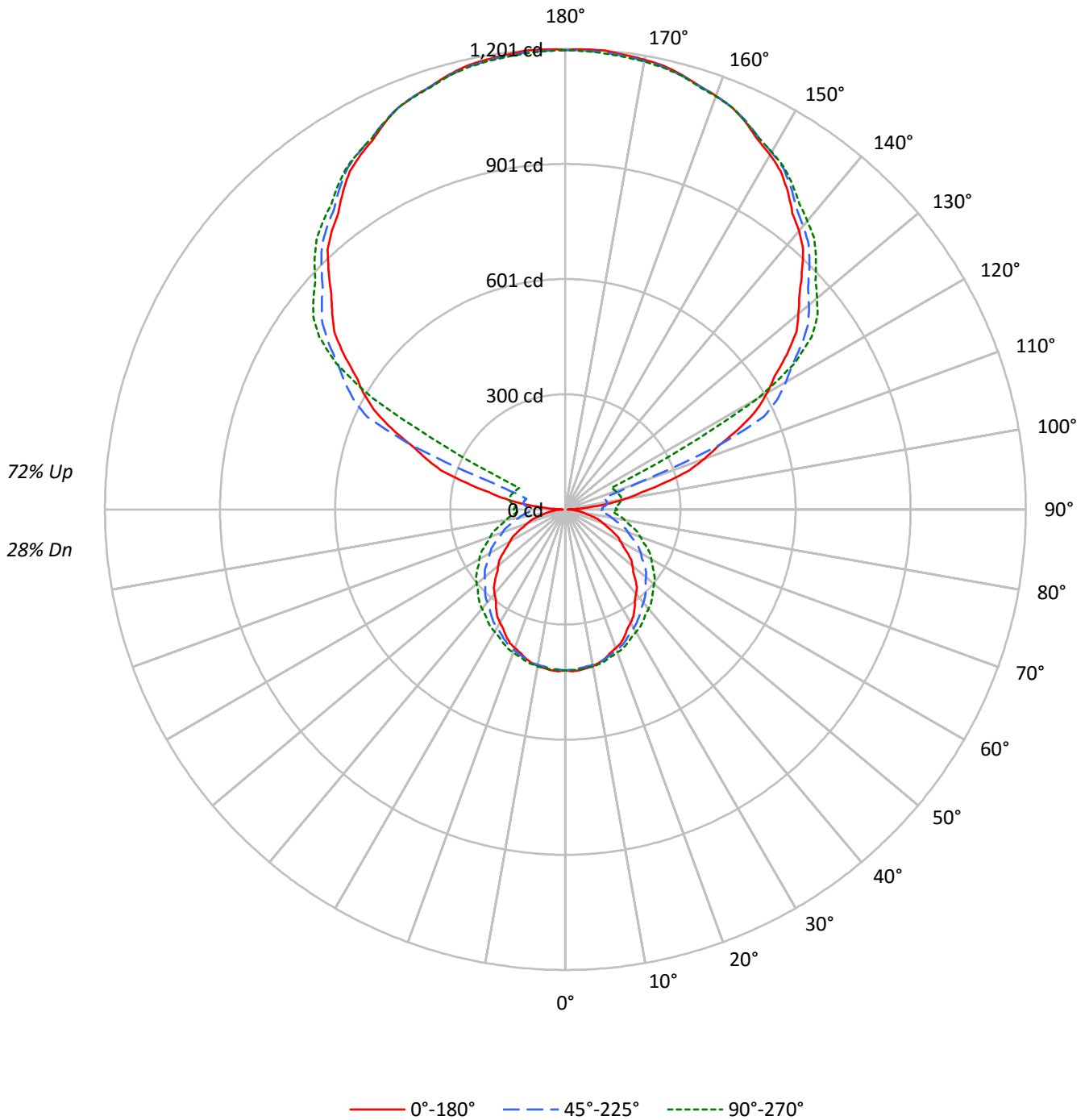
Lumens per Lamp: N/A
Luminaire Lumens: 5116.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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										
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	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°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	0.8
10°-20°	114.2	2.2
20°-30°	173.0	3.4
30°-40°	210.7	4.1
40°-50°	226.7	4.4
50°-60°	220.1	4.3
60°-70°	192.2	3.8
70°-80°	148.0	2.9
80°-90°	102.3	2.0
90°-100°	108.4	2.1
100°-110°	196.5	3.8
110°-120°	424.7	8.3
120°-130°	664.9	13.0
130°-140°	695.3	13.6
140°-150°	640.4	12.5
150°-160°	513.8	10.0
160°-170°	331.1	6.5
170°-180°	114.0	2.2
0°-30°	327.0	6.4
0°-40°	537.7	10.5
0°-60°	984.5	19.2
0°-90°	1427.0	27.9
90°-120°	729.5	14.3
90°-150°	2730.1	53.4
90°-180°	3689.0	72.1
0°-180°	5116.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	7	52	98	125	135	7
95°	61	64	104	130	138	73
105°	266	296	105	135	146	285
115°	501	524	571	206	133	493
125°	706	718	753	775	784	629
135°	872	886	900	921	925	674
145°	1012	1011	1025	1034	1034	633
155°	1114	1107	1116	1121	1115	513
165°	1174	1169	1171	1176	1171	331
175°	1200	1195	1196	1201	1193	114
180°	1198	1198	1198	1198	1198	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.1	20.6	29.1	37.6	46.1	54.8	63.8	72.7	81.7	90.7	96.4
90°	6.9	17.0	26.9	36.9	46.8	56.9	67.1	77.3	87.5	97.7	104.1
92.5°	23.1	30.2	37.3	44.4	51.5	59.7	68.8	77.9	87.0	96.1	101.9
95°	61.2	61.2	61.2	61.2	61.2	66.0	75.4	84.9	94.3	103.8	109.9
97.5°	116.1	103.8	91.6	79.3	67.0	66.4	77.3	88.2	99.1	110.1	115.8
100°	157.7	136.3	114.9	93.5	72.2	66.9	77.7	88.6	99.5	110.3	116.8
102.5°	202.9	201.9	200.9	199.9	198.9	188.4	168.4	148.3	128.3	108.3	115.2
105°	266.5	276.2	285.9	295.6	305.3	287.4	241.9	196.3	150.7	105.3	112.1
107.5°	339.7	347.6	355.3	363.1	371.0	346.7	290.3	234.0	177.7	121.4	123.8
110°	386.4	393.1	399.9	406.7	413.4	392.2	343.2	294.2	245.2	196.2	181.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	430.7	436.6	442.5	448.3	454.2	453.4	446.0	438.5	431.0	423.6	357.7
115°	500.8	505.6	510.3	515.1	519.8	527.7	538.6	549.5	560.4	571.3	486.2
117.5°	562.7	567.4	572.0	576.7	581.3	588.1	597.0	605.9	614.9	623.9	606.3
120°	608.5	612.0	615.4	618.8	622.2	628.4	637.2	646.1	655.0	663.9	670.0
122.5°	647.3	650.6	653.9	657.1	660.4	666.4	675.3	684.2	693.0	701.9	706.9
125°	705.8	708.3	710.9	713.4	715.8	721.1	729.1	737.1	745.1	753.1	758.1
127.5°	759.4	762.1	764.7	767.4	770.0	774.4	780.6	786.8	793.0	799.3	804.6
130°	793.4	796.3	799.2	802.3	805.2	809.1	814.1	819.0	824.0	829.0	834.3
132.5°	828.0	830.5	833.0	835.5	838.0	841.4	845.7	850.0	854.4	858.6	863.6
135°	872.5	875.5	878.6	881.7	884.8	887.9	891.0	894.1	897.2	900.3	905.1
137.5°	918.1	920.2	922.3	924.5	926.6	929.0	931.6	934.1	936.6	939.2	943.5
140°	947.9	949.3	950.7	952.1	953.5	955.4	957.8	960.2	962.6	965.0	968.9
142.5°	972.9	974.1	975.3	976.6	977.9	979.7	982.2	984.7	987.2	989.7	993.0
145°	1011.5	1011.2	1011.1	1010.9	1010.6	1012.2	1015.5	1018.7	1022.1	1025.3	1027.4
147.5°	1045.6	1044.9	1044.2	1043.4	1042.7	1043.9	1047.2	1050.4	1053.6	1056.9	1057.9
150°	1067.8	1066.4	1065.1	1063.7	1062.4	1063.2	1066.3	1069.4	1072.5	1075.5	1076.8
152.5°	1086.5	1085.0	1083.5	1082.0	1080.5	1081.2	1084.1	1087.0	1090.0	1092.9	1094.1
155°	1113.7	1112.0	1110.3	1108.5	1106.8	1107.1	1109.4	1111.7	1114.0	1116.3	1117.4
157.5°	1135.1	1133.6	1132.1	1130.7	1129.2	1129.3	1130.9	1132.5	1134.1	1135.7	1137.0
160°	1147.5	1146.4	1145.2	1144.0	1142.9	1142.9	1144.0	1145.2	1146.4	1147.5	1148.7
162.5°	1158.6	1157.5	1156.3	1155.1	1154.0	1153.9	1154.9	1155.9	1156.9	1157.9	1159.2
165°	1173.5	1172.3	1171.2	1170.0	1168.9	1168.6	1169.1	1169.8	1170.4	1170.9	1172.2
167.5°	1184.6	1183.5	1182.3	1181.1	1180.0	1179.7	1180.2	1180.7	1181.3	1181.9	1183.2
170°	1190.8	1189.7	1188.5	1187.4	1186.3	1185.9	1186.3	1186.6	1187.0	1187.4	1188.7
172.5°	1195.0	1193.8	1192.7	1191.6	1190.4	1190.0	1190.4	1190.7	1191.2	1191.6	1192.9
175°	1200.4	1199.1	1197.7	1196.4	1195.0	1194.5	1194.9	1195.3	1195.6	1196.0	1197.4
177.5°	1201.3	1200.2	1199.1	1198.0	1196.9	1196.5	1196.6	1196.8	1196.9	1197.1	1198.2
180°	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	102.1	107.8	113.5	117.2	119.1	120.9	122.7	124.5
90°	110.5	116.8	123.2	127.4	129.4	131.4	133.5	135.4
92.5°	107.7	113.5	119.3	123.1	125.0	126.9	128.7	130.5
95°	116.0	122.1	128.2	132.0	133.5	134.9	136.3	137.7
97.5°	121.6	127.3	133.1	137.0	138.8	140.6	142.4	144.2
100°	123.4	130.0	136.5	140.7	142.6	144.5	146.3	148.2
102.5°	122.1	129.0	135.9	140.3	142.4	144.4	146.4	148.5
105°	119.0	125.8	132.6	137.2	139.5	141.7	144.0	146.3
107.5°	126.1	128.6	130.9	133.3	135.5	137.8	140.1	142.3
110°	166.2	151.3	136.4	130.0	132.3	134.6	136.8	139.1



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CATALOG NUMBER: SA2XXDIP-C485D1080U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.7	225.8	159.9	128.0	130.0	132.2	134.3	136.4
115°	401.0	315.9	230.8	182.1	169.7	157.4	145.0	132.6
117.5°	588.7	571.1	553.6	522.7	478.5	434.3	390.1	345.9
120°	676.1	682.2	688.3	679.1	654.6	630.1	605.6	581.1
122.5°	712.0	717.1	722.2	722.8	719.0	715.3	711.5	707.7
125°	763.0	768.1	773.1	776.5	778.3	780.1	781.9	783.7
127.5°	809.9	815.2	820.6	823.9	825.2	826.5	827.8	829.1
130°	839.7	845.1	850.4	853.5	854.4	855.3	856.2	857.1
132.5°	868.5	873.5	878.4	881.3	882.2	883.1	884.0	884.9
135°	909.8	914.6	919.3	922.1	922.8	923.5	924.1	924.9
137.5°	947.9	952.4	956.7	959.0	959.3	959.5	959.9	960.1
140°	972.8	976.6	980.6	982.4	982.3	982.2	982.0	981.9
142.5°	996.3	999.6	1002.9	1004.4	1004.2	1004.0	1003.6	1003.4
145°	1029.6	1031.8	1034.0	1034.9	1034.6	1034.3	1034.0	1033.7
147.5°	1059.1	1060.2	1061.3	1061.6	1061.1	1060.6	1060.1	1059.6
150°	1077.9	1079.0	1080.2	1080.3	1079.3	1078.4	1077.4	1076.4
152.5°	1095.2	1096.4	1097.6	1097.5	1096.2	1094.9	1093.6	1092.4
155°	1118.6	1119.8	1121.0	1120.7	1119.2	1117.7	1116.1	1114.6
157.5°	1138.3	1139.6	1140.9	1140.8	1139.4	1137.8	1136.4	1134.8
160°	1149.8	1151.0	1152.1	1152.0	1150.7	1149.3	1148.0	1146.6
162.5°	1160.5	1161.8	1163.2	1162.9	1161.3	1159.7	1158.0	1156.3
165°	1173.6	1174.9	1176.3	1176.3	1174.9	1173.6	1172.2	1170.9
167.5°	1184.5	1185.9	1187.2	1187.0	1185.3	1183.6	1181.9	1180.1
170°	1190.1	1191.4	1192.8	1192.5	1190.8	1189.1	1187.4	1185.6
172.5°	1194.3	1195.6	1196.9	1196.8	1195.0	1193.3	1191.6	1189.8
175°	1198.7	1200.1	1201.4	1201.2	1199.2	1197.3	1195.4	1193.4
177.5°	1199.2	1200.3	1201.4	1201.3	1199.9	1198.5	1197.1	1195.7
180°	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8

(END OF REPORT)