

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: P332606-940

Luminaire Tested: **SA4XXDIP-C795D810U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332606-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D810U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5620.7 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

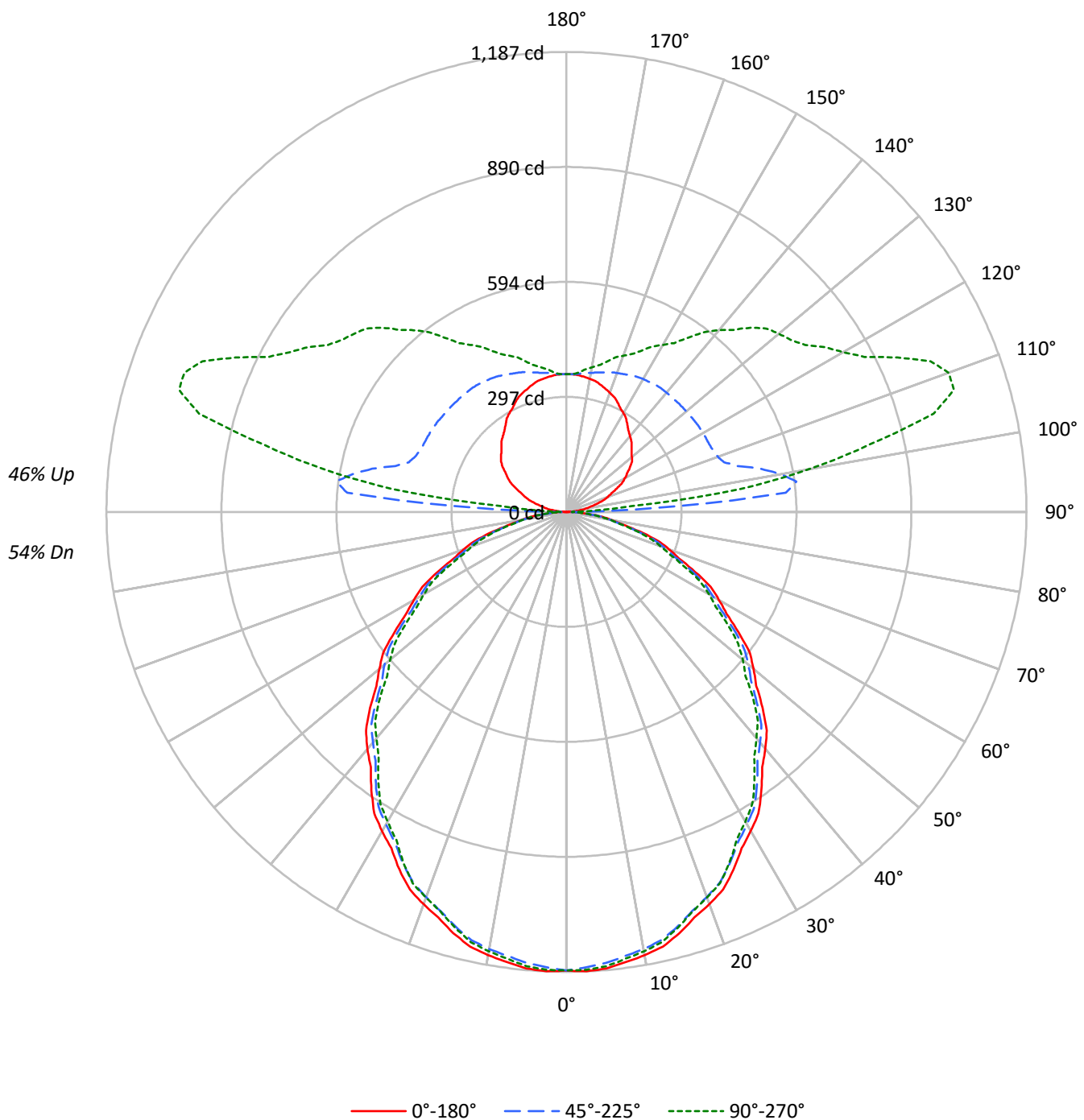
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60
1	99	94	90	87	91	88	84	81	75	73	70	63	62	60	53	52	50
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	46	44	42
3	82	72	65	59	76	67	61	56	58	53	49	49	46	42	41	38	36
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31
5	69	57	49	43	64	53	46	41	46	40	36	39	35	32	33	30	27
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	28	24	21
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9556	9556	9556
5°	9585	9469	9539
10°	9525	9393	9439
15°	9410	9260	9283
20°	9257	9094	9101
25°	9082	8905	8879
30°	8869	8682	8603
35°	8647	8451	8339
40°	8416	8186	8037
45°	8176	7927	7775
50°	7910	7695	7458
55°	7623	7396	7156
60°	7335	7061	6846
65°	7011	6739	6468
70°	6649	6314	6069
75°	6095	5798	5652
80°	5421	5202	5072
85°	4742	4566	4474

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	2.0
10°-20°	314.1	5.6
20°-30°	462.3	8.2
30°-40°	537.4	9.6
40°-50°	537.5	9.6
50°-60°	470.1	8.4
60°-70°	349.1	6.2
70°-80°	198.4	3.5
80°-90°	59.2	1.1
90°-100°	256.3	4.6
100°-110°	533.5	9.5
110°-120°	477.9	8.5
120°-130°	402.0	7.2
130°-140°	335.1	6.0
140°-150°	256.1	4.6
150°-160°	180.0	3.2
160°-170°	105.9	1.9
170°-180°	34.4	0.6
0°-30°	887.8	15.8
0°-40°	1425.3	25.4
0°-60°	2432.8	43.3
0°-90°	3039.5	54.1
90°-120°	1267.7	22.6
90°-150°	2260.9	40.2
90°-180°	2581.0	45.9
0°-180°	5620.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1183	1179	1168	1178	1177	112
15°	1126	1122	1108	1113	1111	317
25°	1020	1013	1000	1000	997	469
35°	877	870	858	851	846	548
45°	716	709	694	684	681	552
55°	542	538	526	514	508	485
65°	367	362	353	344	339	363
75°	195	191	186	182	181	208
85°	51	51	49	49	48	56
90°	1	6	13	14	15	4
95°	23	72	568	281	170	26
105°	82	118	457	985	981	87
115°	144	180	408	784	942	142
125°	200	238	406	667	752	178
135°	238	283	402	592	672	184
145°	274	314	400	499	549	172
155°	312	336	389	441	460	144
165°	340	350	373	395	401	96
175°	354	355	358	363	361	34
180°	355	355	355	355	355	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1186.8	1186.2	1185.7	1185.3	1184.7	1183.6	1181.7	1179.8	1177.9	1176.2	1177.8
5°	1182.8	1182.0	1181.1	1180.3	1179.4	1177.8	1175.5	1173.1	1170.8	1168.5	1170.8
7.5°	1171.8	1170.9	1170.1	1169.2	1168.4	1166.7	1164.1	1161.5	1159.0	1156.4	1158.2
10°	1161.9	1161.1	1160.2	1159.4	1158.5	1156.7	1154.0	1151.3	1148.5	1145.8	1147.5
12.5°	1149.0	1148.2	1147.3	1146.5	1145.7	1143.7	1140.9	1137.9	1135.1	1132.1	1134.0
15°	1125.9	1125.0	1124.2	1123.3	1122.5	1120.5	1117.3	1114.2	1111.0	1107.9	1109.1
17.5°	1098.0	1096.9	1095.8	1094.8	1093.8	1091.7	1088.8	1085.7	1082.7	1079.8	1080.6
20°	1077.5	1076.4	1075.4	1074.3	1073.3	1071.1	1068.0	1064.8	1061.7	1058.5	1059.2
22.5°	1055.5	1054.1	1052.7	1051.3	1049.9	1047.7	1044.5	1041.3	1038.1	1035.0	1036.2
25°	1019.6	1018.2	1016.6	1015.2	1013.7	1011.5	1008.5	1005.6	1002.6	999.7	999.9
27.5°	978.7	977.1	975.6	974.1	972.6	970.4	967.7	965.0	962.2	959.5	958.9
30°	951.4	949.7	948.0	946.3	944.6	942.4	939.6	936.9	934.2	931.4	930.6
32.5°	922.5	921.0	919.4	917.9	916.4	914.2	911.3	908.4	905.5	902.6	901.6
35°	877.4	875.8	874.4	872.9	871.5	869.2	866.3	863.4	860.4	857.5	856.0
37.5°	829.7	828.4	827.1	825.7	824.3	822.1	818.9	815.7	812.6	809.4	807.8
40°	798.6	796.9	795.2	793.5	791.8	789.4	786.3	783.1	780.0	776.8	774.7
42.5°	765.3	764.2	763.2	762.2	761.2	758.9	755.5	752.0	748.4	744.9	742.5
45°	716.1	714.6	713.2	711.7	710.2	707.8	704.5	701.1	697.7	694.3	692.0
47.5°	664.7	663.7	662.7	661.6	660.7	658.6	655.5	652.4	649.3	646.1	643.5
50°	629.8	628.9	628.1	627.2	626.4	624.6	621.6	618.7	615.6	612.7	609.8
52.5°	595.7	594.7	593.6	592.6	591.6	589.5	586.4	583.3	580.1	577.0	574.4
55°	541.6	540.9	540.3	539.7	539.0	537.3	534.3	531.4	528.4	525.5	522.9
57.5°	490.0	489.3	488.6	487.9	487.1	485.3	482.4	479.5	476.6	473.7	471.3
60°	454.3	453.3	452.2	451.2	450.1	448.2	445.5	442.7	440.0	437.3	435.3
62.5°	419.5	418.6	417.7	416.8	415.9	414.0	411.1	408.1	405.3	402.3	400.6
65°	367.0	366.0	365.0	363.9	362.8	361.2	359.2	357.0	354.9	352.8	350.7
67.5°	314.3	313.3	312.4	311.4	310.5	309.0	306.9	304.9	302.9	300.9	298.8
70°	281.7	280.3	278.7	277.2	275.8	274.2	272.5	270.8	269.1	267.5	265.8
72.5°	246.8	245.3	243.9	242.4	240.9	239.5	238.2	236.7	235.4	234.1	232.7
75°	195.4	194.3	193.3	192.3	191.2	190.1	189.0	188.0	187.0	185.9	185.0
77.5°	146.2	145.8	145.3	144.9	144.4	143.7	142.8	141.9	140.9	140.0	139.7
80°	116.6	116.0	115.4	114.8	114.1	113.6	113.2	112.8	112.4	111.9	111.5
82.5°	87.8	87.6	87.2	86.9	86.7	86.5	86.4	86.3	86.2	86.1	85.9
85°	51.2	51.2	51.2	51.2	51.2	51.0	50.6	50.2	49.8	49.3	49.3
87.5°	19.9	20.0	20.2	20.2	20.2	20.0	20.7	20.5	20.6	20.7	20.6
90°	0.7	2.1	4.2	4.9	5.6	5.6	9.7	9.7	11.1	12.6	11.9
92.5°	7.9	11.6	18.1	26.7	36.8	51.3	86.8	140.8	193.6	221.1	184.2
95°	23.0	25.1	32.1	41.1	57.9	87.1	147.8	262.2	428.8	568.3	584.3
97.5°	41.3	41.3	47.3	55.6	70.0	94.5	141.2	235.7	401.4	598.5	734.1
100°	53.0	53.0	57.9	66.3	79.5	101.8	142.9	221.8	364.0	560.6	739.0
102.5°	64.1	65.3	69.6	77.4	90.1	111.3	148.5	217.8	338.9	513.2	697.2
105°	81.6	83.6	87.1	95.5	108.1	128.3	161.8	219.6	317.3	457.4	621.3
107.5°	100.9	102.2	105.7	114.6	126.6	146.6	177.3	230.0	313.3	426.1	559.9
110°	113.7	115.0	118.5	126.9	139.5	158.3	189.0	237.7	314.4	415.5	529.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.9	127.3	131.3	139.2	151.7	170.6	200.1	246.1	317.8	410.5	511.9
115°	143.7	145.7	150.6	157.6	170.9	189.7	217.6	259.4	324.2	407.9	495.7
117.5°	162.0	164.0	168.4	176.0	188.4	207.9	234.4	272.9	331.1	407.2	488.5
120°	174.3	175.7	180.6	188.2	200.1	219.6	246.1	282.4	336.1	407.2	484.6
122.5°	185.5	186.9	191.7	198.9	211.8	230.8	257.3	291.3	341.1	406.6	480.1
125°	200.1	202.9	207.1	214.7	228.0	247.5	272.6	304.7	348.7	405.8	472.7
127.5°	213.1	215.3	220.3	229.1	242.9	262.6	286.9	316.3	354.6	404.3	462.8
130°	220.3	223.1	228.7	239.2	252.4	272.6	296.3	323.5	359.1	403.7	456.7
132.5°	227.6	229.8	237.1	247.0	261.4	280.4	304.2	330.7	363.0	403.1	451.1
135°	237.7	240.6	247.5	259.4	274.0	292.1	315.1	340.3	368.8	402.3	442.7
137.5°	248.0	250.6	258.2	269.6	284.7	302.0	323.5	347.0	372.3	402.2	435.5
140°	255.2	257.3	264.9	276.8	291.4	308.2	329.1	351.4	375.1	401.6	431.6
142.5°	263.0	265.1	272.2	283.5	297.6	313.8	334.1	354.7	377.4	401.6	428.3
145°	274.0	276.1	283.1	292.8	306.1	321.5	339.6	358.4	378.6	400.2	422.5
147.5°	286.4	287.1	293.3	303.3	314.3	328.1	345.2	361.6	379.3	397.7	417.4
150°	294.3	295.0	300.5	308.9	319.3	332.6	347.9	363.3	379.3	396.0	413.5
152.5°	301.5	301.7	307.2	315.0	324.4	336.5	350.2	364.4	378.2	393.2	409.0
155°	311.7	312.4	316.6	323.5	331.2	341.6	353.5	365.3	376.5	389.1	402.3
157.5°	321.6	321.6	325.5	330.9	337.6	345.8	355.9	365.3	374.7	384.8	395.5
160°	327.7	327.7	330.5	335.4	341.0	348.7	357.0	365.3	373.0	381.4	390.5
162.5°	333.3	332.7	334.9	339.3	344.3	350.3	358.1	365.3	371.4	378.1	386.0
165°	339.6	339.6	341.0	344.5	347.9	352.1	358.4	364.0	368.2	373.0	378.6
167.5°	345.8	345.2	345.8	348.5	350.4	353.7	358.3	362.3	364.8	368.0	371.9
170°	348.7	347.9	348.7	350.7	352.1	354.2	357.7	361.1	362.6	364.6	367.5
172.5°	351.4	350.7	350.9	352.4	353.2	354.7	357.1	360.1	360.3	361.3	363.6
175°	354.2	353.5	353.5	354.2	354.9	354.9	356.3	358.4	357.7	357.7	359.1
177.5°	355.4	354.9	354.4	354.9	354.9	354.9	355.4	356.6	355.4	355.4	356.0
180°	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1179.5	1181.2	1182.9	1183.7	1183.5	1183.3	1183.1	1182.9
5°	1173.1	1175.5	1177.8	1178.8	1178.3	1177.9	1177.5	1177.1
7.5°	1160.1	1162.0	1163.8	1164.6	1164.4	1164.1	1163.9	1163.6
10°	1149.1	1150.8	1152.5	1153.2	1152.7	1152.3	1151.9	1151.5
12.5°	1135.9	1137.6	1139.5	1140.1	1139.6	1139.0	1138.4	1137.8
15°	1110.4	1111.6	1112.9	1113.2	1112.6	1112.0	1111.3	1110.7
17.5°	1081.4	1082.2	1083.0	1083.2	1082.7	1082.3	1081.9	1081.5
20°	1059.8	1060.4	1061.0	1061.1	1060.7	1060.3	1059.9	1059.4
22.5°	1037.2	1038.4	1039.6	1039.7	1038.9	1038.2	1037.4	1036.7
25°	1000.1	1000.3	1000.6	1000.2	999.4	998.5	997.7	996.8
27.5°	958.5	958.0	957.4	956.7	955.6	954.6	953.5	952.4
30°	929.7	928.9	928.0	927.1	926.0	925.0	923.9	922.9
32.5°	900.5	899.6	898.6	897.5	896.4	895.4	894.3	893.3
35°	854.5	853.0	851.5	850.2	849.2	848.2	847.1	846.1
37.5°	806.2	804.6	803.1	801.6	800.1	798.8	797.4	795.9
40°	772.6	770.5	768.4	766.8	765.7	764.7	763.7	762.6
42.5°	740.0	737.6	735.1	733.6	732.9	732.2	731.5	730.8
45°	689.6	687.3	685.0	683.6	682.9	682.2	681.6	681.0
47.5°	640.9	638.3	635.6	633.6	632.0	630.4	628.7	627.1
50°	606.8	603.9	600.9	598.8	597.5	596.3	595.0	593.8
52.5°	571.9	569.2	566.6	564.5	562.9	561.3	559.7	558.1
55°	520.4	517.9	515.3	513.4	512.2	511.0	509.6	508.4
57.5°	468.9	466.5	464.0	462.3	461.0	459.8	458.6	457.4
60°	433.5	431.6	429.6	428.2	427.1	426.1	425.0	424.0
62.5°	398.9	397.2	395.5	394.0	393.0	391.9	390.9	389.9
65°	348.7	346.5	344.4	342.9	341.8	340.7	339.7	338.6
67.5°	296.9	294.8	292.7	291.6	291.3	291.1	290.7	290.4
70°	264.1	262.4	260.7	259.6	259.0	258.3	257.7	257.1
72.5°	231.4	230.1	228.7	227.7	227.0	226.4	225.8	225.2
75°	184.2	183.3	182.5	182.0	181.8	181.6	181.4	181.2
77.5°	139.5	139.2	139.0	138.6	138.0	137.5	137.0	136.4
80°	111.1	110.7	110.2	109.9	109.7	109.5	109.3	109.1
82.5°	85.6	85.3	85.1	84.9	84.7	84.4	84.3	84.0
85°	49.3	49.3	49.3	49.2	49.0	48.8	48.6	48.3
87.5°	20.7	20.9	21.0	21.0	21.1	21.3	21.1	21.1
90°	12.6	13.3	13.9	13.9	14.6	15.3	14.6	14.6
92.5°	137.0	103.1	82.0	68.0	59.8	56.1	53.7	53.7
95°	516.7	408.6	315.1	247.5	213.4	191.7	179.2	170.1
97.5°	763.3	723.2	655.0	582.2	532.2	490.2	469.2	454.8
100°	840.9	854.8	820.6	769.1	708.4	665.8	645.0	639.4
102.5°	837.0	906.2	916.1	894.6	857.4	826.5	804.5	800.0
105°	781.0	901.5	970.5	999.2	1000.6	995.0	985.3	981.1
107.5°	701.3	829.7	926.9	989.1	1023.6	1039.5	1046.4	1048.2
110°	653.4	773.9	875.0	951.7	1001.2	1030.6	1043.1	1049.4

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CATALOG NUMBER: SA4XXDIP-C795D810U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	618.2	724.9	820.4	897.1	953.2	988.7	1006.3	1016.5
115°	582.9	668.7	750.2	817.2	872.3	914.1	936.4	942.0
117.5°	565.6	636.6	700.7	757.5	804.5	839.6	862.2	866.6
120°	557.8	622.7	678.4	727.9	767.7	798.3	816.5	824.1
122.5°	551.1	613.7	664.5	707.8	741.5	767.7	783.0	790.7
125°	539.7	599.7	647.7	686.1	714.0	734.2	747.4	751.6
127.5°	525.8	583.0	631.0	667.4	695.4	713.5	724.6	728.8
130°	514.6	569.6	617.1	654.0	682.6	700.1	711.2	715.4
132.5°	502.8	554.6	600.9	637.8	665.8	685.5	696.2	700.3
135°	486.7	532.0	574.5	609.4	637.3	656.8	668.0	672.2
137.5°	472.1	510.4	546.3	577.7	603.8	623.0	632.2	637.3
140°	463.7	496.4	527.8	557.1	581.5	596.8	606.6	612.2
142.5°	455.8	484.7	511.7	537.0	558.7	572.8	581.5	585.4
145°	444.9	468.6	489.5	509.0	526.5	538.2	545.3	548.8
147.5°	435.8	454.6	471.4	486.7	499.5	509.7	515.0	516.2
150°	430.2	446.2	460.2	472.7	483.9	492.9	497.1	497.8
152.5°	424.1	437.8	450.7	461.0	470.5	477.9	480.4	481.1
155°	414.8	426.1	436.5	444.9	451.8	457.4	459.5	459.5
157.5°	404.9	414.3	423.1	429.8	435.1	439.3	440.5	440.5
160°	398.9	406.5	414.2	419.7	423.9	428.1	428.8	428.8
162.5°	392.7	399.2	405.3	410.3	413.3	417.5	418.2	417.7
165°	384.1	388.3	393.2	396.7	399.5	402.3	401.6	400.9
167.5°	375.9	379.2	383.1	385.1	386.6	388.3	388.3	387.6
170°	371.0	373.0	375.9	377.9	379.3	380.0	379.3	379.3
172.5°	366.5	368.0	369.7	371.2	372.0	372.7	372.0	371.0
175°	360.5	361.1	362.6	362.6	362.6	364.0	362.6	361.1
177.5°	356.6	357.1	357.1	357.7	357.1	357.7	356.6	355.4
180°	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9

(END OF REPORT)