

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: McGRAW-EDISON

Report Number: P145935

Luminaire Tested: **VPL-F04-LED-E1-CPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33704)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: VPL-F04-LED-E1-CPL
Description: VALET LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - 90° FORWARD THROW PERIMETER LEFT
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8894 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

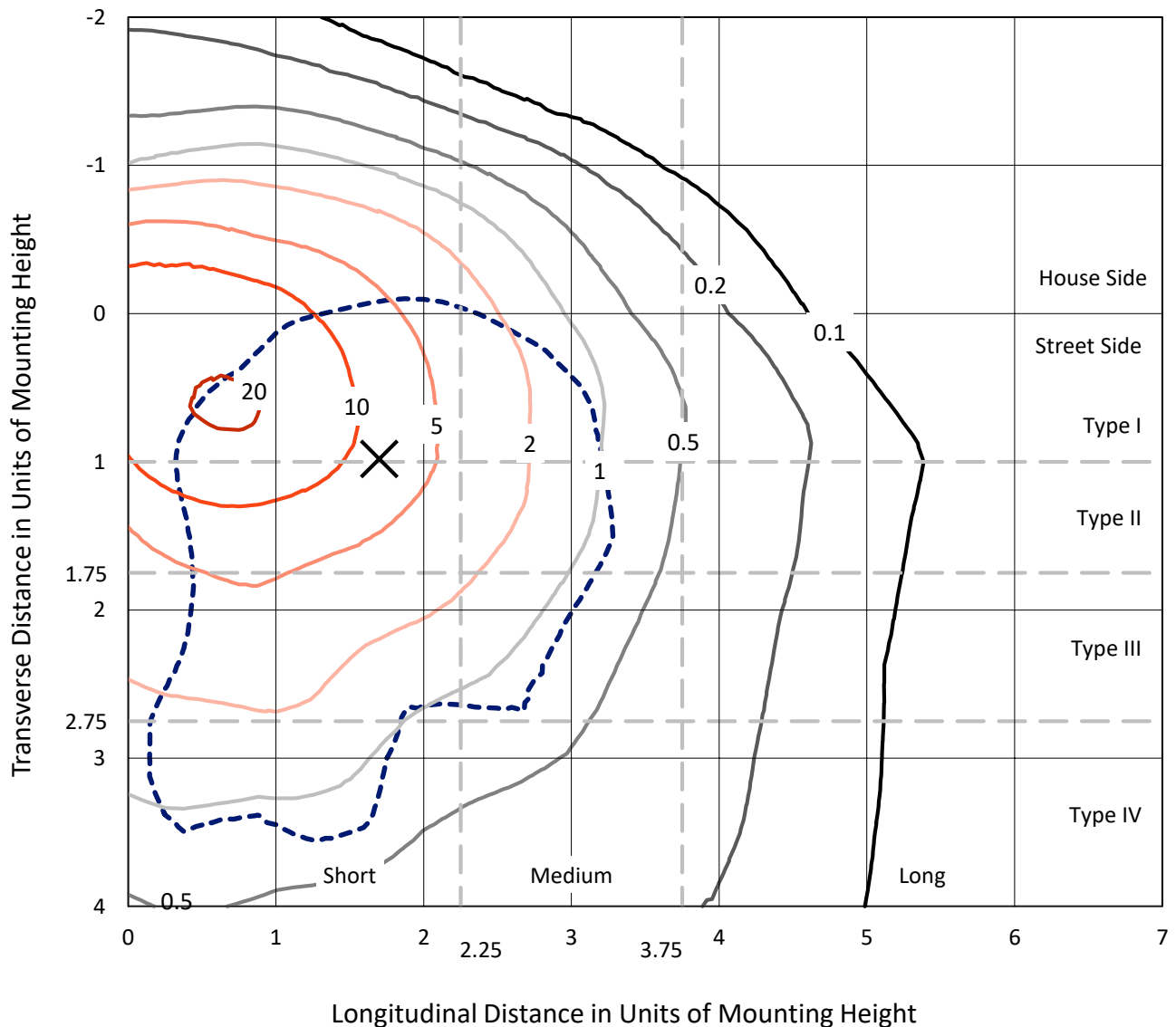
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

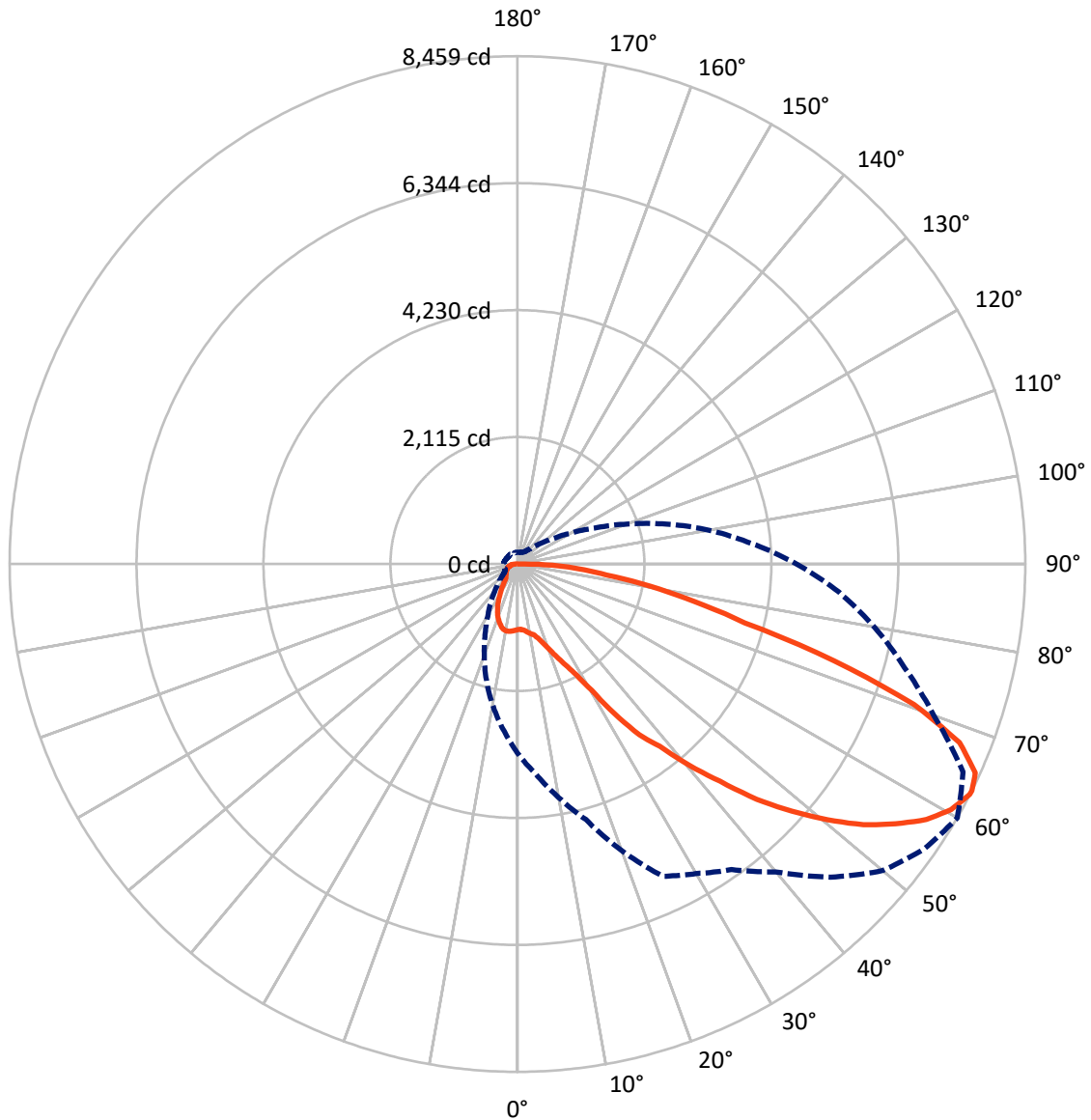
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1861.8	0.0	1861.8
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	7032.2	0.0	7032.2
	% Fixture	79.1	0.0	79.1
Total	Lumens	8894.0	0.0	8894.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	1.2
10°-20°	334.8	3.8
20°-30°	592.1	6.7
30°-40°	934.8	10.5
40°-50°	1374.6	15.5
50°-60°	1810.7	20.4
60°-70°	2018.2	22.7
70°-80°	1326.0	14.9
80°-90°	395.4	4.4
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°	8894.0	100.0
0°-180°	8894.0	100.0

Coefficient of Utilization



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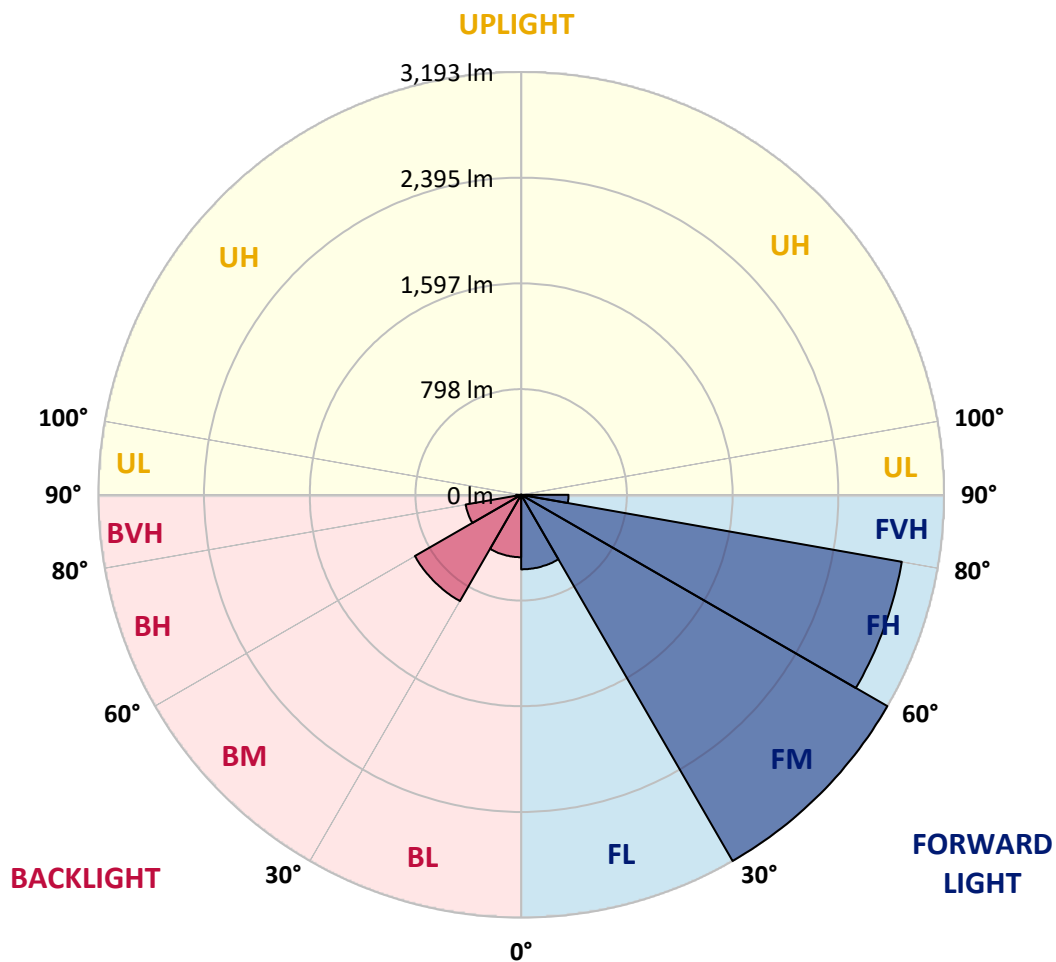
CATALOG NUMBER: VPL-F04-LED-E1-CPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	562.9	6.3			
FM	(30°-60°)	3193.2	35.9			
FH	(60°-80°)	2918.7	32.8			G2/5000
FVH	(80°-90°)	357.4	4.0			G3/500
BL	(0°-30°)	471.3	5.3	B1/500		
BM	(30°-60°)	926.9	10.4	B1/1000		
BH	(60°-80°)	425.5	4.8	B1/500		G1/500
BVH	(80°-90°)	38.0	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1091.0	1091.7	1089.7	1089.0	1087.7	1088.4	1088.4	1087.1	1087.1	1087.7	1085.7
5°	1085.7	1087.1	1086.4	1087.7	1089.0	1091.0	1093.0	1095.0	1097.0	1099.6	1100.3
7.5°	1079.8	1083.7	1084.4	1088.4	1093.0	1098.3	1104.9	1112.1	1122.1	1124.7	1130.6
10°	1083.1	1090.4	1094.3	1102.2	1109.5	1119.4	1131.3	1138.6	1151.1	1155.7	1164.3
12.5°	1108.8	1114.1	1119.4	1128.7	1139.2	1151.8	1165.0	1176.2	1189.4	1194.0	1197.3
15°	1157.7	1163.0	1168.9	1178.2	1189.4	1204.6	1223.8	1237.6	1253.5	1265.4	1274.0
17.5°	1225.7	1225.7	1239.6	1242.2	1264.0	1287.2	1310.9	1338.0	1354.5	1364.4	1380.3
20°	1323.5	1323.5	1342.0	1350.6	1369.1	1398.8	1431.1	1460.8	1484.6	1504.4	1519.0
22.5°	1492.5	1485.3	1501.1	1499.2	1521.6	1565.9	1597.6	1614.1	1645.8	1657.7	1676.8
25°	1688.7	1714.5	1731.6	1731.6	1740.9	1786.4	1812.9	1825.4	1854.5	1845.9	1865.7
27.5°	1929.1	1998.4	2062.5	2088.9	2076.4	2126.6	2135.8	2147.7	2144.4	2123.9	2118.0
30°	2165.5	2287.7	2387.4	2448.2	2518.2	2615.3	2615.3	2631.1	2596.8	2540.0	2506.3
32.5°	2329.3	2486.5	2639.0	2765.2	2884.1	3032.6	3095.4	3182.6	3197.1	3218.9	3143.6
35°	2464.0	2684.6	2848.4	3037.9	3183.2	3333.8	3500.9	3652.1	3752.5	3736.0	3706.3
37.5°	2556.5	2839.8	3068.3	3290.9	3512.1	3684.5	3843.0	4040.4	4232.6	4270.9	4190.4
40°	2621.2	2949.4	3263.8	3537.2	3815.2	4074.1	4267.0	4479.0	4780.1	4907.6	4841.5
42.5°	2652.2	3035.3	3386.0	3734.0	4086.0	4412.9	4654.6	4945.2	5302.5	5520.5	5447.8
45°	2665.5	3088.1	3485.0	3881.3	4304.0	4707.5	5019.2	5348.7	5750.9	6101.0	6114.2
47.5°	2662.2	3116.5	3553.1	3986.3	4475.0	4944.6	5362.6	5736.4	6192.1	6560.0	6696.7
50°	2652.9	3126.4	3594.0	4049.7	4582.7	5118.3	5589.1	6033.6	6542.8	7008.4	7216.4
52.5°	2652.2	3128.4	3614.5	4084.7	4646.1	5224.6	5731.1	6256.2	6814.2	7300.9	7625.2
55°	2668.1	3140.3	3636.9	4109.1	4680.4	5284.7	5811.0	6395.5	6932.4	7485.2	7903.9
57.5°	2732.2	3195.8	3690.4	4150.7	4718.7	5332.2	5873.1	6435.8	6967.4	7561.8	8065.7
60°	2872.8	3299.5	3783.5	4227.3	4818.4	5457.0	5931.9	6379.0	6901.4	7540.0	8088.8
62.5°	3092.1	3465.9	3913.6	4368.7	5021.2	5694.1	5956.3	6248.9	6738.3	7414.5	7989.1
63°	3148.2	3510.1	3948.0	4407.6	5080.0	5739.0	5954.3	6214.6	6693.4	7377.6	7944.2
65°	3382.7	3714.9	4107.8	4593.9	5347.4	5881.7	5882.4	6012.5	6464.2	7173.5	7759.9
67.5°	3735.3	4052.3	4356.1	4839.6	5643.3	5953.0	5669.0	5570.6	5970.2	6741.6	7292.4
70°	3970.4	4362.1	4532.5	4904.3	5683.6	5866.5	5331.6	5003.3	5334.9	5979.4	6468.8
72.5°	3976.4	4422.8	4472.4	4628.2	5306.5	5453.1	4750.4	4305.9	4505.4	5046.3	5303.8
75°	3551.7	4113.1	4011.4	3953.9	4321.1	4383.9	3842.3	3657.4	3913.0	4232.6	4103.8
77.5°	2640.4	3386.6	3179.9	2935.6	3069.0	3078.2	3095.4	3444.1	3757.8	3888.6	3701.0
80°	1638.5	2487.8	2329.3	1926.4	1978.0	2129.9	2585.5	3201.7	3545.1	3638.9	3263.8
82.5°	988.0	1830.0	1745.5	1470.1	1534.8	1913.2	2417.1	2587.5	2703.1	2694.5	2306.8
85°	723.8	1242.9	1357.8	1378.3	1608.1	1857.8	1847.2	1721.1	1650.4	1452.3	1239.6
87.5°	227.8	641.3	760.8	886.9	971.5	919.3	904.1	781.3	559.4	472.9	519.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1085.7	1088.4	1089.7	1089.0	1089.7	1089.7	1093.7	1092.3	1093.7	1093.0	1097.0
5°	1102.2	1106.2	1109.5	1109.5	1110.2	1111.5	1116.8	1116.8	1119.4	1124.7	1127.3
7.5°	1134.6	1139.9	1140.5	1141.9	1145.8	1143.8	1147.1	1148.5	1150.5	1153.1	1156.4
10°	1168.3	1175.5	1175.5	1174.9	1175.5	1170.3	1172.2	1168.3	1168.9	1172.9	1176.9
12.5°	1205.9	1209.9	1207.2	1205.3	1205.3	1195.4	1194.0	1188.8	1186.1	1186.8	1188.1
15°	1281.2	1277.9	1277.3	1274.0	1262.1	1254.8	1249.5	1233.0	1224.4	1219.8	1211.9
17.5°	1381.6	1383.6	1380.3	1377.0	1359.8	1335.4	1324.8	1307.0	1295.1	1283.2	1268.7
20°	1528.2	1515.0	1513.7	1503.1	1479.3	1445.0	1419.2	1390.2	1373.7	1356.5	1341.3
22.5°	1690.0	1676.1	1666.9	1646.4	1611.4	1567.8	1524.9	1487.9	1462.8	1450.3	1439.7
25°	1869.6	1861.7	1846.5	1794.4	1766.6	1716.4	1669.5	1633.2	1604.8	1594.3	1575.8
27.5°	2084.9	2090.9	2062.5	2013.6	1978.6	1908.0	1867.7	1804.9	1781.2	1742.8	1719.1
30°	2477.2	2438.9	2390.7	2316.1	2245.4	2150.3	2083.6	2018.2	1983.2	1931.7	1868.3
32.5°	3118.5	2972.6	2843.1	2684.6	2534.7	2413.2	2316.8	2234.2	2180.7	2095.5	1987.9
35°	3635.6	3494.9	3281.0	3050.5	2853.7	2697.8	2576.3	2498.4	2391.4	2255.3	2099.5
37.5°	4014.7	3852.9	3652.8	3476.5	3261.8	3088.1	2923.7	2761.9	2611.3	2405.2	2206.5
40°	4630.2	4410.9	4081.4	3873.4	3697.7	3462.6	3308.7	3090.8	2861.6	2596.1	2308.2
42.5°	5239.1	4948.5	4650.0	4410.9	4161.3	3906.4	3695.0	3402.5	3098.0	2754.0	2399.3
45°	5946.4	5590.5	5200.1	4866.0	4609.7	4309.9	4039.1	3679.9	3291.5	2883.4	2478.6
47.5°	6503.8	6151.2	5710.7	5373.8	5028.4	4690.3	4339.0	3895.8	3435.5	2989.1	2552.5
50°	7038.1	6698.0	6229.7	5816.3	5419.4	5011.3	4586.6	4049.0	3548.4	3071.6	2611.3
52.5°	7517.6	7215.1	6709.2	6215.2	5771.4	5301.2	4774.8	4192.3	3656.7	3156.8	2657.5
55°	7923.7	7640.4	7186.7	6571.8	6067.9	5547.5	4952.5	4323.1	3771.0	3246.0	2691.2
57.5°	8196.5	8032.7	7547.9	6885.5	6311.6	5757.5	5086.6	4454.5	3878.0	3301.4	2705.7
60°	8323.3	8301.5	7891.4	7168.9	6528.3	5921.3	5255.6	4593.9	3948.7	3326.5	2685.3
62.5°	8296.9	8452.7	8152.9	7363.0	6666.3	6023.7	5363.9	4654.0	3930.8	3265.8	2594.8
63°	8272.4	8459.3	8189.9	7382.2	6677.5	6033.6	5374.5	4646.7	3914.3	3238.7	2563.8
65°	8093.4	8381.4	8199.1	7347.8	6626.0	6005.2	5326.9	4532.5	3749.9	3068.3	2388.1
67.5°	7654.9	7943.5	7842.5	6969.4	6292.5	5700.1	4994.8	4143.5	3347.0	2706.4	2062.5
70°	6749.5	7007.7	6886.9	6118.8	5490.1	5070.0	4399.7	3446.1	2726.9	2175.4	1569.8
72.5°	5338.8	5520.5	5546.9	4936.6	4455.2	4202.9	3544.5	2599.4	1991.8	1515.0	1019.0
75°	3953.3	3911.0	3919.6	3578.8	3382.7	3276.3	2649.6	1783.1	1342.0	925.9	604.3
77.5°	3322.6	3018.8	2759.9	2665.5	2436.9	2370.9	1747.5	1094.3	783.3	554.1	344.1
80°	2701.8	2241.5	1865.0	1697.9	1608.8	1622.0	966.9	583.2	410.1	301.8	215.3
82.5°	1847.2	1497.2	1180.8	1025.6	1009.8	1025.0	502.6	286.0	216.6	173.7	135.4
85°	1092.3	1028.3	918.0	815.0	779.3	735.7	373.8	204.7	111.6	92.5	75.9
87.5°	472.2	579.8	593.7	591.1	550.1	441.8	137.4	52.8	46.9	23.8	19.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1097.0	1097.6	1096.3	1097.6	1102.2	1102.2	1101.6	1102.9	1103.6	1107.5	1106.2
5°	1130.0	1130.6	1131.3	1135.9	1139.2	1143.2	1141.9	1143.2	1145.8	1146.5	1147.8
7.5°	1160.4	1164.3	1169.6	1171.6	1177.5	1178.8	1184.8	1185.5	1186.8	1184.1	1181.5
10°	1181.5	1185.5	1192.1	1195.4	1205.9	1207.2	1211.9	1213.2	1215.8	1213.9	1211.9
12.5°	1192.1	1195.4	1202.6	1209.2	1223.8	1228.4	1236.3	1240.9	1244.2	1242.2	1235.6
15°	1213.9	1213.2	1217.2	1222.4	1235.6	1244.2	1255.5	1261.4	1265.4	1262.1	1253.5
17.5°	1264.0	1254.8	1254.8	1251.5	1261.4	1263.4	1268.0	1271.3	1270.0	1260.1	1246.2
20°	1333.4	1319.5	1310.9	1303.0	1299.7	1283.2	1274.6	1262.7	1252.2	1234.3	1218.5
22.5°	1423.2	1413.3	1393.5	1375.7	1350.6	1316.9	1280.6	1249.5	1226.4	1202.0	1174.9
25°	1559.3	1536.8	1508.4	1466.1	1433.8	1374.3	1313.6	1254.8	1205.3	1167.0	1121.4
27.5°	1687.4	1639.8	1586.3	1520.3	1460.8	1381.6	1304.3	1236.3	1171.6	1110.2	1058.0
30°	1794.4	1711.8	1624.6	1532.2	1447.6	1351.9	1262.1	1184.8	1111.5	1038.8	989.3
32.5°	1874.9	1756.1	1639.8	1521.6	1417.3	1305.0	1202.0	1119.4	1036.2	959.6	902.1
35°	1947.6	1787.1	1635.2	1493.2	1369.7	1245.6	1134.6	1042.1	951.0	869.1	803.1
37.5°	1999.8	1797.7	1615.4	1452.3	1309.0	1172.9	1052.7	954.3	856.6	773.4	700.7
40°	2040.0	1792.4	1577.7	1389.5	1225.7	1084.4	966.9	863.8	766.1	682.9	606.9
42.5°	2067.1	1772.6	1520.9	1318.2	1156.4	1008.5	893.5	785.2	687.5	600.3	516.4
45°	2102.1	1764.6	1485.9	1264.7	1093.7	944.4	821.6	715.9	614.2	523.1	443.1
47.5°	2135.1	1760.0	1457.5	1220.5	1036.9	886.3	764.8	653.8	551.5	462.3	389.6
50°	2155.0	1752.8	1427.8	1167.0	973.5	826.8	710.6	598.3	495.3	410.1	345.4
52.5°	2160.9	1738.2	1388.9	1106.2	918.6	776.0	655.1	542.9	443.8	367.2	307.1
55°	2156.3	1709.8	1336.0	1056.7	862.5	719.9	599.0	490.0	400.2	328.2	280.0
57.5°	2133.8	1653.0	1268.0	993.9	798.4	649.2	530.3	430.6	350.7	293.2	256.2
60°	2083.6	1571.1	1184.8	906.1	706.6	565.3	453.0	367.2	299.8	258.2	233.8
62.5°	1974.0	1452.9	1063.9	781.9	583.8	453.7	356.0	292.6	247.0	225.2	210.7
63°	1941.6	1412.0	1028.3	748.9	562.7	428.6	334.2	276.7	235.8	217.9	206.1
65°	1771.2	1223.1	869.1	602.3	435.9	324.9	254.9	217.3	195.5	188.9	185.6
67.5°	1451.6	951.7	611.5	404.2	292.6	224.5	188.2	173.7	165.8	165.1	167.1
70°	1025.6	631.4	378.4	258.9	201.4	169.7	155.9	149.3	145.3	146.6	150.6
72.5°	667.0	370.5	239.1	189.5	163.8	149.3	139.3	137.4	136.0	134.7	136.0
75°	352.7	231.8	181.0	158.5	143.3	131.4	124.8	122.2	122.8	122.8	122.8
77.5°	218.6	176.3	154.5	140.0	128.1	116.2	109.6	107.6	108.3	109.6	110.3
80°	167.7	153.9	136.0	125.5	108.3	98.4	95.1	94.4	95.8	95.8	97.7
82.5°	122.8	118.9	112.3	99.1	85.9	79.3	78.6	81.2	78.6	77.9	79.3
85°	72.0	67.4	73.3	62.7	57.5	53.5	56.1	61.4	64.1	60.8	59.4
87.5°	23.1	15.9	23.1	25.8	23.1	19.8	25.1	29.7	30.4	29.1	33.0
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: P145935

CATALOG NUMBER: VPL-F04-LED-E1-CPL

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1105.5	1110.2	1105.5	1107.5	1106.9	1105.5	1107.5	1104.9	1103.6	1107.5	1106.9
5°	1147.1	1147.8	1141.9	1142.5	1141.9	1136.6	1136.6	1133.9	1130.6	1131.3	1130.0
7.5°	1180.8	1179.5	1174.9	1172.9	1167.0	1163.0	1160.4	1156.4	1153.8	1151.1	1149.8
10°	1206.6	1203.3	1200.0	1194.0	1188.1	1184.8	1177.5	1171.6	1169.6	1165.6	1163.0
12.5°	1229.0	1223.1	1217.8	1210.5	1203.3	1198.0	1189.4	1184.8	1181.5	1176.2	1172.2
15°	1241.6	1230.4	1220.5	1209.2	1201.3	1193.4	1183.5	1181.5	1176.9	1171.6	1164.3
17.5°	1226.4	1210.5	1192.1	1180.2	1168.3	1156.4	1146.5	1146.5	1144.5	1138.6	1126.0
20°	1195.4	1171.6	1149.8	1130.6	1118.8	1101.6	1095.6	1086.4	1079.8	1069.2	1053.4
22.5°	1144.5	1119.4	1091.0	1071.9	1051.4	1032.2	1020.3	1005.8	1000.5	983.4	962.2
25°	1087.7	1051.4	1021.0	995.9	967.5	945.1	928.6	908.7	895.5	879.0	852.6
27.5°	1020.3	982.7	948.4	920.6	890.9	859.9	829.5	806.4	782.6	763.4	748.3
30°	947.7	908.7	866.5	834.1	799.8	760.8	735.7	704.7	686.2	665.0	645.2
32.5°	852.6	818.3	768.7	731.1	688.8	658.4	638.0	608.2	586.5	568.6	557.4
35°	748.3	696.7	647.2	618.8	589.8	565.3	536.9	513.8	499.3	480.8	470.9
37.5°	634.7	574.6	532.3	507.2	477.5	465.6	447.8	433.9	420.7	408.1	400.2
40°	533.0	477.5	439.2	418.0	398.2	385.0	373.8	367.9	359.3	349.4	343.4
42.5°	448.4	404.2	366.5	346.7	331.5	330.2	322.9	318.3	315.0	309.1	299.8
45°	382.4	342.1	309.7	293.9	287.3	287.9	287.9	284.0	284.0	282.0	276.1
47.5°	338.1	301.8	278.0	267.5	264.8	265.5	263.5	262.2	262.8	262.2	258.9
50°	303.8	272.8	252.9	249.0	248.3	247.7	245.0	243.0	242.4	243.7	243.0
52.5°	268.8	243.0	231.8	230.5	231.1	231.1	230.5	229.8	231.1	232.5	230.5
55°	249.0	230.5	223.2	223.2	223.2	223.2	222.6	221.9	223.9	225.9	222.6
57.5°	230.5	217.3	214.6	214.6	214.6	213.3	213.3	214.0	216.6	220.6	216.6
60°	216.6	210.0	210.0	210.7	210.0	207.4	205.4	205.4	208.7	214.0	210.7
62.5°	203.4	200.1	201.4	200.8	199.4	196.1	193.5	193.5	197.5	202.7	204.1
63°	200.1	197.5	198.8	198.1	196.8	194.2	191.5	191.5	194.8	200.1	202.1
65°	185.6	186.2	186.9	187.6	186.9	186.2	182.9	181.6	184.3	188.2	190.9
67.5°	168.4	169.7	171.0	174.4	173.0	173.0	171.0	169.7	170.4	172.4	174.4
70°	152.6	153.9	155.9	157.2	157.8	158.5	157.2	155.2	155.9	156.5	157.8
72.5°	137.4	138.7	140.0	142.7	142.7	142.7	141.3	140.0	140.7	142.0	143.3
75°	123.5	124.2	125.5	127.5	128.1	126.8	126.8	125.5	126.1	128.1	129.4
77.5°	109.6	108.3	109.0	110.3	112.3	112.3	112.9	112.3	113.6	114.9	116.2
80°	93.8	92.5	91.1	91.8	94.4	97.7	101.0	101.0	103.0	103.7	105.7
82.5°	74.6	73.3	72.6	74.6	74.0	78.6	85.9	89.8	92.5	95.1	96.4
85°	58.1	54.8	56.1	56.1	54.8	62.1	68.7	74.0	74.6	78.6	79.3
87.5°	34.3	33.0	31.7	30.4	35.0	42.3	48.2	50.2	51.5	53.5	55.5
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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CATALOG NUMBER: VPL-F04-LED-E1-CPL

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1101.6	1106.9	1105.5	1104.9	1105.5	1104.9	1102.9	1103.6	1102.2	1102.9	1101.6
5°	1122.7	1125.4	1123.4	1120.1	1120.1	1115.4	1112.1	1109.5	1106.2	1104.9	1102.2
7.5°	1143.2	1141.2	1138.6	1132.6	1129.3	1123.4	1118.8	1113.5	1110.2	1106.2	1101.6
10°	1155.7	1151.8	1146.5	1139.2	1130.0	1124.7	1118.1	1110.2	1106.2	1104.2	1099.6
12.5°	1161.7	1151.1	1142.5	1129.3	1116.1	1106.2	1098.9	1091.0	1089.0	1086.4	1083.1
15°	1147.8	1132.6	1110.8	1093.0	1075.8	1062.0	1056.0	1047.4	1045.4	1044.8	1044.1
17.5°	1100.9	1077.8	1056.7	1032.9	1017.7	1005.2	999.9	997.9	994.6	993.3	993.9
20°	1025.6	1005.8	984.7	976.8	958.9	955.6	947.7	942.4	936.5	934.5	931.2
22.5°	937.8	913.4	900.2	894.2	886.9	869.8	865.8	860.5	852.6	846.7	845.3
25°	835.4	815.6	815.0	801.1	795.1	785.9	775.3	768.7	764.1	756.8	751.6
27.5°	731.1	723.8	711.3	700.7	696.7	691.5	675.6	672.3	667.0	661.1	655.1
30°	634.0	628.7	616.8	606.9	601.0	590.4	575.2	576.5	566.0	558.1	552.8
32.5°	539.6	535.6	524.4	521.7	502.6	497.3	481.4	469.6	459.0	451.1	444.5
35°	454.4	443.8	444.5	432.6	422.0	406.2	389.6	374.5	365.9	361.9	356.0
37.5°	392.9	383.0	373.1	359.9	348.0	336.8	326.9	322.3	317.0	318.3	319.0
40°	337.5	330.2	322.9	313.7	306.4	301.8	299.2	299.2	299.8	303.1	305.8
42.5°	297.8	291.9	287.9	284.6	286.0	286.0	287.9	291.2	294.5	299.2	301.8
45°	271.4	268.1	266.8	268.1	272.1	275.4	280.0	285.3	290.6	295.2	297.2
47.5°	255.6	253.6	253.6	256.9	262.8	268.1	275.4	280.7	286.6	290.6	291.9
50°	238.4	237.8	237.8	240.4	245.7	252.3	259.5	264.8	270.1	273.4	274.7
52.5°	228.5	226.5	225.9	229.2	233.8	240.4	247.7	252.9	256.9	259.5	260.2
55°	219.9	217.9	216.6	220.6	225.9	231.8	240.4	246.3	250.3	253.6	256.2
57.5°	212.7	210.7	209.4	214.0	219.3	226.5	233.8	240.4	245.7	249.6	252.3
60°	206.7	204.1	202.7	208.0	213.3	220.6	227.8	235.1	242.4	247.0	248.3
62.5°	199.4	197.5	195.5	198.8	201.4	206.7	213.3	220.6	227.2	231.8	231.8
63°	197.5	196.8	194.2	196.8	199.4	204.1	210.7	217.3	223.9	229.2	228.5
65°	188.9	188.9	187.6	190.2	192.8	197.5	202.7	210.0	216.0	219.9	220.6
67.5°	175.0	175.7	177.0	179.6	184.9	189.5	195.5	202.1	207.4	210.0	211.3
70°	159.2	160.5	163.1	167.1	171.7	175.7	179.6	186.2	190.9	193.5	194.8
72.5°	144.0	147.3	149.3	152.6	155.2	159.2	162.5	169.1	173.0	175.0	178.3
75°	130.1	132.7	134.1	136.0	138.7	140.0	144.0	146.6	151.9	154.5	158.5
77.5°	116.9	118.2	120.2	123.5	124.2	126.1	127.5	131.4	134.1	136.7	140.0
80°	105.0	106.3	109.0	111.0	111.6	112.9	113.6	112.9	112.3	110.3	112.9
82.5°	94.4	95.8	99.1	101.0	103.0	103.0	102.4	95.1	91.8	93.1	95.1
85°	77.9	79.3	82.6	86.5	87.2	86.5	87.2	79.9	75.3	73.3	75.3
87.5°	48.9	47.6	58.8	64.1	60.1	61.4	62.1	58.1	54.2	46.2	48.2
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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 CATALOG NUMBER: VPL-F04-LED-E1-CPL

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	0°
2.5°	1102.9	1098.3	1098.9	1100.3	1100.3	1102.2	1099.6	1096.3	1098.3	1095.0	1094.3	2.5°
5°	1102.2	1096.3	1096.3	1097.6	1096.3	1097.6	1095.6	1092.3	1094.3	1090.4	1089.7	5°
7.5°	1099.6	1096.3	1097.6	1098.9	1097.0	1097.6	1097.0	1092.3	1093.0	1091.0	1086.4	7.5°
10°	1098.3	1096.3	1098.9	1102.9	1102.9	1103.6	1101.6	1096.3	1093.0	1091.0	1087.1	10°
12.5°	1084.4	1087.1	1092.3	1101.6	1104.9	1110.2	1112.8	1110.2	1111.5	1108.8	1107.5	12.5°
15°	1044.8	1051.4	1060.0	1073.8	1083.7	1095.6	1110.2	1116.8	1129.3	1139.2	1145.8	15°
17.5°	997.2	1001.9	1011.1	1027.0	1039.5	1063.3	1083.1	1105.5	1130.0	1156.4	1179.5	17.5°
20°	938.5	935.2	949.7	966.9	988.6	1015.1	1044.1	1077.8	1118.1	1160.4	1200.6	20°
22.5°	851.9	851.9	867.1	887.6	914.0	944.4	984.7	1021.0	1073.8	1135.3	1194.7	22.5°
25°	752.9	754.9	765.4	788.5	807.0	850.6	888.3	935.2	998.6	1065.9	1145.2	25°
27.5°	647.2	660.4	657.8	682.2	706.6	749.6	801.1	848.6	919.3	991.3	1081.8	27.5°
30°	551.5	549.5	548.8	577.9	602.3	641.3	683.5	743.6	815.0	907.4	1011.8	30°
32.5°	432.6	439.8	445.1	462.3	488.7	525.0	570.6	633.3	719.2	812.3	929.9	32.5°
35°	357.3	359.3	366.5	376.4	399.6	429.9	477.5	533.0	608.2	704.7	829.5	35°
37.5°	320.3	322.3	330.2	339.5	356.0	378.4	410.8	453.7	523.1	612.9	729.1	37.5°
40°	308.4	310.4	315.0	323.6	338.8	357.9	383.7	416.7	466.9	536.9	638.6	40°
42.5°	303.1	303.1	303.8	310.4	325.6	348.0	375.8	405.5	442.5	495.3	577.9	42.5°
45°	297.2	297.2	296.5	301.2	313.0	338.8	372.5	408.8	449.1	494.7	559.4	45°
47.5°	291.9	290.6	289.3	291.2	301.2	327.6	366.5	410.8	462.3	519.1	584.5	47.5°
50°	273.4	273.4	272.8	273.4	282.7	310.4	355.3	408.8	474.2	547.5	626.7	50°
52.5°	260.2	260.9	261.5	261.5	268.8	297.2	346.7	409.5	487.4	575.2	675.6	52.5°
55°	256.9	258.2	258.2	256.9	262.8	288.6	338.8	407.5	496.6	606.3	727.8	55°
57.5°	252.9	253.6	254.3	252.9	256.9	279.4	327.6	398.2	494.0	618.2	766.7	57.5°
60°	247.7	245.0	244.4	242.4	245.0	262.8	307.8	378.4	478.1	612.9	780.0	60°
62.5°	233.1	231.1	229.2	227.2	229.2	242.4	286.0	354.0	451.7	591.7	769.4	62.5°
63°	229.8	228.5	226.5	224.5	224.5	239.1	278.7	348.0	445.1	585.8	765.4	63°
65°	220.6	219.9	218.6	216.6	216.0	227.2	262.2	321.0	414.1	559.4	740.3	65°
67.5°	210.0	210.0	209.4	206.7	203.4	210.0	234.4	280.7	359.9	491.4	678.3	67.5°
70°	194.8	194.8	194.2	192.8	188.9	193.5	209.4	239.7	296.5	401.5	568.6	70°
72.5°	179.6	179.6	181.6	181.0	181.6	182.3	190.2	206.7	241.1	312.4	429.9	72.5°
75°	159.8	163.1	163.8	165.1	165.8	165.1	169.1	179.0	198.8	239.7	313.7	75°
77.5°	143.3	147.9	147.3	146.0	145.3	146.0	145.3	149.9	164.4	190.2	232.5	77.5°
80°	118.2	122.8	122.8	122.2	120.9	122.2	120.9	125.5	137.4	159.8	184.9	80°
82.5°	97.1	100.4	102.4	103.7	102.4	107.6	107.6	106.3	115.6	135.4	155.9	82.5°
85°	77.9	81.2	83.2	85.9	87.2	85.9	85.2	83.9	89.2	105.0	118.9	85°
87.5°	49.5	52.2	52.2	52.8	52.8	54.8	50.9	46.2	42.3	60.1	62.7	87.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90°



NUMBER: P145935

NUMBER: VPL-F04-LED-E1-CPL

DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
1092.3	1092.3	1092.3	1092.3	1092.3	1092.3	1092.3
1092.3	1092.3	1093.0	1091.0	1093.0	1093.0	1091.0
1087.7	1086.4	1086.4	1085.7	1087.1	1086.4	1085.7
1083.7	1083.7	1081.1	1079.1	1078.5	1081.1	1079.8
1082.4	1081.1	1080.4	1079.1	1079.8	1081.8	1083.1
1106.2	1101.6	1102.9	1102.2	1102.9	1104.9	1108.8
1149.8	1149.8	1153.1	1145.8	1149.1	1152.4	1157.7
1198.7	1210.5	1216.5	1215.8	1217.2	1219.8	1225.7
1240.3	1277.9	1304.3	1310.9	1328.8	1332.7	1323.5
1258.8	1326.1	1385.6	1425.2	1469.4	1487.3	1492.5
1221.1	1318.2	1415.9	1507.1	1594.3	1644.4	1688.7
1182.2	1297.1	1427.2	1563.2	1705.2	1833.3	1929.1
1128.0	1279.9	1455.6	1639.2	1827.4	2005.7	2165.5
1068.6	1252.2	1458.2	1681.4	1913.9	2135.8	2329.3
983.4	1187.4	1415.9	1674.8	1944.3	2222.3	2464.0
885.6	1084.4	1340.7	1636.5	1942.3	2266.6	2556.5
781.3	984.7	1254.1	1571.1	1916.5	2280.4	2621.2
702.7	904.1	1168.3	1509.1	1878.2	2271.2	2652.2
662.4	834.8	1098.3	1448.3	1835.3	2248.7	2665.5
670.3	816.3	1056.7	1398.1	1797.0	2224.3	2662.2
714.6	844.0	1056.0	1379.6	1772.6	2201.8	2652.9
781.3	906.8	1094.3	1401.4	1785.8	2199.9	2652.2
856.6	994.6	1186.8	1460.2	1841.9	2235.5	2668.1
929.2	1101.6	1305.7	1591.6	1948.2	2324.7	2732.2
972.1	1199.3	1458.2	1777.2	2112.0	2481.2	2872.8
982.0	1258.1	1593.6	1959.5	2336.6	2707.7	3092.1
981.4	1264.0	1616.7	1997.1	2382.1	2759.9	3148.2
966.2	1275.9	1678.8	2121.3	2565.1	2983.8	3382.7
918.6	1254.8	1713.1	2236.8	2746.7	3230.8	3735.3
809.7	1158.4	1672.8	2274.5	2855.0	3394.6	3970.4
634.0	955.6	1444.3	2079.0	2708.4	3247.9	3976.4
445.8	675.6	1111.5	1707.2	2213.7	2744.7	3551.7
310.4	437.9	721.8	1148.5	1597.6	2002.4	2640.4
227.2	291.2	432.6	686.8	969.5	1251.5	1638.5
175.0	210.0	276.7	414.7	547.5	700.7	988.0
122.8	138.7	171.0	256.2	367.2	501.3	723.8
53.5	62.7	82.6	151.2	248.3	239.1	227.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)