

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: LUMARK

Report Number: G2-16-1017-1

Luminaire Tested: **NFFLD-S-C70-D-UNV-66**

Test Date: 05/20/16

Test Information

Test Method: LM-79-08
Report Number: G2-16-1017-1
Test Lab: INNOVATION CENTER(G2)
Test Date: 05/20/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NFFLD-S-C70-D-UNV-66
Description: LOW WATTAGE LED FLOODLIGHT
Light Source: (1) CITIZEN 4000 70
CLU038-1208C4-40AL7K3
Ballast/Driver: (1) ERP ELECTRONIC DRIVER
ESS030W-0500-42

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2712.6 lumens
Efficiency: N/A
Efficacy: 137.7 lumens/watt
Luminous Opening: (L: 0 ' x W: -0.46 ' x H: 0 '
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B1 - U0 - G0

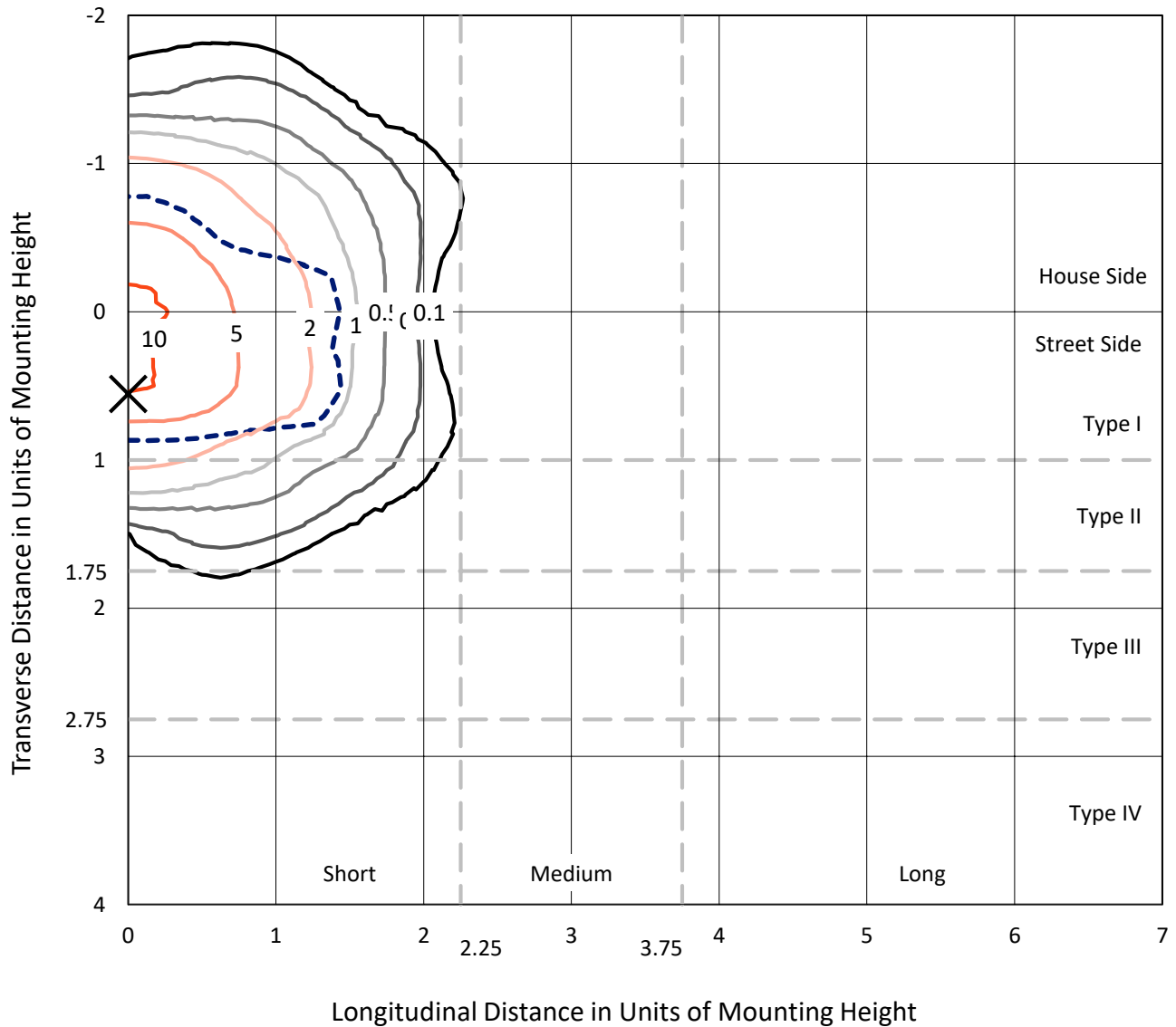
Input Watts (W): 19.7
Input Voltage (V): 120.0
Input Current (A_{in}): 0.167
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 15.0%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.2
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

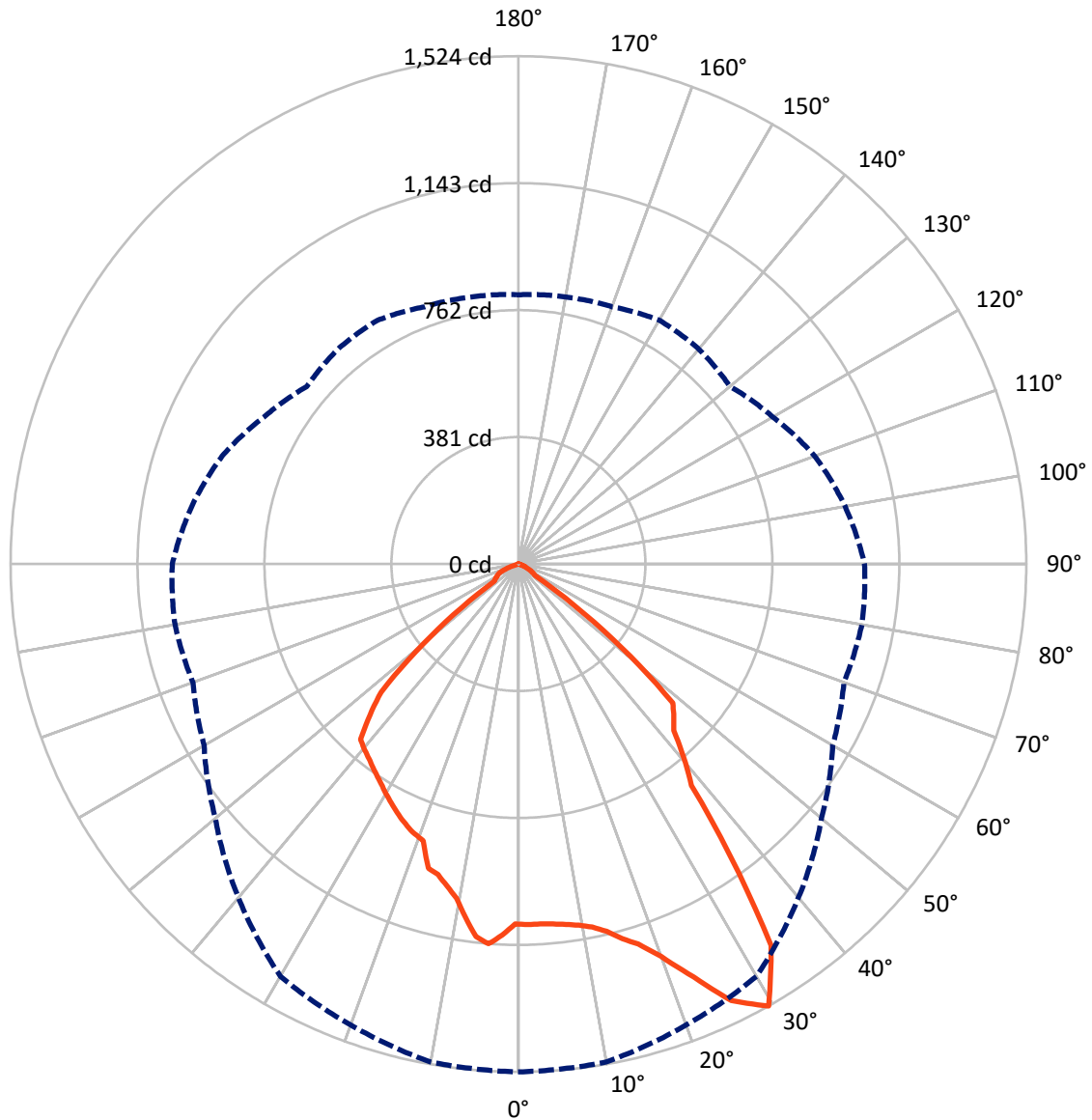
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 29-Deg Vertical

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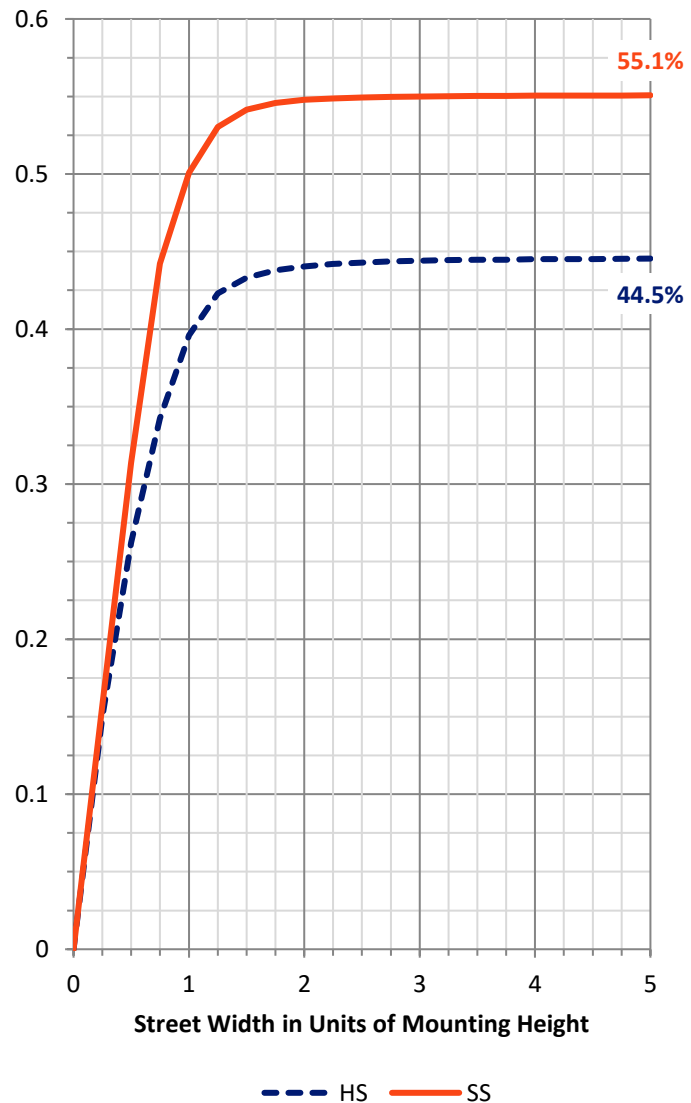
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1219.3	0.0	1219.3
	% Fixture	45.0	0.0	45.0
Street Side	Lumens	1493.3	0.0	1493.3
	% Fixture	55.0	0.0	55.0
Total	Lumens	2712.6	0.0	2712.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	3.9
10°-20°	303.8	11.2
20°-30°	493.7	18.2
30°-40°	610.4	22.5
40°-50°	602.8	22.2
50°-60°	422.2	15.6
60°-70°	172.7	6.4
70°-80°	35.9	1.3
80°-90°	5.4	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2712.6	100.0
0°-180°	2712.6	100.0



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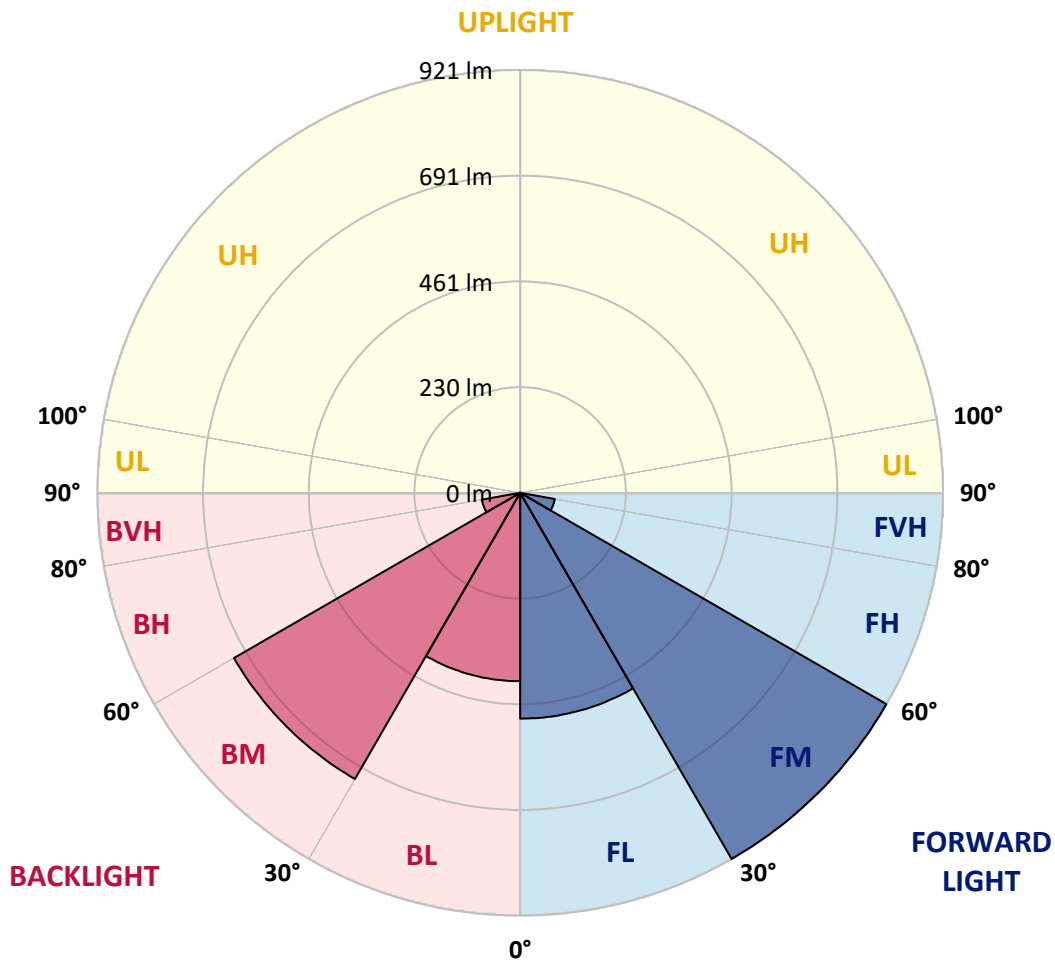
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	492.0	18.1			
FM	(30°-60°)	921.2	34.0			
FH	(60°-80°)	76.5	2.8			G0/660
FVH	(80°-90°)	2.5	0.1			G0/10
BL	(0°-30°)	410.4	15.1	B1/500		
BM	(30°-60°)	719.9	26.5	B1/1000		
BH	(60°-80°)	84.8	3.1	B0/110		G0/110
BVH	(80°-90°)	3.2	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1
1°	1082.1	1082.1	1082.0	1081.9	1081.7	1081.4	1081.2	1080.8	1080.5	1080.1	1079.9
3°	1082.1	1082.1	1082.2	1085.0	1087.6	1089.8	1091.5	1092.8	1092.7	1091.9	1092.7
5°	1085.0	1084.1	1087.6	1091.8	1094.0	1092.8	1092.1	1091.9	1092.0	1091.9	1095.3
7°	1090.9	1090.7	1095.7	1096.7	1093.5	1090.1	1086.5	1084.5	1084.3	1087.0	1098.1
9°	1098.8	1099.4	1105.5	1099.8	1091.9	1084.8	1085.7	1088.5	1092.4	1100.8	1116.9
11°	1111.7	1114.9	1114.7	1103.7	1091.1	1089.1	1085.2	1079.9	1081.4	1091.9	1109.0
13°	1133.4	1137.6	1131.2	1111.2	1099.6	1084.0	1069.8	1074.8	1084.9	1103.8	1112.1
15°	1166.9	1170.9	1157.0	1130.3	1106.7	1078.8	1069.5	1076.7	1093.0	1119.6	1113.9
17°	1195.5	1201.4	1182.8	1157.8	1114.7	1087.5	1076.7	1072.3	1083.0	1103.8	1086.5
19.5°	1252.7	1251.8	1224.5	1179.1	1140.4	1112.2	1074.1	1067.7	1091.5	1110.7	1067.9
22.5°	1346.4	1338.7	1296.6	1225.0	1173.7	1129.1	1083.9	1065.1	1086.1	1077.1	1037.5
25.5°	1456.9	1444.8	1388.1	1306.4	1228.4	1156.8	1086.9	1047.7	1067.8	1050.5	1010.7
29°	1524.0	1517.3	1472.0	1428.5	1307.2	1187.1	1088.9	1039.2	1046.5	1038.7	995.5
33°	1373.1	1397.4	1411.3	1484.6	1397.0	1224.3	1098.2	1043.0	984.1	949.9	914.6
37.5°	843.4	897.4	1037.4	1241.8	1371.8	1290.7	1114.0	1036.3	963.5	903.5	857.7
42.5°	683.6	688.6	727.8	772.3	1007.7	1220.6	1163.9	1045.8	931.7	892.7	830.5
47.5°	623.4	621.0	623.8	628.8	660.9	900.9	1191.1	1052.6	855.2	836.5	815.6
55°	61.2	127.5	229.9	337.8	476.0	500.7	815.8	857.0	730.1	779.2	730.0
65°	27.6	25.5	51.3	41.3	51.7	117.7	186.8	203.5	133.4	29.6	138.6
75°	3.0	4.7	8.6	7.9	9.2	7.4	12.0	14.5	15.2	25.6	25.5
85°	0.0	3.4	4.9	5.0	5.5	5.2	5.9	6.4	6.5	6.9	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1
1°	1079.8	1079.7	1079.7	1079.7	1079.7	1079.8	1079.9	1080.1	1079.9	1079.8	1079.7
3°	1093.0	1098.9	1103.5	1106.8	1108.6	1108.9	1112.3	1114.6	1112.3	1108.9	1108.6
5°	1107.2	1119.5	1129.3	1136.6	1140.2	1140.8	1140.4	1143.2	1140.4	1140.8	1140.2
7°	1115.8	1130.6	1142.7	1146.4	1143.1	1137.6	1128.5	1125.5	1128.5	1137.6	1143.1
9°	1131.2	1137.5	1130.5	1124.0	1108.8	1096.8	1080.6	1072.2	1080.6	1096.8	1108.8
11°	1120.7	1122.4	1104.1	1076.1	1058.4	1044.6	1028.4	1019.9	1028.4	1044.6	1058.4
13°	1104.3	1073.6	1055.7	1038.4	1015.3	1008.4	997.4	989.4	997.4	1008.4	1015.3
15°	1085.2	1042.4	1016.5	1006.9	989.6	980.9	970.8	962.7	970.8	980.9	989.6
17°	1055.5	1027.9	1001.0	977.5	967.8	960.5	960.6	951.9	960.6	960.5	967.8
19.5°	1032.7	1006.3	987.9	954.6	944.5	912.7	893.7	877.9	893.7	912.7	944.5
22.5°	1017.4	993.6	947.2	921.0	871.3	874.6	871.2	862.1	871.2	874.6	871.3
25.5°	988.5	949.8	905.8	867.3	867.9	856.4	847.2	838.4	847.2	856.4	867.9
29°	946.3	881.9	828.7	842.0	844.8	821.5	813.8	807.9	813.8	821.5	844.8
33°	874.7	813.9	787.7	797.6	791.9	776.3	777.8	773.3	777.8	776.3	791.9
37.5°	804.0	757.1	741.7	736.3	739.4	739.9	743.3	739.8	743.3	739.9	739.4
42.5°	761.5	719.3	684.7	683.8	693.2	703.3	710.8	708.2	710.8	703.3	693.2
47.5°	736.6	696.4	629.6	633.8	638.0	592.5	561.9	563.2	561.9	592.5	638.0
55°	648.6	666.2	553.4	471.4	310.1	191.7	118.0	88.8	118.0	191.7	310.1
65°	229.4	184.4	95.0	69.2	85.5	70.8	64.1	64.1	64.1	70.8	85.5
75°	30.8	18.9	20.8	15.8	19.3	13.4	7.5	4.9	7.5	13.4	19.3
85°	6.9	6.4	6.1	5.5	5.2	6.0	4.4	0.0	4.4	6.0	5.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1	1081.1
1°	1079.7	1079.7	1079.7	1079.8	1079.9	1080.1	1080.5	1080.8	1081.2	1081.4	1081.7
3°	1106.8	1103.5	1098.9	1093.0	1092.7	1091.9	1092.7	1092.8	1091.5	1089.8	1087.6
5°	1136.6	1129.3	1119.5	1107.2	1095.3	1091.9	1092.0	1091.9	1092.1	1092.8	1094.0
7°	1146.4	1142.7	1130.6	1115.8	1098.1	1087.0	1084.3	1084.5	1086.5	1090.1	1093.5
9°	1124.0	1130.5	1137.5	1131.2	1116.9	1100.8	1092.4	1088.5	1085.7	1084.8	1091.9
11°	1076.1	1104.1	1122.4	1120.7	1109.0	1091.9	1081.4	1079.9	1085.2	1089.1	1091.1
13°	1038.4	1055.7	1073.6	1104.3	1112.1	1103.8	1084.9	1074.8	1069.8	1084.0	1099.6
15°	1006.9	1016.5	1042.4	1085.2	1113.9	1119.6	1093.0	1076.7	1069.5	1078.8	1106.7
17°	977.5	1001.0	1027.9	1055.5	1086.5	1103.8	1083.0	1072.3	1076.7	1087.5	1114.7
19.5°	954.6	987.9	1006.3	1032.7	1067.9	1110.7	1091.5	1067.7	1074.1	1112.2	1140.4
22.5°	921.0	947.2	993.6	1017.4	1037.5	1077.1	1086.1	1065.1	1083.9	1129.1	1173.7
25.5°	867.3	905.8	949.8	988.5	1010.7	1050.5	1067.8	1047.7	1086.9	1156.8	1228.4
29°	842.0	828.7	881.9	946.3	995.5	1038.7	1046.5	1039.2	1088.9	1187.1	1307.2
33°	797.6	787.7	813.9	874.7	914.6	949.9	984.1	1043.0	1098.2	1224.3	1397.0
37.5°	736.3	741.7	757.1	804.0	857.7	903.5	963.5	1036.3	1114.0	1290.7	1371.8
42.5°	683.8	684.7	719.3	761.5	830.5	892.7	931.7	1045.8	1163.9	1220.6	1007.7
47.5°	633.8	629.6	696.4	736.6	815.6	836.5	855.2	1052.6	1191.1	900.9	660.9
55°	471.4	553.4	666.2	648.6	730.0	779.2	730.1	857.0	815.8	500.7	476.0
65°	69.2	95.0	184.4	229.4	138.6	29.6	133.4	203.5	186.8	117.7	51.7
75°	15.8	20.8	18.9	30.8	25.5	25.6	15.2	14.5	12.0	7.4	9.2
85°	5.5	6.1	6.4	6.9	6.7	6.9	6.5	6.4	5.9	5.2	5.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1081.1	1081.1	1081.1	1081.1
1°	1081.9	1082.0	1082.1	1082.1
3°	1085.0	1082.2	1082.1	1082.1
5°	1091.8	1087.6	1084.1	1085.0
7°	1096.7	1095.7	1090.7	1090.9
9°	1099.8	1105.5	1099.4	1098.8
11°	1103.7	1114.7	1114.9	1111.7
13°	1111.2	1131.2	1137.6	1133.4
15°	1130.3	1157.0	1170.9	1166.9
17°	1157.8	1182.8	1201.4	1195.5
19.5°	1179.1	1224.5	1251.8	1252.7
22.5°	1225.0	1296.6	1338.7	1346.4
25.5°	1306.4	1388.1	1444.8	1456.9
29°	1428.5	1472.0	1517.3	1524.0
33°	1484.6	1411.3	1397.4	1373.1
37.5°	1241.8	1037.4	897.4	843.4
42.5°	772.3	727.8	688.6	683.6
47.5°	628.8	623.8	621.0	623.4
55°	337.8	229.9	127.5	61.2
65°	41.3	51.3	25.5	27.6
75°	7.9	8.6	4.7	3.0
85°	5.0	4.9	3.4	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)