

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: P407853

Luminaire Tested: **ALP5A40**

Issue Date: 08/27/2020

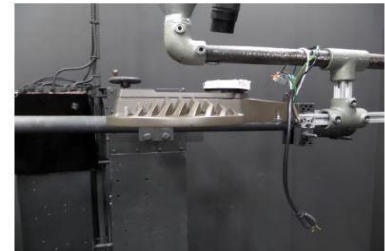
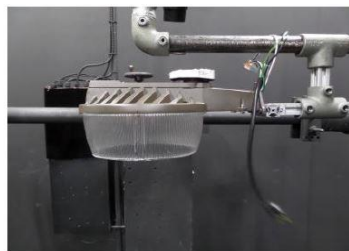
**Test Information**

Test Method: LM-79-08  
Report Number: P407853  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-5)  
Test Lab: INNOVATIONS CENTER(G1)  
Issue Date: 08/27/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ALP5A40  
Description: HALO OUTDOOR BARN LIGHT PREMIUM 5000LM  
Light Source: (60) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5324.3 lumens  
Efficiency: N/A  
Efficacy: 144.3 lumens/watt  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B2 - U0 - G0

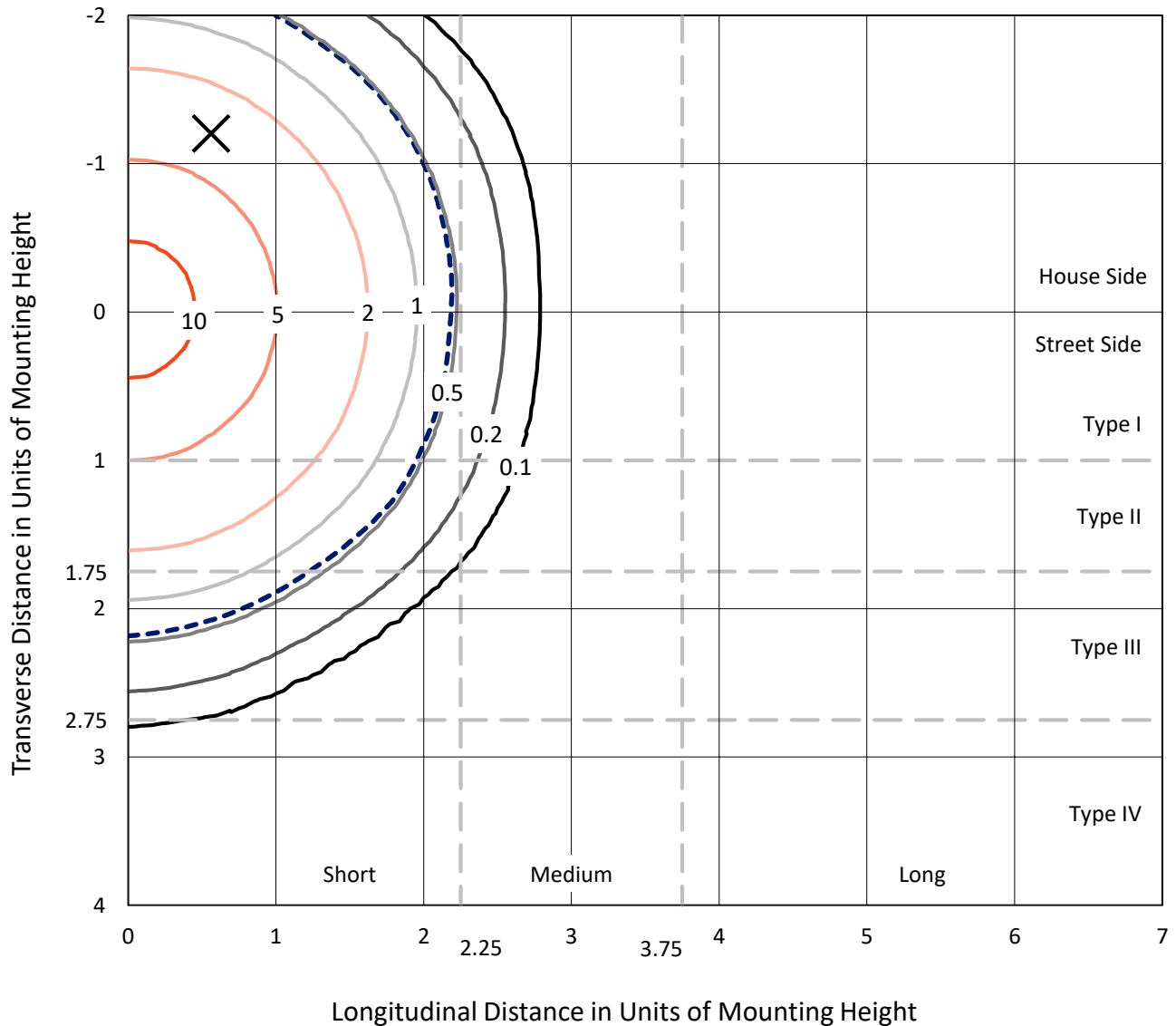
Input Watts (W): 36.9  
Input Voltage (V): 120.0  
Input Current (Ain): 0.313  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P407853  
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### Iso-Footcandle Lines of Horizontal Illumination

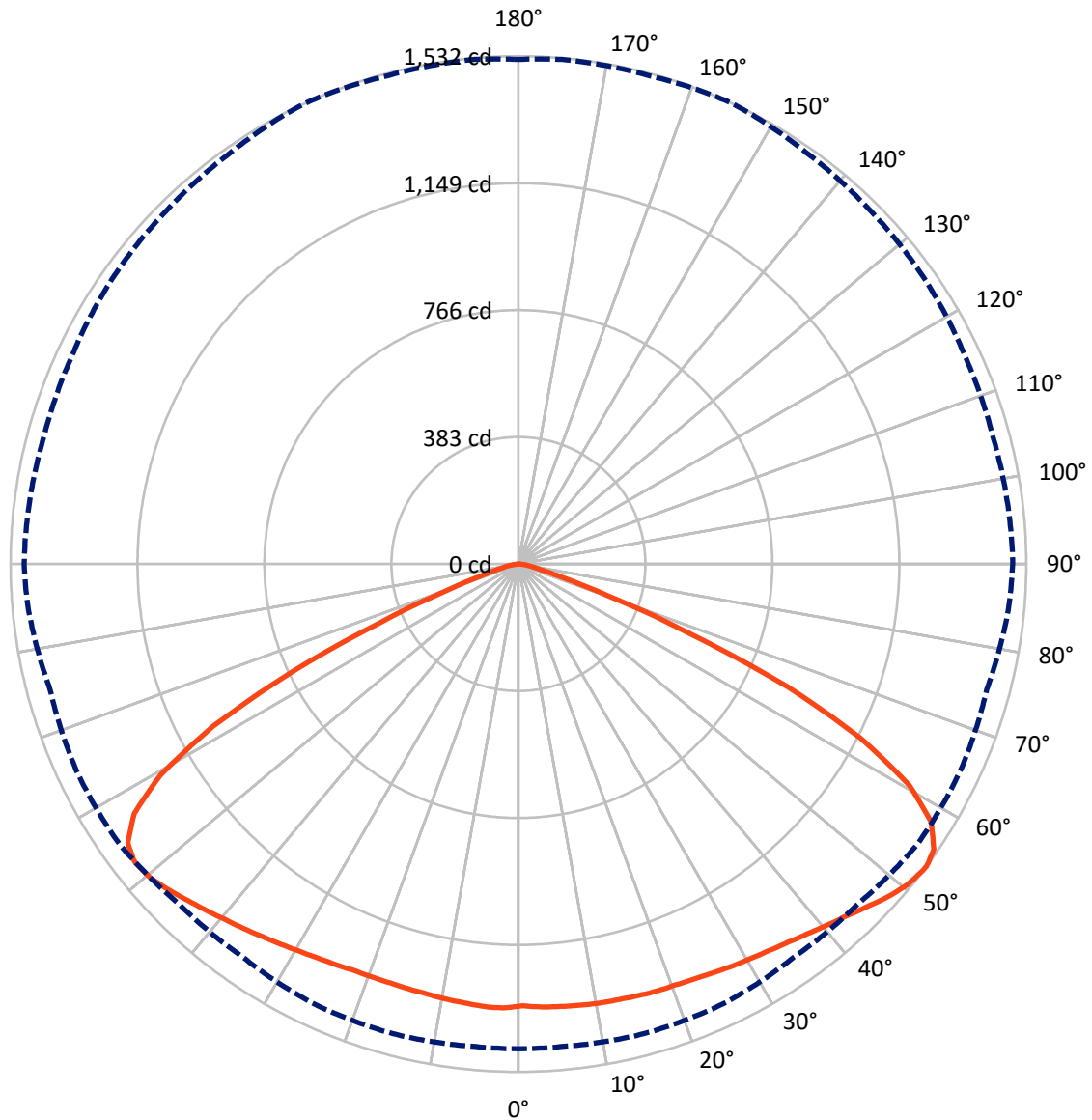
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.3 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 155-Deg Lateral      - - - Horizontal Cone Through 53-Deg Vertical

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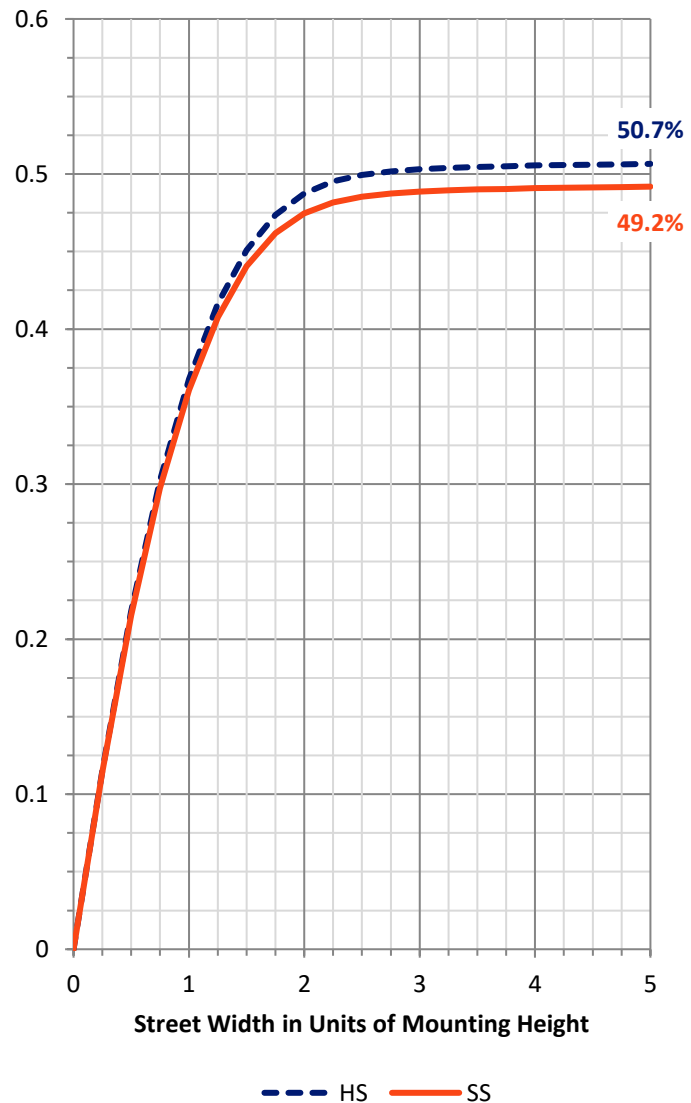
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2707.7	0.0	2707.7
	% Fixture	50.9	0.0	50.9
<b>Street Side</b>	Lumens	2616.6	0.0	2616.6
	% Fixture	49.1	0.0	49.1
<b>Total</b>	Lumens	5324.3	0.0	5324.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.1	2.4
10°-20°	376.5	7.1
20°-30°	618.6	11.6
30°-40°	861.8	16.2
40°-50°	1114.0	20.9
50°-60°	1292.3	24.3
60°-70°	802.0	15.1
70°-80°	119.0	2.2
80°-90°	12.9	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°	5324.3	100.0
0°-180°	5324.3	100.0



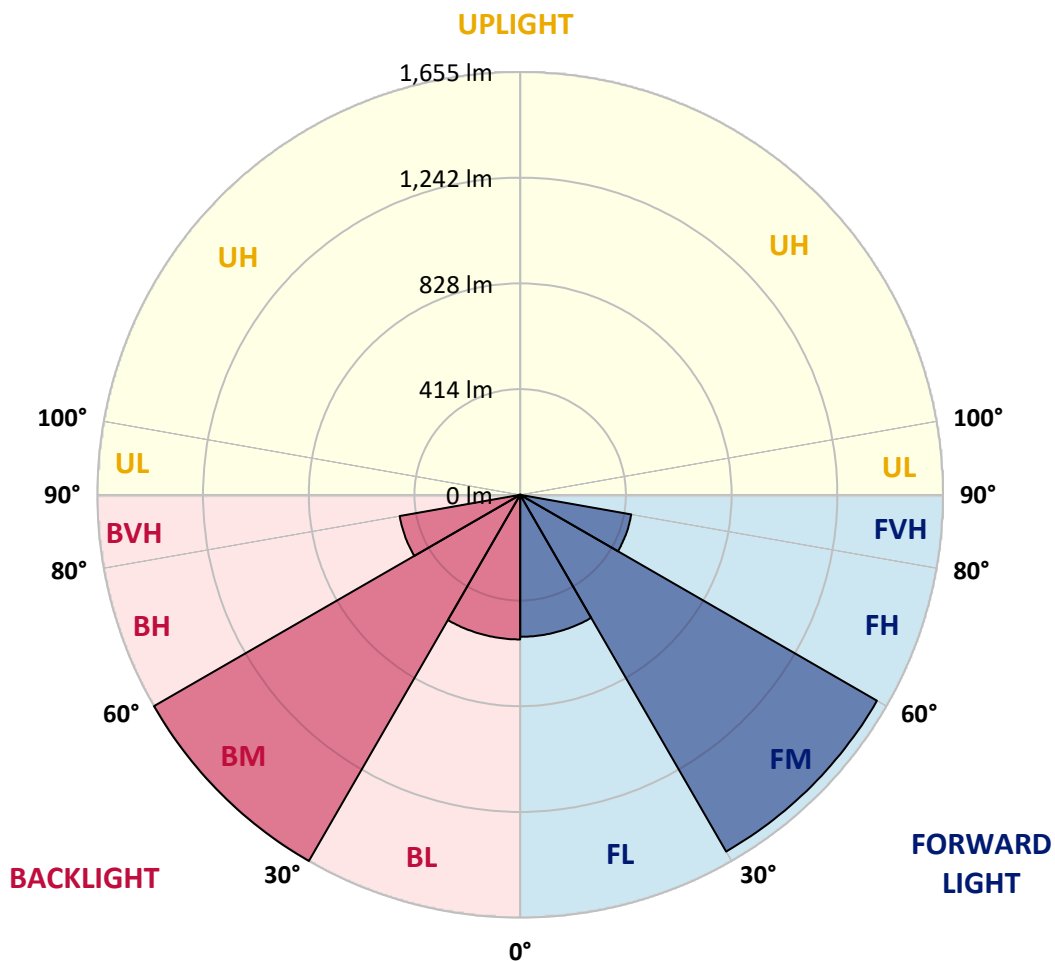
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 CATALOG NUMBER: ALP5A40

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	556.0	10.4			
FM	(30°-60°)	1612.8	30.3			
FH	(60°-80°)	441.8	8.3			G0/660
FVH	(80°-90°)	6.0	0.1			G0/10
BL	(0°-30°)	566.3	10.6	B2/1000		
BM	(30°-60°)	1655.4	31.1	B2/2500		
BH	(60°-80°)	479.2	9.0	B1/500		G0/660
BVH	(80°-90°)	6.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G0**

Type V Short





REPORT NUMBER: P407853  
 CATALOG NUMBER: ALP5A40

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8
2.5°	1321.6	1330.7	1327.7	1339.9	1324.6	1325.6	1327.7	1336.9	1325.6	1332.8	1328.7
5°	1319.5	1327.7	1325.6	1338.9	1322.6	1322.6	1325.6	1334.8	1323.6	1331.8	1327.7
7.5°	1316.5	1323.6	1321.6	1333.8	1318.5	1320.5	1323.6	1332.8	1321.6	1331.8	1327.7
10°	1312.4	1319.5	1317.5	1330.7	1313.4	1316.5	1320.5	1329.7	1319.5	1329.7	1326.7
12.5°	1307.3	1314.4	1314.4	1325.6	1309.3	1313.4	1316.5	1327.7	1317.5	1326.7	1325.6
15°	1304.2	1312.4	1312.4	1323.6	1308.3	1310.3	1315.4	1324.6	1314.4	1326.7	1324.6
17.5°	1303.2	1310.3	1311.3	1321.6	1305.2	1308.3	1314.4	1322.6	1314.4	1325.6	1323.6
20°	1305.2	1310.3	1312.4	1321.6	1305.2	1307.3	1314.4	1323.6	1314.4	1325.6	1324.6
22.5°	1308.3	1313.4	1314.4	1322.6	1306.2	1308.3	1316.5	1323.6	1314.4	1327.7	1326.7
25°	1313.4	1318.5	1320.5	1327.7	1310.3	1313.4	1320.5	1327.7	1317.5	1330.7	1329.7
27.5°	1322.6	1325.6	1328.7	1333.8	1315.4	1318.5	1326.7	1333.8	1323.6	1335.9	1335.9
30°	1331.8	1334.8	1337.9	1342.0	1322.6	1325.6	1336.9	1342.0	1329.7	1344.0	1344.0
32.5°	1342.0	1344.0	1348.1	1352.2	1334.8	1336.9	1346.1	1350.2	1339.9	1353.2	1354.2
35°	1352.2	1355.3	1360.4	1363.4	1344.0	1347.1	1359.3	1361.4	1352.2	1366.5	1366.5
37.5°	1365.5	1368.5	1372.6	1376.7	1358.3	1360.4	1372.6	1374.7	1366.5	1381.8	1381.8
40°	1377.7	1380.8	1386.9	1390.0	1372.6	1374.7	1389.0	1391.0	1381.8	1398.2	1400.2
42.5°	1397.1	1398.2	1403.3	1406.3	1389.0	1390.0	1405.3	1409.4	1399.2	1418.6	1419.6
45°	1414.5	1414.5	1421.6	1422.7	1407.3	1409.4	1424.7	1428.8	1418.6	1438.0	1442.1
47.5°	1433.9	1435.9	1441.0	1442.1	1424.7	1425.7	1443.1	1446.2	1439.0	1458.4	1463.5
50°	1453.3	1453.3	1460.5	1458.4	1440.0	1442.1	1459.4	1462.5	1455.3	1476.8	1480.9
52.5°	1463.5	1462.5	1468.6	1465.6	1448.2	1450.2	1471.7	1471.7	1463.5	1486.0	1490.1
53°	1462.5	1461.5	1466.6	1463.5	1448.2	1449.2	1470.7	1471.7	1462.5	1485.0	1491.1
55°	1448.2	1447.2	1452.3	1447.2	1432.9	1434.9	1457.4	1458.4	1452.3	1474.8	1479.9
57.5°	1390.0	1384.9	1391.0	1381.8	1369.6	1373.6	1401.2	1407.3	1395.1	1420.6	1428.8
60°	1262.3	1255.2	1262.3	1253.1	1245.0	1251.1	1281.7	1291.9	1273.6	1301.1	1308.3
62.5°	1061.1	1053.0	1058.1	1042.7	1033.6	1053.0	1088.7	1083.6	1081.6	1093.8	1108.1
65°	809.9	794.6	772.1	758.8	752.7	783.3	827.3	816.0	818.1	801.7	814.0
67.5°	522.9	514.7	486.1	454.5	458.6	491.2	523.9	533.1	524.9	509.6	512.7
70°	276.8	268.6	262.5	240.0	242.1	260.4	292.1	301.3	286.0	273.7	272.7
72.5°	153.2	154.2	137.9	126.6	128.7	143.0	157.3	162.4	147.1	135.8	134.8
75°	96.0	91.9	81.7	76.6	74.6	82.7	94.0	96.0	85.8	78.6	78.6
77.5°	62.3	59.2	53.1	48.0	48.0	51.1	61.3	62.3	55.2	50.0	49.0
80°	39.8	37.8	33.7	31.7	30.6	33.7	37.8	40.9	34.7	32.7	32.7
82.5°	21.5	21.5	20.4	18.4	18.4	20.4	21.5	22.5	20.4	19.4	19.4
85°	7.2	6.1	5.1	5.1	5.1	6.1	8.2	8.2	8.2	7.2	8.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P407853  
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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	159°	165°	175°	180°
0°	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8	1332.8
2.5°	1325.6	1321.6	1334.8	1338.9	1335.9	1329.7	1337.9	1338.9	1347.1	1343.0	1343.0
5°	1325.6	1321.6	1335.9	1341.0	1337.9	1332.8	1341.0	1344.0	1350.2	1346.1	1345.0
7.5°	1325.6	1323.6	1335.9	1342.0	1339.9	1336.9	1344.0	1347.1	1353.2	1348.1	1347.1
10°	1324.6	1321.6	1335.9	1342.0	1339.9	1337.9	1347.1	1348.1	1355.3	1350.2	1348.1
12.5°	1324.6	1320.5	1333.8	1341.0	1339.9	1338.9	1348.1	1349.1	1355.3	1350.2	1349.1
15°	1323.6	1319.5	1332.8	1341.0	1342.0	1338.9	1351.2	1350.2	1356.3	1353.2	1351.2
17.5°	1323.6	1320.5	1332.8	1341.0	1341.0	1341.0	1354.2	1353.2	1358.3	1353.2	1352.2
20°	1323.6	1320.5	1332.8	1342.0	1344.0	1343.0	1355.3	1355.3	1360.4	1356.3	1354.2
22.5°	1324.6	1321.6	1334.8	1344.0	1345.0	1347.1	1359.3	1360.4	1363.4	1359.3	1358.3
25°	1328.7	1324.6	1336.9	1347.1	1349.1	1352.2	1365.5	1364.5	1369.6	1363.4	1364.5
27.5°	1333.8	1329.7	1342.0	1351.2	1355.3	1359.3	1373.6	1371.6	1375.7	1371.6	1368.5
30°	1341.0	1337.9	1349.1	1358.3	1362.4	1365.5	1380.8	1378.8	1382.8	1377.7	1376.7
32.5°	1353.2	1347.1	1357.3	1366.5	1371.6	1375.7	1390.0	1387.9	1390.0	1386.9	1384.9
35°	1365.5	1359.3	1370.6	1377.7	1383.9	1387.9	1401.2	1399.2	1400.2	1396.1	1394.1
37.5°	1379.8	1374.7	1383.9	1392.0	1396.1	1400.2	1415.5	1412.5	1412.5	1408.4	1404.3
40°	1398.2	1392.0	1399.2	1408.4	1413.5	1417.6	1432.9	1428.8	1428.8	1424.7	1419.6
42.5°	1418.6	1411.4	1418.6	1426.8	1432.9	1438.0	1451.3	1449.2	1447.2	1443.1	1435.9
45°	1439.0	1432.9	1440.0	1450.2	1454.3	1461.5	1474.8	1470.7	1468.6	1464.5	1461.5
47.5°	1461.5	1454.3	1460.5	1470.7	1476.8	1483.9	1500.3	1494.2	1491.1	1489.1	1485.0
50°	1476.8	1472.7	1477.8	1489.1	1497.2	1503.3	1520.7	1516.6	1511.5	1511.5	1507.4
52.5°	1487.0	1481.9	1486.0	1497.2	1505.4	1514.6	1530.9	1529.9	1524.8	1525.8	1518.7
53°	1488.0	1481.9	1486.0	1497.2	1504.4	1514.6	1531.9	1529.9	1524.8	1527.9	1521.7
55°	1477.8	1470.7	1475.8	1486.0	1493.1	1502.3	1520.7	1522.8	1518.7	1521.7	1515.6
57.5°	1425.7	1423.7	1423.7	1434.9	1444.1	1448.2	1467.6	1470.7	1470.7	1474.8	1467.6
60°	1307.3	1312.4	1309.3	1323.6	1323.6	1334.8	1354.2	1356.3	1359.3	1364.5	1354.2
62.5°	1096.9	1105.0	1116.3	1140.8	1133.6	1139.8	1160.2	1150.0	1151.0	1164.3	1177.6
65°	830.3	843.6	869.1	879.3	878.3	871.2	889.6	877.3	885.5	903.8	920.2
67.5°	524.9	547.4	577.0	579.1	571.9	539.2	546.4	574.0	584.2	608.7	597.5
70°	275.8	303.3	327.8	331.9	304.4	288.0	287.0	295.2	318.6	334.0	338.1
72.5°	134.8	155.2	173.6	175.7	157.3	139.9	136.9	145.0	150.1	173.6	170.6
75°	78.6	87.8	101.1	102.1	88.9	78.6	76.6	80.7	82.7	97.0	97.0
77.5°	50.0	55.2	64.3	63.3	56.2	49.0	49.0	51.1	53.1	61.3	61.3
80°	33.7	35.8	40.9	41.9	36.8	33.7	32.7	33.7	34.7	39.8	40.9
82.5°	20.4	22.5	23.5	24.5	23.5	21.5	20.4	21.5	22.5	23.5	23.5
85°	8.2	9.2	10.2	10.2	10.2	10.2	10.2	9.2	9.2	9.2	11.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)