

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P670466

Luminaire Tested: ALP90LSFSUNVDGY-40W-3000K

Issue Date: 3/29/2023

Test Information

Test Method: LM-79-2019
Report Number: P670466
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (2022-07-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/29/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ALP90LSFSUNVDGY-40W-3000K
Description: ALP Premium Area Light
Light Source:
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5853 lumens
Efficiency: N/A
Efficacy: 146.3 lumens/watt
Luminous Opening: Circular (Dia: 0.66' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U3 - G2

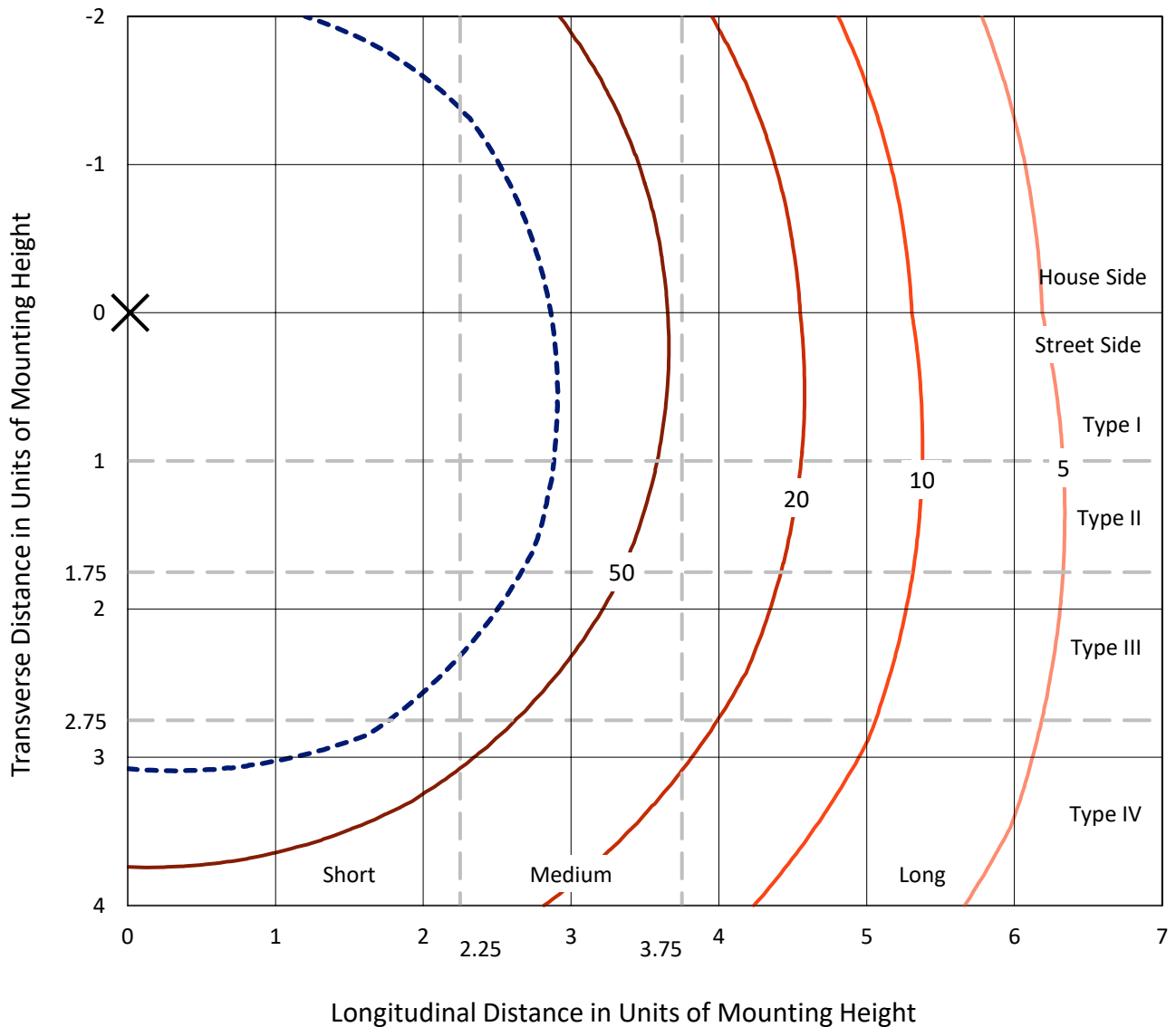
Input Watts (W): 40
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

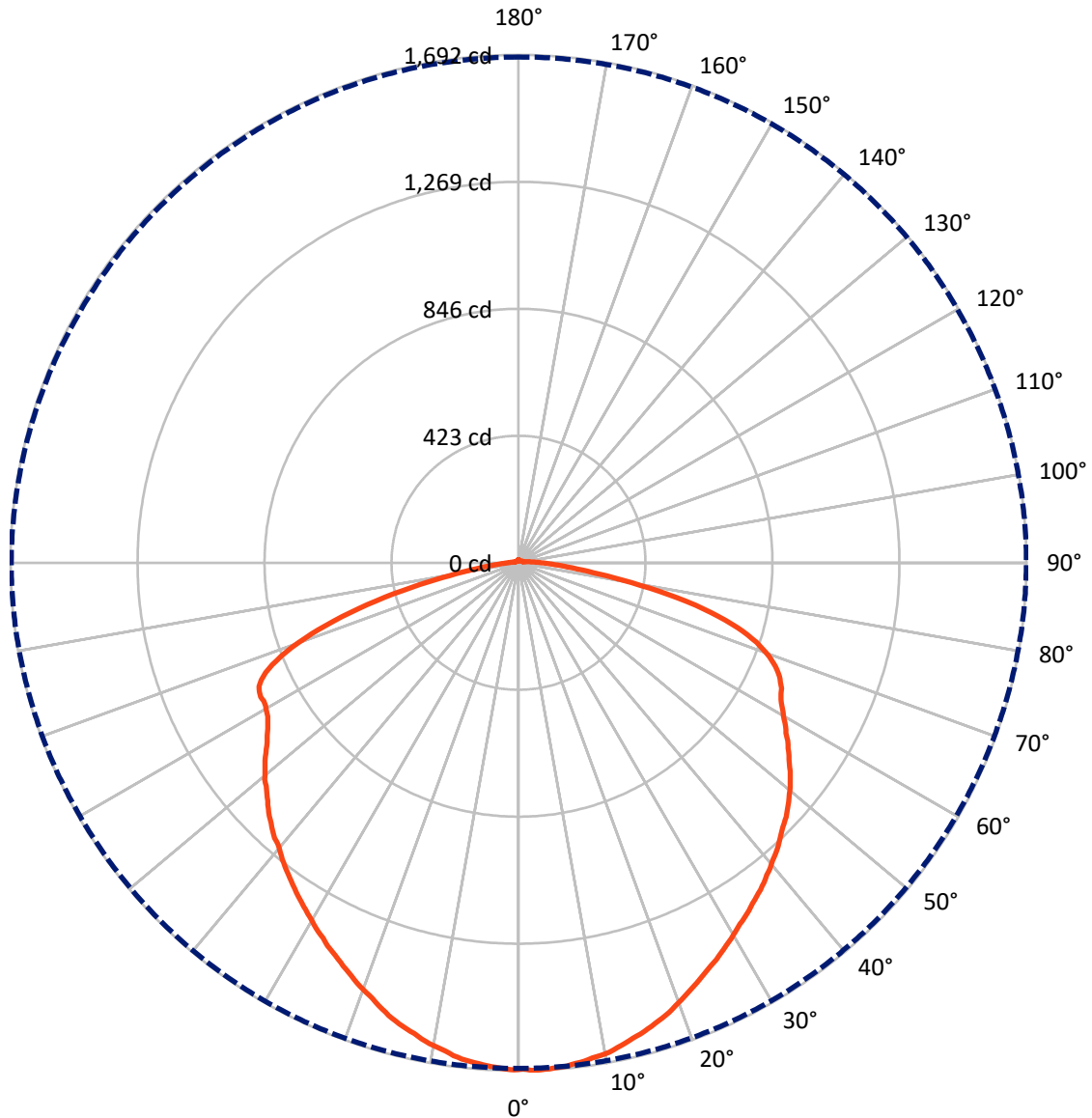
× Max cd
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 6741.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 1-Deg Vertical

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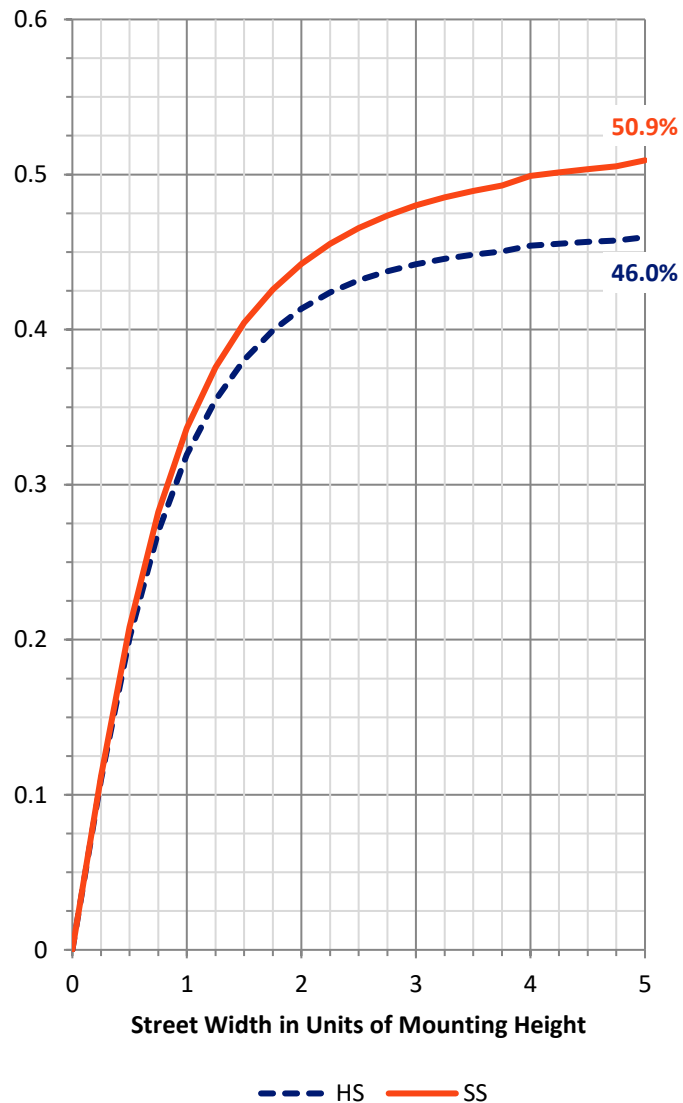
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2718.3	42.4	2760.7
	% Fixture	46.4	0.7	47.2
Street Side	Lumens	3033.0	59.3	3092.3
	% Fixture	51.8	1.0	52.8
Total	Lumens	5751.3	101.7	5853.0
	% Fixture	98.3	1.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.7	2.7
10°-20°	451.4	7.7
20°-30°	681.6	11.6
30°-40°	841.4	14.4
40°-50°	931.6	15.9
50°-60°	951.7	16.3
60°-70°	920.9	15.7
70°-80°	626.4	10.7
80°-90°	187.6	3.2
90°-100°	40.4	0.7
100°-110°	18.8	0.3
110°-120°	14.4	0.2
120°-130°	10.0	0.2
130°-140°	6.4	0.1
140°-150°	4.7	0.1
150°-160°	3.7	0.1
160°-170°	2.4	0.0
170°-180°	0.9	0.0
0°-90°	5751.3	98.3
0°-180°	5853.0	100.0

Coefficient of Utilization

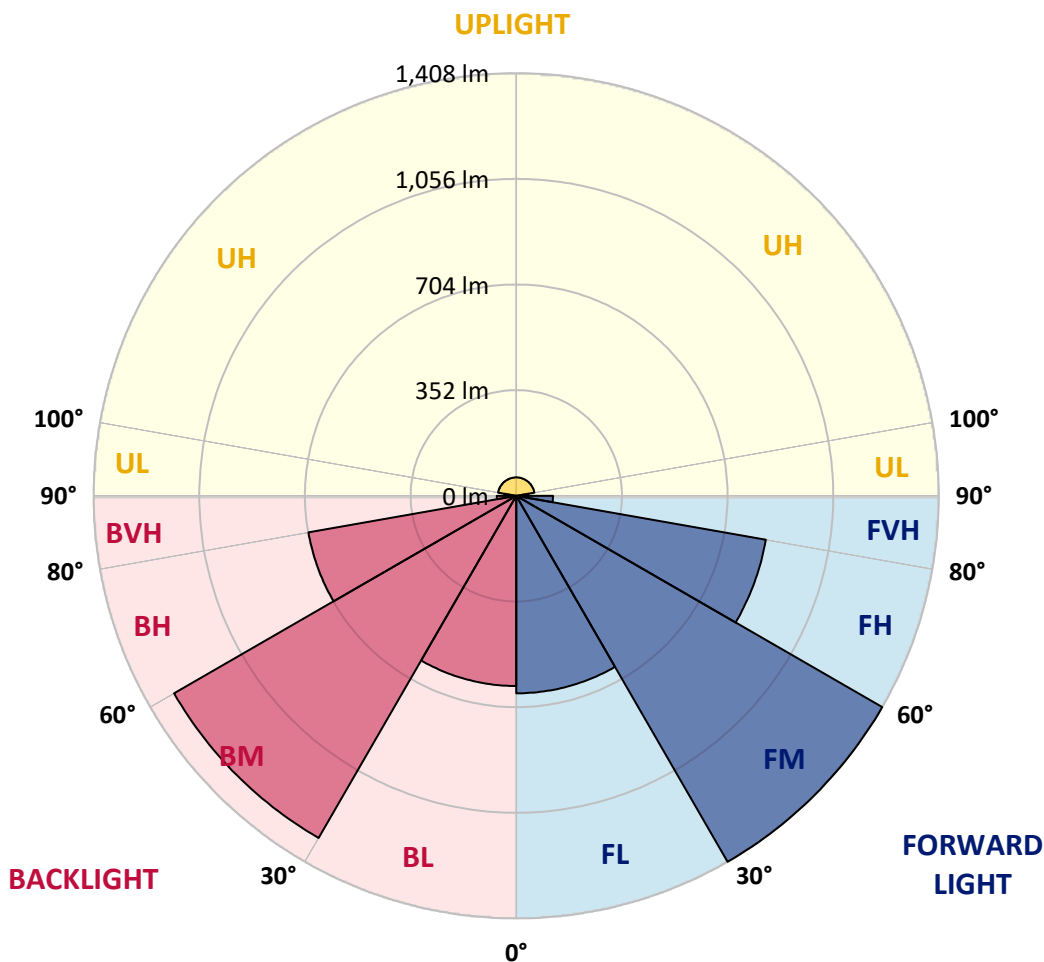


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	658.1	11.2			
FM (30°-60°)	1408.1	24.1			
FH (60°-80°)	844.3	14.4			G1/1800
FVH (80°-90°)	122.5	2.1			G2/225
BL (0°-30°)	633.7	10.8	B2/1000		
BM (30°-60°)	1316.6	22.5	B2/2500		
BH (60°-80°)	703.0	12.0	B2/1000		G2/1000
BVH (80°-90°)	65.1	1.1			G1/100
UL (90°-100°)	40.4	0.7		U2/50	
UH (100°-180°)	61.3	1.0		U3/500	

BUG Rating: B2-U3-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4	1685.4
1°	1683.9	1684.0	1684.0	1691.5	1688.0	1687.3	1684.3	1684.3	1682.8	1689.3	1686.5
2°	1687.8	1686.8	1687.6	1690.5	1689.7	1683.6	1680.4	1681.0	1680.3	1686.8	1684.7
3°	1687.3	1686.6	1686.4	1688.6	1684.9	1679.6	1674.6	1670.4	1676.5	1682.4	1683.1
4°	1686.4	1685.2	1680.4	1686.0	1681.9	1673.2	1664.8	1666.5	1667.0	1679.0	1679.0
5°	1684.7	1687.2	1682.9	1683.9	1677.0	1663.7	1655.1	1656.1	1663.1	1673.7	1676.4
6°	1683.5	1683.8	1679.6	1678.2	1670.3	1655.2	1643.8	1641.7	1655.8	1668.4	1673.9
7°	1674.7	1677.5	1680.6	1674.1	1663.5	1644.4	1634.9	1636.7	1648.0	1663.4	1667.9
8°	1668.8	1674.1	1674.0	1667.5	1654.2	1636.8	1635.2	1626.6	1639.2	1655.2	1667.1
9°	1665.4	1664.8	1672.9	1663.5	1648.2	1627.5	1628.1	1622.0	1629.6	1643.8	1660.5
10°	1659.1	1661.6	1663.2	1657.5	1641.5	1624.2	1619.8	1620.5	1621.4	1636.1	1653.1
11°	1664.6	1655.8	1660.1	1648.3	1633.2	1617.0	1620.4	1609.2	1611.0	1628.2	1646.1
12°	1659.6	1657.3	1656.4	1639.6	1622.1	1614.7	1607.1	1603.6	1597.6	1618.2	1638.7
13°	1657.4	1658.4	1647.4	1628.7	1613.8	1606.9	1599.5	1593.4	1584.8	1605.7	1628.6
14°	1655.4	1649.1	1641.9	1621.0	1603.6	1597.2	1579.8	1586.9	1571.8	1596.0	1616.5
15°	1649.1	1641.1	1635.7	1610.9	1589.8	1585.1	1567.1	1565.7	1559.9	1586.5	1606.3
16°	1634.5	1637.2	1621.3	1600.3	1579.0	1569.2	1545.1	1553.4	1547.9	1574.8	1596.8
17°	1618.4	1627.4	1610.3	1590.6	1565.0	1554.4	1534.3	1536.3	1534.5	1561.2	1585.7
18°	1604.9	1615.4	1594.3	1579.4	1550.8	1535.4	1527.3	1518.9	1527.6	1546.8	1572.2
19°	1593.6	1603.7	1585.8	1565.3	1540.8	1521.3	1519.5	1508.2	1512.1	1530.5	1562.3
20°	1590.9	1594.2	1579.2	1552.2	1528.7	1511.5	1509.4	1491.4	1496.8	1518.4	1550.1
21°	1586.8	1579.2	1568.0	1539.1	1517.8	1501.3	1497.2	1484.0	1486.4	1506.6	1536.7
22°	1581.4	1573.7	1557.2	1526.3	1504.0	1485.9	1474.6	1463.8	1469.4	1492.1	1523.3
23°	1569.0	1566.8	1547.4	1513.2	1491.8	1473.7	1454.3	1457.7	1455.9	1476.8	1511.8
24°	1562.4	1558.6	1535.7	1499.7	1476.5	1456.8	1435.0	1441.2	1440.4	1464.3	1497.0
25°	1544.3	1549.1	1522.8	1486.8	1462.6	1439.9	1421.8	1424.4	1425.5	1449.6	1482.4
26°	1530.3	1534.0	1508.1	1476.5	1448.5	1429.4	1406.9	1403.4	1411.7	1436.6	1472.6
27°	1512.1	1519.0	1495.3	1462.9	1433.1	1407.8	1390.7	1389.1	1397.3	1425.1	1455.5
28°	1496.8	1501.9	1483.4	1450.4	1419.9	1391.5	1384.2	1371.7	1385.0	1409.0	1443.7
29°	1483.1	1488.8	1471.8	1437.9	1407.5	1375.8	1367.8	1359.3	1370.5	1397.5	1430.0
30°	1476.6	1476.8	1459.5	1424.8	1393.9	1364.9	1360.0	1344.0	1355.9	1383.3	1417.6
31°	1466.0	1464.0	1449.1	1411.7	1380.7	1351.5	1340.5	1336.5	1341.2	1368.7	1404.4
32°	1452.2	1449.4	1438.2	1400.7	1366.5	1339.2	1325.1	1321.9	1328.4	1356.2	1391.9
33°	1435.9	1439.1	1427.6	1390.2	1353.1	1326.0	1304.0	1310.0	1313.3	1342.9	1380.4
34°	1420.0	1424.8	1409.9	1376.8	1338.6	1309.5	1287.6	1295.3	1295.7	1330.7	1366.7
35°	1404.2	1413.8	1397.2	1365.3	1324.3	1297.9	1275.3	1281.3	1284.3	1316.8	1354.0
36°	1387.4	1392.2	1388.6	1354.5	1310.7	1288.0	1260.2	1267.7	1268.6	1302.6	1338.4
37°	1370.5	1383.9	1372.6	1342.3	1298.9	1272.8	1246.6	1252.9	1253.7	1289.5	1322.5
38°	1361.7	1370.7	1362.0	1328.5	1282.5	1260.3	1237.0	1241.4	1238.5	1276.7	1307.1
39°	1350.0	1358.6	1349.1	1317.5	1270.9	1248.9	1222.2	1231.2	1227.4	1263.3	1295.3
40°	1340.1	1345.0	1332.9	1303.9	1257.3	1233.3	1209.8	1215.7	1213.2	1247.5	1283.5
41°	1327.4	1331.4	1322.5	1292.4	1244.2	1216.8	1192.5	1197.6	1196.9	1233.3	1272.6
42°	1315.2	1316.6	1308.6	1280.0	1232.5	1205.3	1179.6	1180.3	1183.7	1225.1	1257.7
43°	1297.6	1295.2	1295.8	1266.0	1219.7	1188.4	1162.3	1168.3	1170.3	1211.9	1245.7
44°	1275.3	1286.6	1283.8	1250.9	1206.8	1171.8	1145.5	1154.9	1154.4	1196.4	1230.5



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	1259.0	1277.0	1267.1	1239.5	1193.8	1159.2	1125.9	1144.4	1143.5	1183.4	1214.6
46°	1248.4	1261.6	1255.3	1228.6	1180.1	1141.2	1110.3	1126.3	1130.3	1168.4	1201.0
47°	1231.7	1249.2	1235.8	1214.7	1165.1	1128.5	1096.7	1111.6	1121.1	1151.5	1187.7
48°	1217.7	1233.5	1224.8	1200.9	1151.2	1116.4	1085.5	1096.4	1106.3	1136.8	1173.1
49°	1211.7	1217.1	1208.6	1186.4	1137.2	1102.1	1073.4	1081.1	1091.9	1122.1	1159.8
50°	1195.7	1200.7	1197.2	1172.6	1125.7	1084.7	1067.5	1064.6	1075.7	1111.0	1147.9
51°	1180.6	1191.9	1182.7	1156.1	1111.6	1071.2	1051.4	1051.3	1062.6	1094.0	1133.9
52°	1161.9	1171.1	1166.8	1140.3	1097.2	1055.3	1031.6	1037.4	1046.0	1078.6	1119.5
53°	1142.1	1156.5	1152.4	1122.1	1083.4	1038.8	1013.7	1030.6	1032.4	1062.8	1104.3
54°	1125.4	1134.9	1133.3	1106.2	1068.1	1027.3	998.8	1017.5	1022.0	1044.5	1089.0
55°	1111.1	1118.3	1119.5	1089.8	1054.0	1013.7	989.9	1004.9	1007.9	1027.5	1070.2
56°	1095.1	1106.4	1108.9	1075.0	1040.7	1003.3	983.2	993.5	997.7	1016.1	1057.3
57°	1084.9	1094.7	1087.5	1056.3	1027.6	991.0	974.9	985.7	986.8	1000.9	1043.6
58°	1066.3	1082.8	1073.9	1043.7	1014.8	978.7	963.0	976.5	975.6	989.9	1033.2
59°	1050.2	1069.4	1061.4	1026.7	1001.0	967.1	949.8	967.6	964.7	979.7	1021.6
60°	1034.5	1053.4	1046.3	1012.1	991.1	956.7	941.0	961.3	957.5	973.7	1011.8
61°	1023.5	1038.8	1032.2	998.4	980.3	943.7	930.2	948.0	949.2	968.1	999.0
62°	1016.1	1023.9	1019.1	984.9	969.6	927.5	909.8	940.7	940.2	965.8	986.7
63°	1007.8	1012.4	1005.7	976.9	961.3	914.5	886.5	926.8	929.8	968.0	976.6
64°	1007.4	1002.7	990.6	970.3	949.7	894.8	867.2	906.0	919.4	963.7	970.2
65°	1007.2	993.8	977.4	958.6	936.5	878.6	848.5	879.8	901.5	957.3	962.4
66°	996.8	982.9	969.1	947.4	923.6	859.8	823.2	857.6	877.8	941.3	956.9
67°	964.7	972.2	952.7	931.5	905.3	835.2	792.3	823.1	845.3	918.0	944.7
68°	931.0	960.9	937.2	913.1	882.4	808.0	760.6	788.2	809.1	887.9	929.7
69°	913.0	947.1	925.6	891.0	854.7	778.1	722.0	751.9	766.3	849.4	906.4
70°	902.2	926.0	907.5	863.9	823.4	744.4	684.0	703.3	716.8	806.4	878.7
71°	878.1	900.8	884.5	835.5	785.2	708.7	642.4	655.6	662.3	755.9	841.8
72°	842.4	872.0	861.1	800.1	742.0	666.6	597.4	605.7	603.8	702.5	797.7
73°	806.0	844.4	826.4	760.9	694.9	619.6	547.8	551.1	545.9	645.0	747.7
74°	769.7	813.2	793.7	713.8	643.5	571.6	492.2	495.9	486.8	584.4	693.4
75°	726.6	779.1	756.4	663.0	589.2	520.2	441.0	439.6	427.7	522.3	636.8
76°	675.2	736.8	714.0	606.4	531.9	467.5	392.0	381.9	371.1	459.1	575.6
77°	619.0	691.5	667.9	544.7	476.0	417.0	345.1	329.4	318.5	397.7	516.9
78°	563.0	649.4	619.0	478.6	419.2	368.0	299.9	280.3	270.2	337.0	455.4
79°	507.2	601.3	564.5	412.6	367.2	323.1	254.8	237.2	228.1	281.3	397.7
80°	447.5	549.0	514.6	352.4	318.8	281.6	209.9	199.4	191.5	231.8	342.6
81°	388.6	497.7	461.6	297.7	275.5	243.1	171.9	165.3	160.0	190.4	292.7
82°	328.8	448.2	413.3	252.0	236.8	209.8	140.7	137.7	133.4	156.4	248.6
83°	273.6	396.5	366.2	214.4	202.8	177.8	114.7	114.0	111.1	128.0	211.5
84°	223.4	347.8	322.9	180.5	174.2	151.4	94.6	94.9	92.6	105.4	176.6
85°	177.2	301.2	283.3	153.7	148.5	128.4	76.0	79.1	76.7	87.2	148.3
86°	142.5	259.2	246.4	131.1	126.2	108.8	62.3	66.4	64.6	71.0	123.7
87°	115.6	221.6	215.2	112.0	107.1	92.6	52.7	56.2	54.8	59.3	102.5
88°	94.5	188.2	185.4	95.8	91.4	79.3	44.6	48.4	47.2	50.1	84.6
89°	78.5	159.3	157.8	82.4	77.4	68.5	37.6	42.3	41.3	42.9	69.6



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	65.7	133.4	134.1	71.3	66.8	60.2	31.3	37.5	36.8	37.4	57.7
91°	55.4	111.7	113.7	61.9	58.3	53.5	24.9	33.5	33.2	33.1	48.8
92°	46.2	93.1	96.0	53.5	51.7	48.0	19.8	30.2	30.3	29.7	42.1
93°	39.2	77.0	81.1	46.5	46.3	43.6	15.5	27.4	28.0	26.8	37.1
94°	33.7	64.6	69.5	40.4	41.8	39.8	12.2	25.1	26.2	24.4	33.3
95°	28.6	55.0	60.1	34.7	38.0	36.7	9.5	22.9	24.7	22.4	30.4
96°	24.3	47.7	53.2	29.5	34.9	34.0	7.6	21.2	23.6	20.5	28.1
97°	20.6	42.2	47.5	24.8	32.3	31.8	7.0	19.8	22.7	18.7	26.3
98°	17.3	37.9	43.0	20.8	30.1	29.9	6.6	18.6	22.0	17.0	24.9
99°	15.5	34.4	39.3	18.3	28.3	28.2	6.3	17.5	21.5	15.5	23.8
100°	14.8	31.7	36.2	17.0	26.7	26.7	6.3	16.3	21.2	13.8	23.0
101°	14.2	29.4	33.6	16.1	25.4	25.3	6.2	15.1	20.9	12.5	22.4
102°	13.8	27.6	31.5	15.2	24.3	23.9	5.9	14.1	20.8	11.7	21.9
103°	13.4	26.1	29.8	14.6	23.4	22.5	5.6	12.9	20.6	11.3	21.6
104°	13.0	25.0	28.3	14.2	22.7	21.2	5.3	11.7	20.4	11.0	21.3
105°	12.3	24.1	27.3	14.0	22.0	19.7	5.1	10.6	20.2	10.8	21.2
106°	11.4	23.4	26.2	13.9	21.5	18.4	5.1	9.7	20.0	10.7	21.2
107°	10.7	22.8	25.5	13.8	20.9	17.2	5.1	9.0	19.7	10.7	21.2
108°	9.9	22.5	24.8	13.6	20.4	15.9	5.1	9.0	19.4	10.7	21.2
109°	9.4	22.1	24.4	13.5	19.9	14.8	5.2	9.1	19.0	10.9	21.3
110°	9.4	21.9	23.9	13.5	19.4	13.9	5.3	9.1	18.6	11.1	21.3
111°	10.0	21.7	23.6	13.5	18.9	13.1	5.4	9.1	18.1	11.1	21.2
112°	10.6	21.5	23.2	13.5	18.3	12.5	5.5	9.1	17.4	11.1	21.1
113°	10.8	21.3	22.9	13.5	17.8	12.0	5.6	8.9	16.5	11.0	20.8
114°	11.0	21.2	22.6	13.5	17.2	11.5	5.7	8.7	15.6	11.0	20.6
115°	10.9	20.9	22.3	13.3	16.6	11.1	5.8	8.5	14.6	10.8	20.2
116°	10.9	20.7	22.0	13.1	16.0	10.7	5.9	8.3	13.9	10.6	19.8
117°	10.9	20.4	21.6	12.9	15.4	10.3	6.0	8.1	13.3	10.4	19.4
118°	10.9	20.0	21.2	12.7	14.7	9.9	6.0	7.9	12.8	10.2	18.9
119°	10.9	19.7	20.7	12.4	14.1	9.6	6.1	7.7	12.4	9.9	18.3
120°	10.8	19.3	20.2	12.2	13.5	9.2	6.2	7.6	12.0	9.6	17.7
121°	10.7	18.7	19.6	11.9	12.9	8.9	6.3	7.4	11.5	9.4	17.0
122°	10.5	18.2	19.1	11.6	12.2	8.7	6.4	7.3	10.9	9.2	16.3
123°	10.3	17.6	18.4	11.3	11.7	8.4	6.5	7.2	10.4	9.0	15.6
124°	10.1	17.0	17.7	11.0	11.2	8.2	6.5	7.1	9.9	8.8	14.9
125°	9.9	16.3	17.0	10.7	10.6	8.0	6.6	7.0	9.5	8.6	14.2
126°	9.6	15.6	16.3	10.4	10.2	7.8	6.7	7.0	9.1	8.4	13.5
127°	9.2	14.9	15.6	10.1	9.8	7.6	6.8	6.9	8.6	8.2	12.8
128°	8.7	14.2	14.8	9.8	9.4	7.5	6.9	6.9	7.7	8.0	12.1
129°	8.3	13.6	14.1	9.5	9.0	7.4	6.9	6.9	7.6	7.9	11.5
130°	7.9	12.9	13.4	9.1	8.7	7.2	7.0	6.9	7.8	7.7	10.9
131°	7.6	12.2	12.7	8.7	8.5	7.2	7.1	6.9	7.8	7.6	10.3
132°	7.5	11.6	12.0	8.4	8.3	7.1	7.1	7.0	7.7	7.5	9.9
133°	7.6	11.0	11.4	8.2	8.1	7.1	7.2	7.1	7.5	7.3	9.4
134°	7.7	10.5	10.8	8.0	7.9	7.1	7.2	7.1	7.4	7.3	9.0



REPORT NUMBER: P670466
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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
135°	7.7	10.0	10.3	7.9	7.7	7.1	7.3	7.2	7.4	7.2	8.6
136°	7.6	9.6	9.7	7.6	7.6	7.1	7.4	7.2	7.3	7.1	8.3
137°	7.5	9.1	9.2	7.5	7.5	7.2	7.4	7.3	7.3	7.1	8.0
138°	7.4	8.8	8.8	7.4	7.4	7.2	7.5	7.4	7.3	7.2	7.7
139°	7.2	8.4	8.4	7.3	7.4	7.3	7.5	7.4	7.3	7.2	7.5
140°	7.2	8.1	8.0	7.2	7.3	7.4	7.6	7.5	7.4	7.3	7.3
141°	7.2	7.9	7.7	7.2	7.3	7.4	7.6	7.6	7.5	7.3	7.2
142°	7.1	7.6	7.4	7.3	7.4	7.5	7.7	7.6	7.5	7.4	7.2
143°	7.1	7.4	7.2	7.3	7.4	7.5	7.7	7.7	7.6	7.4	7.3
144°	7.1	7.3	7.1	7.4	7.5	7.6	7.8	7.7	7.6	7.5	7.3
145°	7.2	7.2	7.0	7.4	7.5	7.7	7.8	7.8	7.7	7.5	7.4
146°	7.3	7.2	7.1	7.5	7.6	7.7	7.9	7.9	7.7	7.6	7.5
147°	7.3	7.2	7.1	7.5	7.7	7.8	7.9	7.9	7.8	7.7	7.5
148°	7.4	7.3	7.2	7.6	7.7	7.9	8.0	8.0	7.9	7.7	7.6
149°	7.5	7.4	7.3	7.7	7.8	7.9	8.0	8.0	7.9	7.8	7.7
150°	7.5	7.4	7.3	7.7	7.8	8.0	8.1	8.1	8.0	7.8	7.7
151°	7.6	7.5	7.4	7.8	7.9	8.1	8.1	8.1	8.1	7.9	7.8
152°	7.7	7.6	7.4	7.9	7.9	8.1	8.2	8.1	8.1	8.0	7.9
153°	7.7	7.6	7.5	7.9	8.0	8.2	8.2	8.2	8.2	8.0	8.0
154°	7.8	7.7	7.6	8.0	8.1	8.3	8.3	8.2	8.2	8.1	8.0
155°	7.8	7.8	7.6	8.1	8.1	8.3	8.4	8.3	8.3	8.1	8.1
156°	7.9	7.8	7.7	8.1	8.2	8.4	8.4	8.3	8.3	8.2	8.2
157°	8.0	7.9	7.8	8.2	8.2	8.4	8.5	8.4	8.4	8.3	8.2
158°	8.1	8.0	7.8	8.3	8.3	8.5	8.5	8.4	8.4	8.3	8.3
159°	8.1	8.0	7.9	8.3	8.3	8.5	8.6	8.5	8.5	8.4	8.3
160°	8.2	8.1	8.0	8.4	8.4	8.6	8.6	8.5	8.5	8.5	8.4
161°	8.3	8.2	8.0	8.5	8.4	8.6	8.7	8.6	8.5	8.5	8.5
162°	8.3	8.2	8.1	8.5	8.5	8.7	8.7	8.6	8.6	8.6	8.5
163°	8.4	8.3	8.1	8.6	8.5	8.7	8.8	8.6	8.6	8.7	8.6
164°	8.5	8.3	8.2	8.7	8.6	8.8	8.8	8.7	8.7	8.7	8.6
165°	8.5	8.4	8.3	8.7	8.7	8.8	8.9	8.7	8.7	8.8	8.7
166°	8.6	8.5	8.3	8.8	8.7	8.9	8.9	8.8	8.7	8.8	8.7
167°	8.7	8.5	8.4	8.9	8.7	8.9	9.0	8.8	8.8	8.9	8.8
168°	8.7	8.6	8.4	8.9	8.8	8.9	9.0	8.8	8.8	8.9	8.8
169°	8.8	8.6	8.5	9.0	8.8	9.0	9.1	8.9	8.9	9.0	8.9
170°	8.9	8.7	8.6	9.1	8.9	9.0	9.1	8.9	8.9	9.1	8.9
171°	8.9	8.7	8.6	9.1	8.9	9.0	9.2	8.9	8.9	9.1	9.0
172°	9.0	8.8	8.7	9.2	9.0	9.1	9.2	9.0	9.0	9.2	9.0
173°	9.1	8.8	8.7	9.2	9.0	9.1	9.2	9.0	9.0	9.2	9.1
174°	9.1	8.9	8.8	9.3	9.1	9.1	9.3	9.0	9.0	9.3	9.1
175°	9.2	8.9	8.8	9.3	9.1	9.1	9.3	9.0	9.0	9.3	9.1
176°	9.2	9.0	8.9	9.4	9.1	9.2	9.3	9.1	9.0	9.3	9.2
177°	9.2	9.0	8.9	9.4	9.2	9.2	9.3	9.1	9.1	9.4	9.2
178°	9.3	9.0	9.0	9.4	9.2	9.2	9.3	9.1	9.1	9.4	9.2
179°	9.3	9.1	9.0	9.4	9.2	9.2	9.3	9.1	9.1	9.4	9.2



REPORT NUMBER: P670466
CATALOG NUMBER: ALP90LSFSUNVDGY-40W-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
180°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3



REPORT NUMBER: P670466
CATALOG NUMBER: ALP90LSFSUNVDGY-40W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
0°	1685.4	1685.4
1°	1686.2	1683.9
2°	1685.4	1687.8
3°	1684.2	1687.3
4°	1685.8	1686.4
5°	1684.5	1684.7
6°	1677.7	1683.5
7°	1670.6	1674.7
8°	1667.1	1668.8
9°	1664.9	1665.4
10°	1658.2	1659.1
11°	1656.9	1664.6
12°	1647.2	1659.6
13°	1641.8	1657.4
14°	1637.5	1655.4
15°	1632.7	1649.1
16°	1623.2	1634.5
17°	1612.2	1618.4
18°	1599.9	1604.9
19°	1587.4	1593.6
20°	1575.5	1590.9
21°	1565.7	1586.8
22°	1555.9	1581.4
23°	1545.3	1569.0
24°	1535.1	1562.4
25°	1522.5	1544.3
26°	1510.8	1530.3
27°	1495.1	1512.1
28°	1480.3	1496.8
29°	1469.1	1483.1
30°	1452.5	1476.6
31°	1438.2	1466.0
32°	1428.1	1452.2
33°	1415.4	1435.9
34°	1406.5	1420.0
35°	1395.1	1404.2
36°	1379.7	1387.4
37°	1364.1	1370.5
38°	1347.3	1361.7
39°	1333.6	1350.0
40°	1319.1	1340.1
41°	1306.1	1327.4
42°	1293.6	1315.2
43°	1280.6	1297.6
44°	1267.6	1275.3



REPORT NUMBER: P670466
CATALOG NUMBER: ALP90LSFSUNVDGY-40W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	1254.3	1259.0
46°	1238.5	1248.4
47°	1226.8	1231.7
48°	1209.3	1217.7
49°	1189.2	1211.7
50°	1175.0	1195.7
51°	1159.0	1180.6
52°	1144.7	1161.9
53°	1129.9	1142.1
54°	1116.6	1125.4
55°	1101.2	1111.1
56°	1080.2	1095.1
57°	1064.7	1084.9
58°	1052.2	1066.3
59°	1041.4	1050.2
60°	1032.3	1034.5
61°	1018.8	1023.5
62°	1008.0	1016.1
63°	997.8	1007.8
64°	988.1	1007.4
65°	982.7	1007.2
66°	972.7	996.8
67°	961.2	964.7
68°	948.9	931.0
69°	928.9	913.0
70°	902.5	902.2
71°	871.7	878.1
72°	839.4	842.4
73°	797.8	806.0
74°	761.9	769.7
75°	718.9	726.6
76°	672.6	675.2
77°	623.8	619.0
78°	568.8	563.0
79°	510.2	507.2
80°	450.1	447.5
81°	389.9	388.6
82°	334.2	328.8
83°	283.0	273.6
84°	239.1	223.4
85°	201.1	177.2
86°	169.8	142.5
87°	142.5	115.6
88°	118.9	94.5
89°	98.5	78.5



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CANDELA DISTRIBUTION (continued):

	330°	360°
90°	80.8	65.7
91°	66.7	55.4
92°	55.2	46.2
93°	46.4	39.2
94°	39.8	33.7
95°	35.0	28.6
96°	31.4	24.3
97°	28.6	20.6
98°	26.5	17.3
99°	24.9	15.5
100°	23.7	14.8
101°	22.7	14.2
102°	22.0	13.8
103°	21.5	13.4
104°	21.1	13.0
105°	20.8	12.3
106°	20.6	11.4
107°	20.6	10.7
108°	20.5	9.9
109°	20.5	9.4
110°	20.4	9.4
111°	20.4	10.0
112°	20.3	10.6
113°	20.2	10.8
114°	20.1	11.0
115°	19.9	10.9
116°	19.6	10.9
117°	19.3	10.9
118°	18.9	10.9
119°	18.5	10.9
120°	18.0	10.8
121°	17.4	10.7
122°	16.8	10.5
123°	16.2	10.3
124°	15.5	10.1
125°	14.8	9.9
126°	14.2	9.6
127°	13.5	9.2
128°	12.8	8.7
129°	12.2	8.3
130°	11.6	7.9
131°	11.0	7.6
132°	10.4	7.5
133°	10.0	7.6
134°	9.5	7.7



REPORT NUMBER: P670466
CATALOG NUMBER: ALP90LSFSUNVDGY-40W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
135°	9.1	7.7
136°	8.7	7.6
137°	8.4	7.5
138°	8.1	7.4
139°	7.9	7.2
140°	7.7	7.2
141°	7.5	7.2
142°	7.4	7.1
143°	7.3	7.1
144°	7.2	7.1
145°	7.2	7.2
146°	7.3	7.3
147°	7.4	7.3
148°	7.4	7.4
149°	7.5	7.5
150°	7.5	7.5
151°	7.6	7.6
152°	7.7	7.7
153°	7.7	7.7
154°	7.8	7.8
155°	7.8	7.8
156°	7.9	7.9
157°	8.0	8.0
158°	8.0	8.1
159°	8.1	8.1
160°	8.1	8.2
161°	8.2	8.3
162°	8.3	8.3
163°	8.3	8.4
164°	8.4	8.5
165°	8.5	8.5
166°	8.5	8.6
167°	8.6	8.7
168°	8.6	8.7
169°	8.7	8.8
170°	8.7	8.9
171°	8.8	8.9
172°	8.9	9.0
173°	8.9	9.1
174°	9.0	9.1
175°	9.0	9.2
176°	9.0	9.2
177°	9.1	9.2
178°	9.1	9.3
179°	9.1	9.3



REPORT NUMBER: P670466
CATALOG NUMBER: ALP90LSFSUNVDGY-40W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
180°	9.3	9.3

(END OF REPORT)