

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: HALO

Report Number: P407863

Luminaire Tested: **ALP5A40-DL**

Issue Date: 08/27/2020

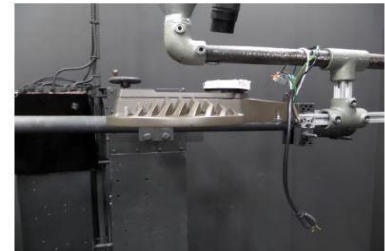
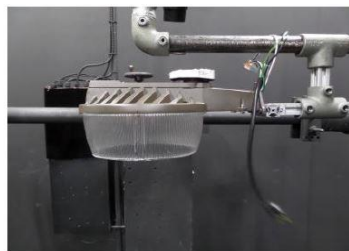
Test Information

Test Method: LM-79-08
Report Number: P407863
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-17)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALP5A40-DL
Description: HALO OUTDOOR BARN LIGHT PREMIUM 5000LM W/DROP LENS
Light Source: (60) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5244.4 lumens
Efficiency: N/A
Efficacy: 142.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.67' x H: 0.25')
IES Classification: Type V - Short - Cutoff
BUG Rating: B2 - U3 - G1

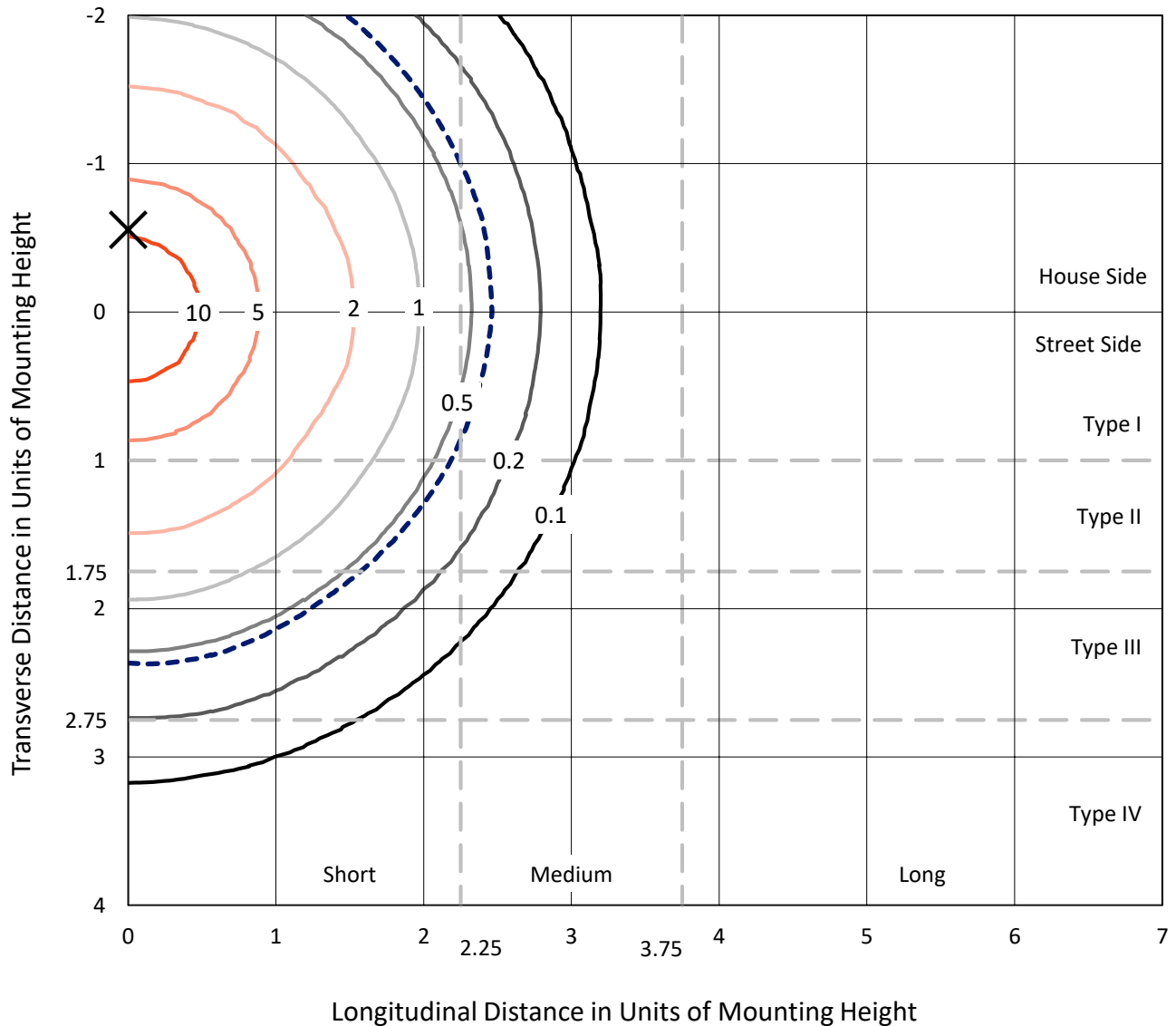
Input Watts (W): 36.9
Input Voltage (V): 120.0
Input Current (Ain): 0.313
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

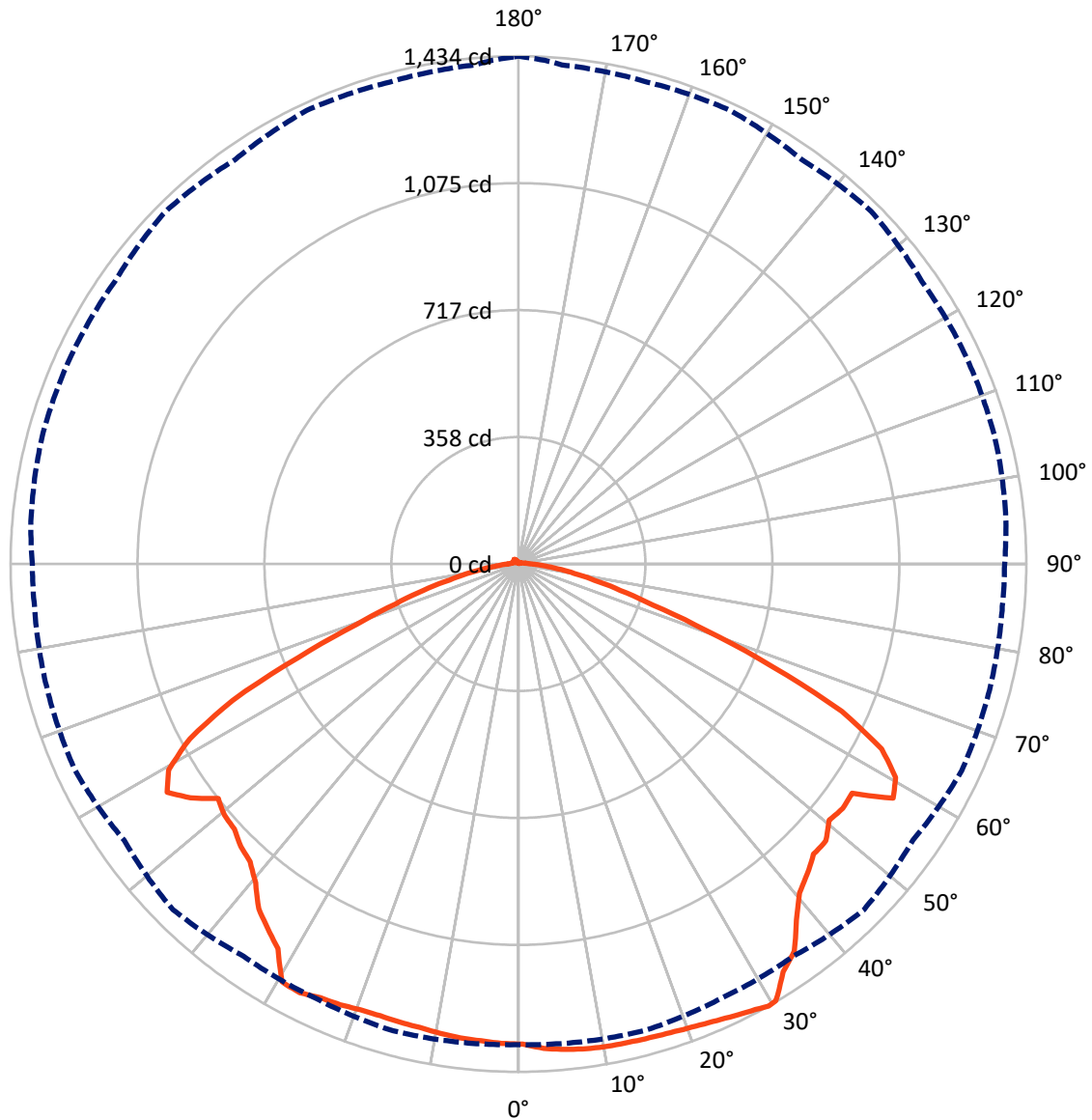
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.6 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 180-Deg Lateral - - - Horizontal Cone Through 29-Deg Vertical

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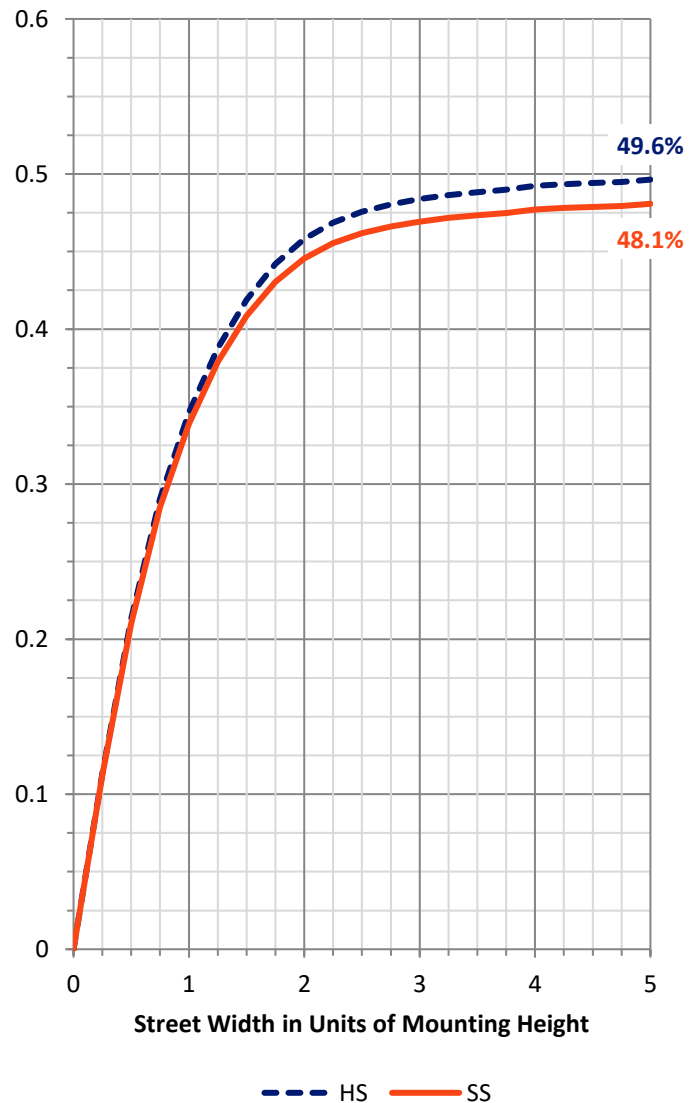
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2628.4	37.5	2665.8
	% Fixture	50.1	0.7	50.8
Street Side	Lumens	2535.2	43.3	2578.6
	% Fixture	48.3	0.8	49.2
Total	Lumens	5163.6	80.8	5244.4
	% Fixture	98.5	1.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.3	2.5
10°-20°	383.8	7.3
20°-30°	633.9	12.1
30°-40°	806.1	15.4
40°-50°	891.0	17.0
50°-60°	1031.5	19.7
60°-70°	886.3	16.9
70°-80°	316.3	6.0
80°-90°	85.5	1.6
90°-100°	26.0	0.5
100°-110°	15.2	0.3
110°-120°	8.8	0.2
120°-130°	8.7	0.2
130°-140°	9.8	0.2
140°-150°	8.2	0.2
150°-160°	3.6	0.1
160°-170°	0.5	0.0
170°-180°	0.1	0.0
0°-90°	5163.6	98.5
0°-180°	5244.4	100.0



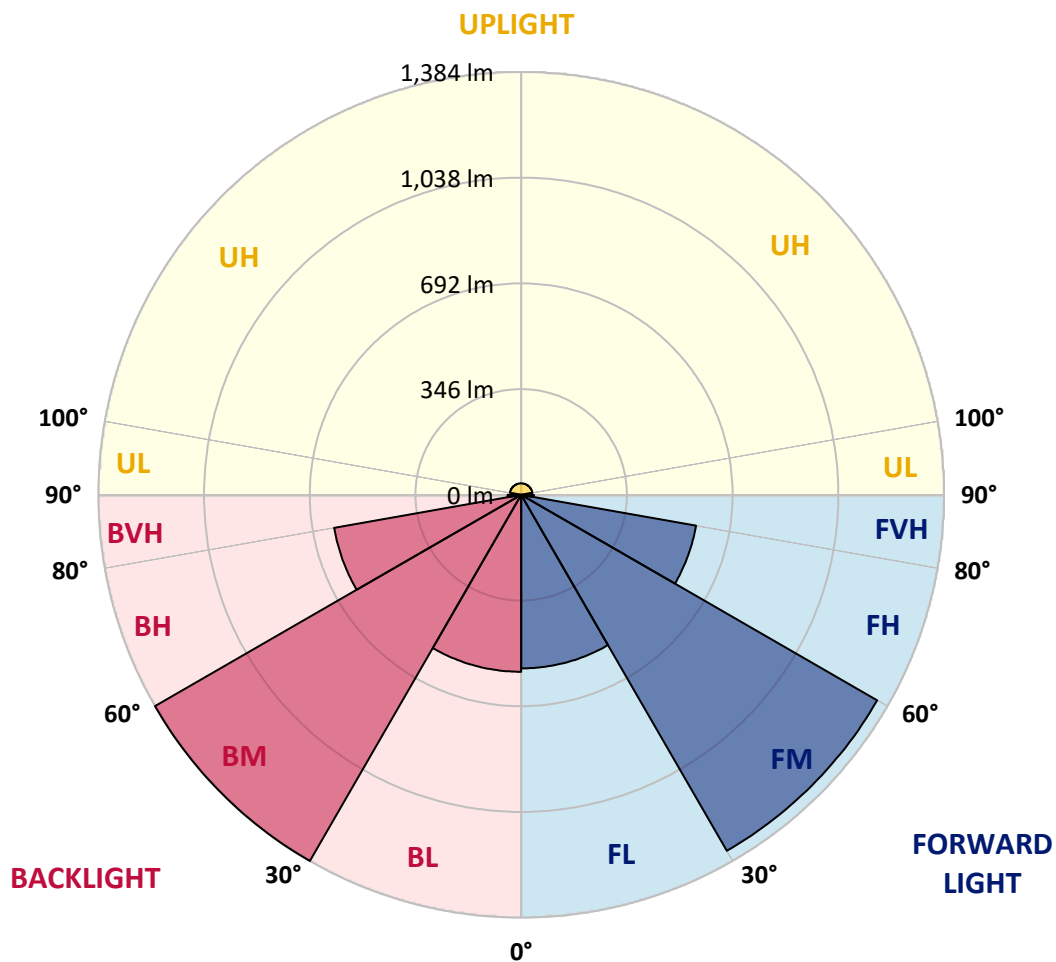
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	568.0	10.8			
FM	(30°-60°)	1345.0	25.6			
FH	(60°-80°)	581.0	11.1			G0/660
FVH	(80°-90°)	41.2	0.8			G1/100
BL	(0°-30°)	579.0	11.0	B2/1000		
BM	(30°-60°)	1383.5	26.4	B2/2500		
BH	(60°-80°)	621.5	11.9	B2/1000		G0/660
BVH	(80°-90°)	44.3	0.8			G1/100
UL	(90°-100°)	26.0	0.5		U2/50	
UH	(100°-180°)	37.5	0.7		U2/50	

BUG Rating: B2-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2
2.5°	1354.2	1349.0	1350.1	1347.0	1342.9	1364.4	1347.0	1363.3	1351.1	1347.0	1349.0
5°	1350.1	1346.0	1347.0	1345.0	1340.9	1363.3	1346.0	1363.3	1351.1	1347.0	1350.1
7.5°	1348.0	1343.9	1345.0	1341.9	1337.8	1360.3	1341.9	1360.3	1349.0	1346.0	1348.0
10°	1342.9	1339.9	1342.9	1338.8	1334.7	1358.2	1340.9	1357.2	1349.0	1343.9	1347.0
12.5°	1337.8	1336.8	1339.9	1334.7	1331.7	1357.2	1337.8	1355.2	1349.0	1342.9	1347.0
15°	1335.8	1333.7	1338.8	1331.7	1329.6	1354.2	1335.8	1355.2	1348.0	1342.9	1346.0
17.5°	1333.7	1332.7	1337.8	1330.7	1328.6	1354.2	1334.7	1355.2	1349.0	1343.9	1346.0
20°	1334.7	1334.7	1339.9	1329.6	1327.6	1355.2	1333.7	1355.2	1349.0	1343.9	1348.0
22.5°	1341.9	1339.9	1343.9	1334.7	1329.6	1357.2	1338.8	1357.2	1353.1	1349.0	1349.0
25°	1346.0	1348.0	1351.1	1338.8	1338.8	1365.4	1343.9	1364.4	1359.3	1356.2	1356.2
27.5°	1358.2	1360.3	1364.4	1352.1	1349.0	1374.6	1353.1	1376.6	1369.5	1364.4	1365.4
29°	1357.2	1359.3	1364.4	1353.1	1352.1	1379.7	1359.3	1380.7	1376.6	1371.5	1372.5
30°	1355.2	1357.2	1362.3	1351.1	1352.1	1379.7	1359.3	1381.7	1377.6	1373.6	1374.6
32.5°	1280.6	1283.7	1290.8	1288.8	1282.7	1310.2	1299.0	1324.5	1316.4	1316.4	1317.4
35°	1249.0	1243.9	1256.1	1240.8	1255.1	1278.6	1262.2	1274.5	1286.8	1293.9	1287.8
37.5°	1218.3	1222.4	1234.7	1219.3	1211.2	1244.9	1223.4	1244.9	1242.8	1257.1	1252.0
40°	1166.2	1173.4	1162.2	1179.5	1167.3	1178.5	1171.4	1197.9	1186.7	1208.1	1195.9
42.5°	1131.5	1141.7	1128.5	1143.8	1148.9	1150.9	1128.5	1155.0	1168.3	1181.6	1172.4
45°	1118.2	1113.1	1144.8	1126.4	1132.5	1157.1	1117.2	1126.4	1181.6	1161.1	1167.3
47.5°	1096.8	1097.8	1119.3	1083.5	1092.7	1120.3	1097.8	1110.1	1158.1	1139.7	1163.2
50°	1091.7	1090.7	1099.9	1077.4	1091.7	1097.8	1082.5	1093.7	1136.6	1139.7	1145.8
52.5°	1075.4	1086.6	1088.6	1073.3	1078.4	1075.4	1050.8	1086.6	1117.2	1130.5	1140.7
55°	1136.6	1135.6	1139.7	1117.2	1116.2	1112.1	1087.6	1104.0	1151.9	1163.2	1166.2
57.5°	1182.6	1190.8	1195.9	1174.4	1164.2	1167.3	1150.9	1175.4	1229.6	1249.0	1253.1
60°	1145.8	1153.0	1155.0	1129.5	1124.4	1127.4	1116.2	1143.8	1193.8	1213.2	1210.2
62.5°	1050.8	1058.0	1051.9	1027.4	1034.5	1038.6	1024.3	1053.9	1094.8	1113.1	1109.1
65°	894.6	898.7	890.5	879.3	869.1	875.2	879.3	898.7	928.3	937.5	946.7
67.5°	675.0	687.3	686.3	669.9	659.7	668.9	682.2	700.6	714.9	731.2	741.4
70°	488.2	492.2	498.4	482.0	480.0	486.1	504.5	503.5	521.9	533.1	538.2
72.5°	365.6	364.6	362.5	356.4	356.4	360.5	360.5	364.6	375.8	377.9	376.8
75°	278.8	277.8	271.7	270.6	270.6	273.7	272.7	273.7	272.7	281.9	278.8
77.5°	199.1	204.3	202.2	202.2	200.2	201.2	202.2	203.2	201.2	206.3	205.3
80°	147.1	148.1	149.1	144.0	149.1	149.1	147.1	146.0	146.0	147.1	148.1
82.5°	100.1	99.1	101.1	97.0	99.1	97.0	99.1	100.1	102.1	100.1	100.1
85°	66.4	67.4	65.4	65.4	66.4	66.4	65.4	66.4	67.4	67.4	67.4
87.5°	47.0	47.0	46.0	46.0	46.0	47.0	47.0	47.0	48.0	47.0	49.0
90°	32.7	32.7	32.7	32.7	32.7	32.7	33.7	33.7	33.7	34.7	35.7
92.5°	25.5	25.5	26.6	26.6	26.6	26.6	26.6	26.6	26.6	27.6	27.6
95°	21.5	21.5	22.5	21.5	22.5	21.5	22.5	22.5	22.5	22.5	22.5
97.5°	19.4	19.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
100°	18.4	18.4	18.4	18.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
102.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
105°	14.3	14.3	15.3	14.3	15.3	14.3	15.3	15.3	15.3	15.3	15.3
107.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	13.3	12.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	10.2	10.2	10.2	11.2	11.2	11.2	11.2	10.2	10.2	10.2	11.2
112.5°	9.2	10.2	10.2	10.2	11.2	10.2	10.2	10.2	9.2	9.2	9.2
115°	9.2	9.2	10.2	10.2	10.2	10.2	10.2	10.2	9.2	9.2	8.2
117.5°	9.2	10.2	9.2	10.2	10.2	10.2	10.2	9.2	9.2	9.2	9.2
120°	11.2	11.2	10.2	10.2	10.2	10.2	10.2	10.2	9.2	9.2	9.2
122.5°	13.3	12.3	12.3	11.2	11.2	11.2	11.2	10.2	10.2	9.2	9.2
125°	14.3	14.3	14.3	13.3	12.3	11.2	11.2	11.2	10.2	9.2	9.2
127.5°	15.3	15.3	15.3	14.3	13.3	11.2	12.3	12.3	12.3	10.2	10.2
130°	15.3	16.3	16.3	15.3	14.3	12.3	12.3	12.3	13.3	11.2	10.2
132.5°	16.3	16.3	15.3	16.3	15.3	14.3	14.3	13.3	13.3	13.3	12.3
135°	17.4	16.3	16.3	16.3	16.3	15.3	14.3	14.3	13.3	14.3	13.3
137.5°	15.3	16.3	16.3	15.3	15.3	16.3	14.3	14.3	14.3	14.3	14.3
140°	17.4	16.3	15.3	15.3	16.3	15.3	15.3	14.3	15.3	14.3	13.3
142.5°	15.3	15.3	15.3	14.3	15.3	15.3	14.3	14.3	14.3	13.3	14.3
145°	14.3	14.3	13.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	15.3
147.5°	12.3	12.3	12.3	12.3	13.3	13.3	13.3	14.3	13.3	13.3	14.3
150°	10.2	10.2	11.2	10.2	11.2	11.2	11.2	11.2	11.2	12.3	12.3
152.5°	9.2	9.2	8.2	9.2	9.2	9.2	9.2	9.2	9.2	10.2	10.2
155°	6.1	7.2	7.2	7.2	7.2	8.2	8.2	8.2	7.2	8.2	8.2
157.5°	4.1	5.1	5.1	5.1	5.1	5.1	6.1	5.1	6.1	6.1	6.1
160°	3.1	3.1	3.1	3.1	3.1	3.1	4.1	3.1	4.1	4.1	4.1
162.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	177°	180°
0°	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2
2.5°	1357.2	1367.4	1350.1	1354.2	1369.5	1350.1	1358.2	1352.1	1351.1	1362.3	1369.5
5°	1357.2	1367.4	1351.1	1354.2	1373.6	1353.1	1364.4	1358.2	1357.2	1367.4	1376.6
7.5°	1357.2	1366.4	1355.2	1357.2	1375.6	1355.2	1366.4	1362.3	1359.3	1371.5	1381.7
10°	1355.2	1366.4	1357.2	1358.2	1378.7	1357.2	1369.5	1362.3	1362.3	1373.6	1384.8
12.5°	1354.2	1366.4	1358.2	1359.3	1378.7	1358.2	1371.5	1365.4	1365.4	1375.6	1385.8
15°	1355.2	1366.4	1358.2	1359.3	1378.7	1359.3	1373.6	1366.4	1367.4	1376.6	1387.9
17.5°	1354.2	1365.4	1360.3	1361.3	1380.7	1361.3	1377.6	1369.5	1370.5	1380.7	1390.9
20°	1355.2	1368.4	1364.4	1363.3	1382.7	1364.4	1379.7	1373.6	1374.6	1384.8	1396.0
22.5°	1359.3	1370.5	1369.5	1367.4	1386.8	1369.5	1384.8	1379.7	1382.7	1390.9	1403.2
25°	1365.4	1375.6	1374.6	1374.6	1391.9	1375.6	1394.0	1388.9	1391.9	1401.1	1413.4
27.5°	1373.6	1384.8	1383.8	1383.8	1400.1	1386.8	1405.2	1399.1	1405.2	1413.4	1424.6
29°	1381.7	1391.9	1393.0	1390.9	1408.3	1394.0	1413.4	1408.3	1414.4	1423.6	1433.8
30°	1381.7	1391.9	1395.0	1389.9	1407.3	1393.0	1410.3	1406.2	1410.3	1419.5	1431.8
32.5°	1333.7	1336.8	1339.9	1334.7	1351.1	1341.9	1356.2	1357.2	1352.1	1362.3	1372.5
35°	1289.8	1303.1	1312.3	1319.4	1321.5	1311.3	1329.6	1312.3	1329.6	1329.6	1341.9
37.5°	1251.0	1261.2	1260.2	1252.0	1260.2	1251.0	1267.3	1247.9	1262.2	1268.4	1274.5
40°	1205.1	1207.1	1206.1	1198.9	1215.3	1201.0	1215.3	1210.2	1206.1	1209.1	1221.4
42.5°	1188.7	1177.5	1178.5	1161.1	1199.9	1171.4	1181.6	1190.8	1177.5	1183.6	1195.9
45°	1181.6	1174.4	1156.0	1142.8	1175.4	1144.8	1158.1	1160.1	1160.1	1163.2	1168.3
47.5°	1160.1	1156.0	1150.9	1142.8	1144.8	1158.1	1153.0	1138.7	1166.2	1169.3	1168.3
50°	1143.8	1139.7	1145.8	1123.4	1126.4	1149.9	1141.7	1134.6	1136.6	1130.5	1136.6
52.5°	1137.7	1134.6	1124.4	1100.9	1118.2	1129.5	1122.3	1121.3	1132.5	1135.6	1146.8
55°	1163.2	1154.0	1132.5	1112.1	1124.4	1133.6	1133.6	1126.4	1134.6	1130.5	1142.8
57.5°	1246.9	1238.8	1215.3	1203.0	1220.4	1230.6	1234.7	1231.6	1237.7	1241.8	1247.9
60°	1214.2	1210.2	1192.8	1175.4	1195.9	1210.2	1218.3	1217.3	1223.4	1223.4	1223.4
62.5°	1116.2	1111.1	1109.1	1084.5	1108.0	1123.4	1130.5	1130.5	1143.8	1140.7	1150.9
65°	957.9	954.9	955.9	940.6	952.8	965.1	978.3	980.4	988.6	990.6	1003.9
67.5°	736.3	753.7	740.4	741.4	752.6	761.8	760.8	778.2	779.2	786.3	774.1
70°	540.2	539.2	542.3	542.3	536.1	549.4	546.4	547.4	567.8	571.9	561.7
72.5°	383.0	373.8	383.0	389.1	386.0	390.1	392.2	394.2	398.3	400.3	396.2
75°	278.8	275.7	282.9	288.0	288.0	291.1	289.0	293.1	299.2	298.2	297.2
77.5°	205.3	203.2	204.3	213.4	214.5	216.5	216.5	216.5	221.6	220.6	219.6
80°	147.1	147.1	150.1	158.3	155.2	158.3	159.3	161.4	164.4	162.4	160.3
82.5°	100.1	102.1	106.2	104.2	108.3	110.3	113.4	114.4	114.4	114.4	112.3
85°	68.4	68.4	70.5	69.4	70.5	72.5	74.6	75.6	76.6	76.6	77.6
87.5°	48.0	48.0	50.0	49.0	49.0	51.1	51.1	52.1	52.1	52.1	53.1
90°	35.7	34.7	34.7	34.7	34.7	35.7	34.7	34.7	35.7	35.7	34.7
92.5°	27.6	27.6	27.6	27.6	26.6	27.6	26.6	26.6	26.6	26.6	26.6
95°	23.5	22.5	23.5	22.5	22.5	22.5	21.5	21.5	21.5	21.5	21.5
97.5°	20.4	20.4	20.4	20.4	20.4	19.4	19.4	18.4	18.4	18.4	18.4
100°	19.4	19.4	19.4	19.4	18.4	18.4	16.3	15.3	15.3	15.3	15.3
102.5°	17.4	17.4	17.4	17.4	17.4	16.3	14.3	12.3	13.3	13.3	13.3
105°	15.3	15.3	15.3	15.3	14.3	13.3	12.3	11.2	11.2	11.2	11.2
107.5°	13.3	12.3	13.3	12.3	12.3	11.2	10.2	9.2	10.2	10.2	10.2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	177°	180°
110°	11.2	10.2	10.2	10.2	10.2	9.2	8.2	7.2	8.2	8.2	8.2
112.5°	9.2	9.2	9.2	9.2	9.2	9.2	7.2	6.1	6.1	6.1	6.1
115°	8.2	8.2	8.2	8.2	8.2	8.2	6.1	5.1	5.1	5.1	5.1
117.5°	8.2	8.2	8.2	8.2	8.2	8.2	7.2	5.1	4.1	4.1	4.1
120°	8.2	8.2	8.2	8.2	8.2	7.2	7.2	5.1	4.1	4.1	4.1
122.5°	8.2	8.2	8.2	8.2	8.2	8.2	6.1	5.1	4.1	4.1	4.1
125°	9.2	8.2	8.2	8.2	8.2	8.2	6.1	5.1	4.1	4.1	4.1
127.5°	9.2	9.2	9.2	9.2	8.2	8.2	7.2	5.1	4.1	4.1	4.1
130°	10.2	9.2	9.2	9.2	9.2	9.2	7.2	5.1	4.1	4.1	4.1
132.5°	12.3	11.2	11.2	10.2	10.2	10.2	9.2	7.2	5.1	4.1	4.1
135°	13.3	12.3	11.2	12.3	11.2	11.2	10.2	8.2	5.1	5.1	4.1
137.5°	13.3	13.3	13.3	12.3	12.3	12.3	11.2	8.2	6.1	5.1	5.1
140°	14.3	14.3	13.3	14.3	13.3	13.3	12.3	9.2	6.1	6.1	6.1
142.5°	14.3	13.3	14.3	14.3	13.3	13.3	12.3	9.2	6.1	6.1	6.1
145°	15.3	13.3	14.3	15.3	14.3	13.3	12.3	9.2	6.1	5.1	5.1
147.5°	14.3	13.3	14.3	15.3	14.3	13.3	11.2	8.2	6.1	5.1	4.1
150°	13.3	12.3	13.3	14.3	13.3	11.2	10.2	7.2	5.1	4.1	4.1
152.5°	11.2	11.2	11.2	11.2	11.2	10.2	8.2	6.1	5.1	4.1	4.1
155°	9.2	9.2	9.2	9.2	9.2	8.2	6.1	5.1	4.1	4.1	4.1
157.5°	6.1	7.2	7.2	7.2	7.2	6.1	5.1	4.1	3.1	3.1	3.1
160°	4.1	4.1	4.1	4.1	4.1	4.1	3.1	2.0	2.0	2.0	2.0
162.5°	2.0	2.0	2.0	3.1	2.0	2.0	2.0	2.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)