

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: P145930

Luminaire Tested: **VPL-E04-LED-E1-CPL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P145930  
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-E04-LED-E1-CPL  
Description: VALET LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - 90° FORWARD THROW PERIMETER LEFT  
Light Source: (84) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10773.8 lumens  
Efficiency: N/A  
Efficacy: 110.8 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

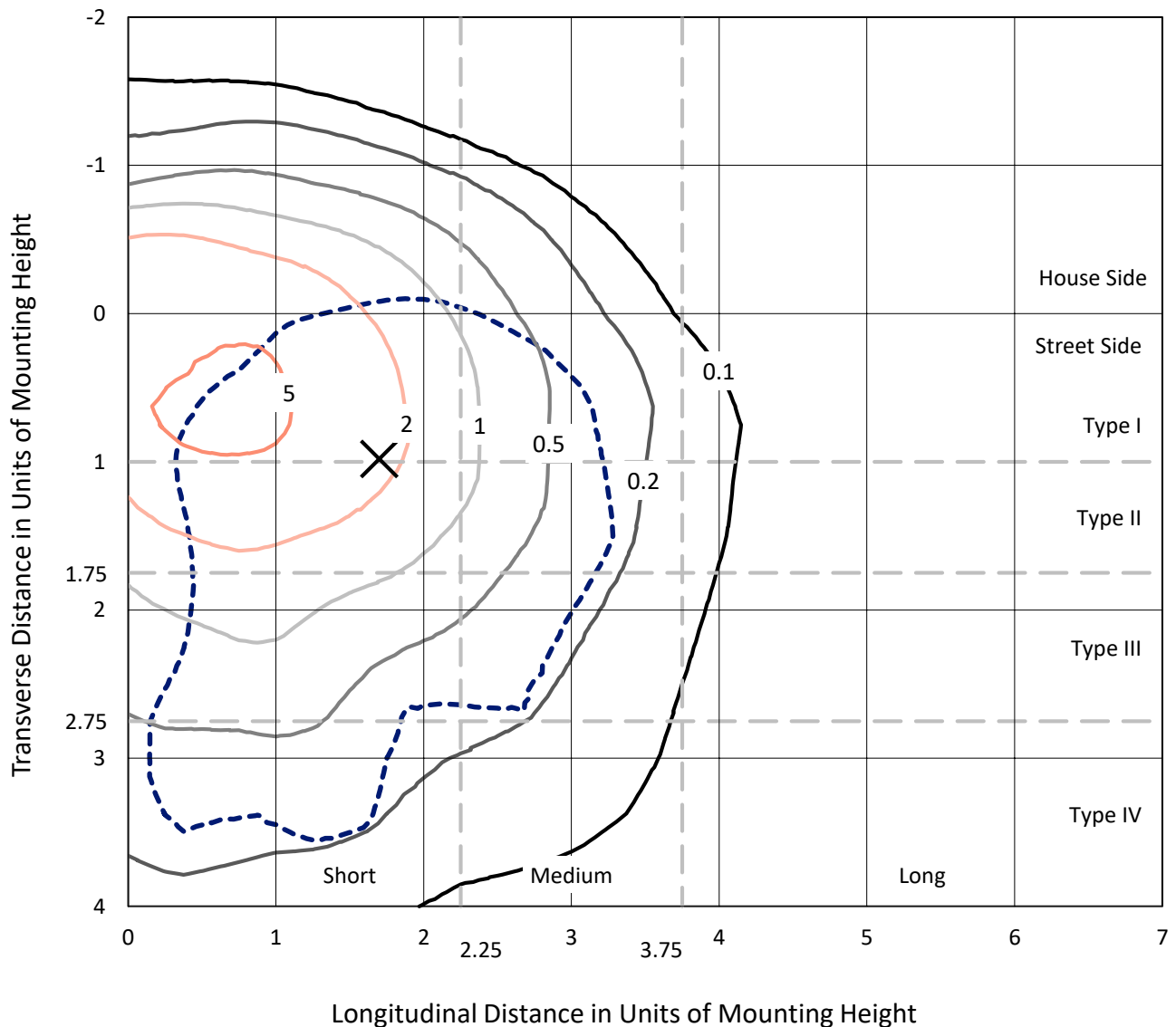
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

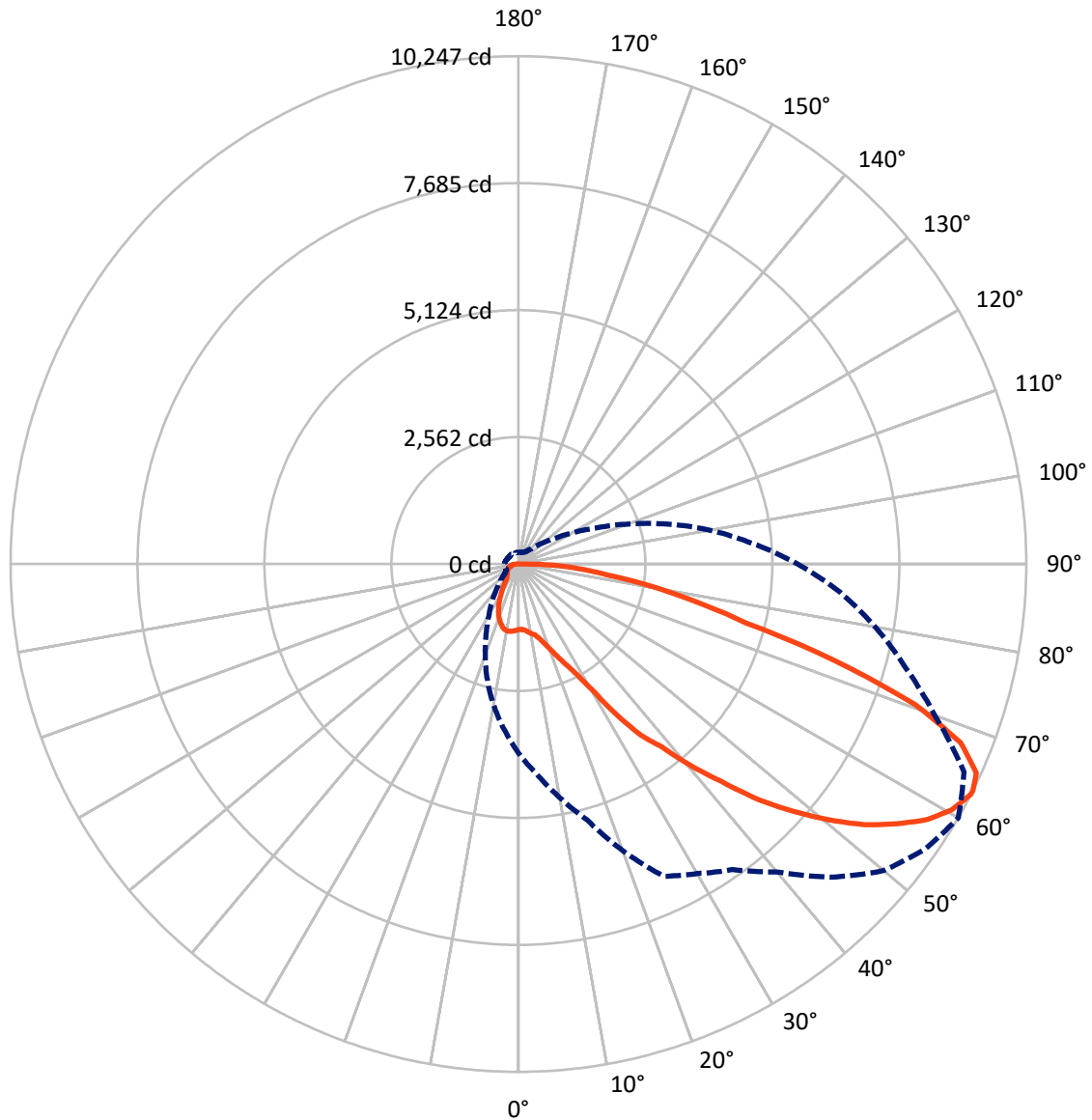
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.7 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
<b>House Side</b>	Lumens	2255.3	0.0	2255.3
	% Fixture	20.9	0.0	20.9
<b>Street Side</b>	Lumens	8518.5	0.0	8518.5
	% Fixture	79.1	0.0	79.1
<b>Total</b>	Lumens	10773.8	0.0	10773.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.0	1.2
10°-20°	405.6	3.8
20°-30°	717.3	6.7
30°-40°	1132.4	10.5
40°-50°	1665.1	15.5
50°-60°	2193.4	20.4
60°-70°	2444.8	22.7
70°-80°	1606.3	14.9
80°-90°	479.0	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°	10773.8	100.0
0°-180°	10773.8	100.0

**Coefficient of Utilization**



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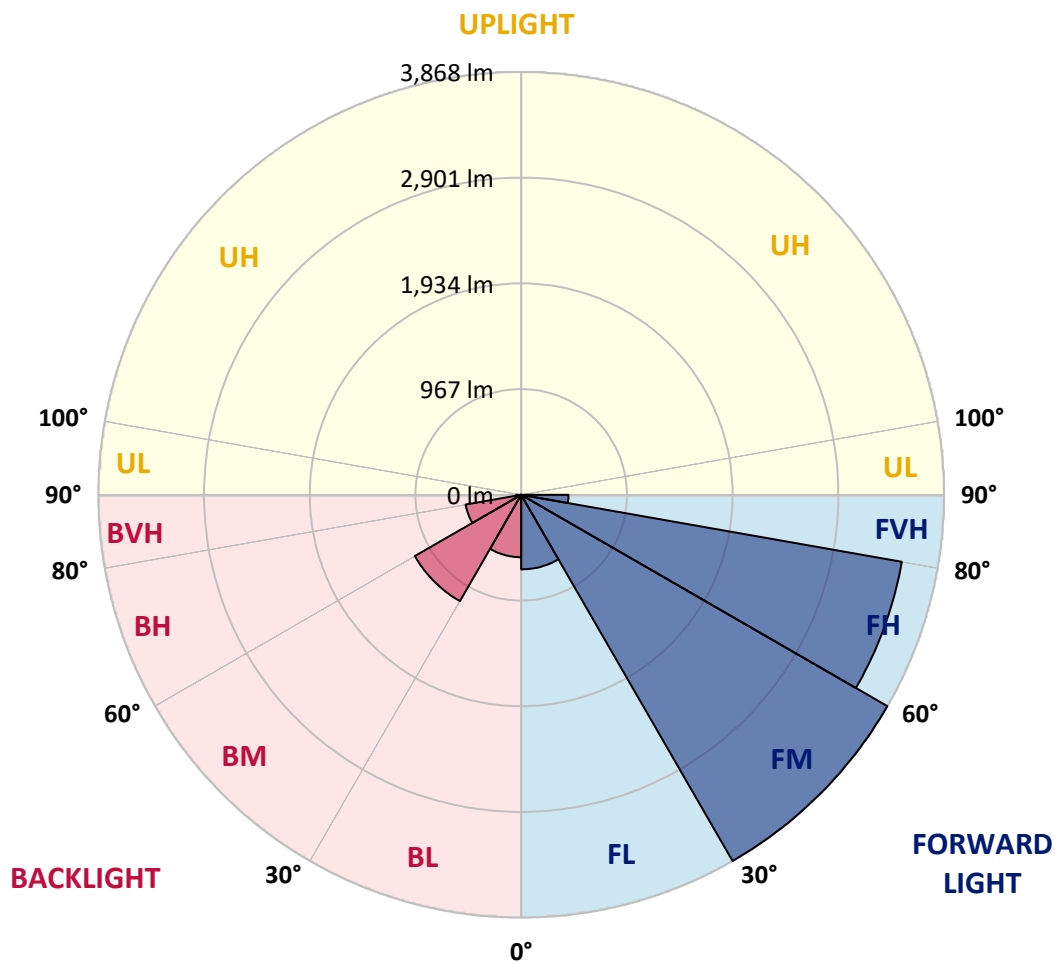
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	681.9	6.3			
FM	(30°-60°)	3868.1	35.9			
FH	(60°-80°)	3535.6	32.8			G2/5000
FVH	(80°-90°)	432.9	4.0			G3/500
BL	(0°-30°)	570.9	5.3	B2/1000		
BM	(30°-60°)	1122.8	10.4	B2/2500		
BH	(60°-80°)	515.4	4.8	B2/1000		G2/1000
BVH	(80°-90°)	46.1	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1321.6	1322.4	1320.0	1319.2	1317.6	1318.4	1318.4	1316.8	1316.8	1317.6	1315.2
5°	1315.2	1316.8	1316.0	1317.6	1319.2	1321.6	1324.0	1326.4	1328.8	1332.0	1332.8
7.5°	1308.0	1312.8	1313.6	1318.4	1324.0	1330.4	1338.4	1347.2	1359.2	1362.4	1369.6
10°	1312.0	1320.8	1325.6	1335.2	1344.0	1356.0	1370.4	1379.2	1394.4	1400.0	1410.4
12.5°	1343.2	1349.6	1356.0	1367.2	1380.0	1395.2	1411.2	1424.8	1440.8	1446.4	1450.4
15°	1402.4	1408.8	1416.0	1427.2	1440.8	1459.2	1482.4	1499.2	1518.4	1532.8	1543.2
17.5°	1484.8	1484.8	1501.6	1504.8	1531.2	1559.2	1588.0	1620.8	1640.8	1652.8	1672.0
20°	1603.2	1603.2	1625.6	1636.0	1658.4	1694.4	1733.6	1769.6	1798.4	1822.4	1840.0
22.5°	1808.0	1799.2	1818.4	1816.0	1843.2	1896.8	1935.2	1955.2	1993.6	2008.0	2031.2
25°	2045.6	2076.8	2097.6	2097.6	2108.8	2164.0	2196.0	2211.2	2246.4	2236.0	2260.0
27.5°	2336.8	2420.8	2498.4	2530.4	2515.2	2576.0	2587.2	2601.6	2597.6	2572.8	2565.6
30°	2623.2	2771.2	2892.0	2965.6	3050.4	3168.0	3168.0	3187.2	3145.6	3076.8	3036.0
32.5°	2821.6	3012.0	3196.8	3349.6	3493.6	3673.6	3749.6	3855.2	3872.8	3899.2	3808.0
35°	2984.8	3252.0	3450.4	3680.0	3856.0	4038.4	4240.8	4424.0	4545.6	4525.6	4489.6
37.5°	3096.8	3440.0	3716.8	3986.4	4254.4	4463.2	4655.2	4894.4	5127.2	5173.6	5076.0
40°	3175.2	3572.8	3953.6	4284.8	4621.6	4935.2	5168.8	5425.6	5790.4	5944.8	5864.8
42.5°	3212.8	3676.8	4101.6	4523.2	4949.6	5345.6	5638.4	5990.4	6423.2	6687.2	6599.2
45°	3228.8	3740.8	4221.6	4701.6	5213.6	5702.4	6080.0	6479.2	6966.4	7390.4	7406.4
47.5°	3224.8	3775.2	4304.0	4828.8	5420.8	5989.6	6496.0	6948.8	7500.8	7946.4	8112.0
50°	3213.6	3787.2	4353.6	4905.6	5551.2	6200.0	6770.4	7308.8	7925.6	8489.6	8741.6
52.5°	3212.8	3789.6	4378.4	4948.0	5628.0	6328.8	6942.4	7578.4	8254.4	8844.0	9236.8
55°	3232.0	3804.0	4405.6	4977.6	5669.6	6401.6	7039.2	7747.2	8397.6	9067.2	9574.4
57.5°	3309.6	3871.2	4470.4	5028.0	5716.0	6459.2	7114.4	7796.0	8440.0	9160.0	9770.4
60°	3480.0	3996.8	4583.2	5120.8	5836.8	6610.4	7185.6	7727.2	8360.0	9133.6	9798.4
62.5°	3745.6	4198.4	4740.8	5292.0	6082.4	6897.6	7215.2	7569.6	8162.4	8981.6	9677.6
63°	3813.6	4252.0	4782.4	5339.2	6153.6	6952.0	7212.8	7528.0	8108.0	8936.8	9623.2
65°	4097.6	4500.0	4976.0	5564.8	6477.6	7124.8	7125.6	7283.2	7830.4	8689.6	9400.0
67.5°	4524.8	4908.8	5276.8	5862.4	6836.0	7211.2	6867.2	6748.0	7232.0	8166.4	8833.6
70°	4809.6	5284.0	5490.4	5940.8	6884.8	7106.4	6458.4	6060.8	6462.4	7243.2	7836.0
72.5°	4816.8	5357.6	5417.6	5606.4	6428.0	6605.6	5754.4	5216.0	5457.6	6112.8	6424.8
75°	4302.4	4982.4	4859.2	4789.6	5234.4	5310.4	4654.4	4430.4	4740.0	5127.2	4971.2
77.5°	3198.4	4102.4	3852.0	3556.0	3717.6	3728.8	3749.6	4172.0	4552.0	4710.4	4483.2
80°	1984.8	3013.6	2821.6	2333.6	2396.0	2580.0	3132.0	3878.4	4294.4	4408.0	3953.6
82.5°	1196.8	2216.8	2114.4	1780.8	1859.2	2317.6	2928.0	3134.4	3274.4	3264.0	2794.4
85°	876.8	1505.6	1644.8	1669.6	1948.0	2250.4	2237.6	2084.8	1999.2	1759.2	1501.6
87.5°	276.0	776.8	921.6	1074.4	1176.8	1113.6	1095.2	946.4	677.6	572.8	629.6
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°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1315.2	1318.4	1320.0	1319.2	1320.0	1320.0	1324.8	1323.2	1324.8	1324.0	1328.8
5°	1335.2	1340.0	1344.0	1344.0	1344.8	1346.4	1352.8	1352.8	1356.0	1362.4	1365.6
7.5°	1374.4	1380.8	1381.6	1383.2	1388.0	1385.6	1389.6	1391.2	1393.6	1396.8	1400.8
10°	1415.2	1424.0	1424.0	1423.2	1424.0	1417.6	1420.0	1415.2	1416.0	1420.8	1425.6
12.5°	1460.8	1465.6	1462.4	1460.0	1460.0	1448.0	1446.4	1440.0	1436.8	1437.6	1439.2
15°	1552.0	1548.0	1547.2	1543.2	1528.8	1520.0	1513.6	1493.6	1483.2	1477.6	1468.0
17.5°	1673.6	1676.0	1672.0	1668.0	1647.2	1617.6	1604.8	1583.2	1568.8	1554.4	1536.8
20°	1851.2	1835.2	1833.6	1820.8	1792.0	1750.4	1719.2	1684.0	1664.0	1643.2	1624.8
22.5°	2047.2	2030.4	2019.2	1994.4	1952.0	1899.2	1847.2	1802.4	1772.0	1756.8	1744.0
25°	2264.8	2255.2	2236.8	2173.6	2140.0	2079.2	2022.4	1978.4	1944.0	1931.2	1908.8
27.5°	2525.6	2532.8	2498.4	2439.2	2396.8	2311.2	2262.4	2186.4	2157.6	2111.2	2082.4
30°	3000.8	2954.4	2896.0	2805.6	2720.0	2604.8	2524.0	2444.8	2402.4	2340.0	2263.2
32.5°	3777.6	3600.8	3444.0	3252.0	3070.4	2923.2	2806.4	2706.4	2641.6	2538.4	2408.0
35°	4404.0	4233.6	3974.4	3695.2	3456.8	3268.0	3120.8	3026.4	2896.8	2732.0	2543.2
37.5°	4863.2	4667.2	4424.8	4211.2	3951.2	3740.8	3541.6	3345.6	3163.2	2913.6	2672.8
40°	5608.8	5343.2	4944.0	4692.0	4479.2	4194.4	4008.0	3744.0	3466.4	3144.8	2796.0
42.5°	6346.4	5994.4	5632.8	5343.2	5040.8	4732.0	4476.0	4121.6	3752.8	3336.0	2906.4
45°	7203.2	6772.0	6299.2	5894.4	5584.0	5220.8	4892.8	4457.6	3987.2	3492.8	3002.4
47.5°	7878.4	7451.2	6917.6	6509.6	6091.2	5681.6	5256.0	4719.2	4161.6	3620.8	3092.0
50°	8525.6	8113.6	7546.4	7045.6	6564.8	6070.4	5556.0	4904.8	4298.4	3720.8	3163.2
52.5°	9106.4	8740.0	8127.2	7528.8	6991.2	6421.6	5784.0	5078.4	4429.6	3824.0	3219.2
55°	9598.4	9255.2	8705.6	7960.8	7350.4	6720.0	5999.2	5236.8	4568.0	3932.0	3260.0
57.5°	9928.8	9730.4	9143.2	8340.8	7645.6	6974.4	6161.6	5396.0	4697.6	3999.2	3277.6
60°	10082.4	10056.0	9559.2	8684.0	7908.0	7172.8	6366.4	5564.8	4783.2	4029.6	3252.8
62.5°	10050.4	10239.2	9876.0	8919.2	8075.2	7296.8	6497.6	5637.6	4761.6	3956.0	3143.2
63°	10020.8	10247.2	9920.8	8942.4	8088.8	7308.8	6510.4	5628.8	4741.6	3923.2	3105.6
65°	9804.0	10152.8	9932.0	8900.8	8026.4	7274.4	6452.8	5490.4	4542.4	3716.8	2892.8
67.5°	9272.8	9622.4	9500.0	8442.4	7622.4	6904.8	6050.4	5019.2	4054.4	3278.4	2498.4
70°	8176.0	8488.8	8342.4	7412.0	6650.4	6141.6	5329.6	4174.4	3303.2	2635.2	1901.6
72.5°	6467.2	6687.2	6719.2	5980.0	5396.8	5091.2	4293.6	3148.8	2412.8	1835.2	1234.4
75°	4788.8	4737.6	4748.0	4335.2	4097.6	3968.8	3209.6	2160.0	1625.6	1121.6	732.0
77.5°	4024.8	3656.8	3343.2	3228.8	2952.0	2872.0	2116.8	1325.6	948.8	671.2	416.8
80°	3272.8	2715.2	2259.2	2056.8	1948.8	1964.8	1171.2	706.4	496.8	365.6	260.8
82.5°	2237.6	1813.6	1430.4	1242.4	1223.2	1241.6	608.8	346.4	262.4	210.4	164.0
85°	1323.2	1245.6	1112.0	987.2	944.0	891.2	452.8	248.0	135.2	112.0	92.0
87.5°	572.0	702.4	719.2	716.0	666.4	535.2	166.4	64.0	56.8	28.8	23.2
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°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1328.8	1329.6	1328.0	1329.6	1335.2	1335.2	1334.4	1336.0	1336.8	1341.6	1340.0
5°	1368.8	1369.6	1370.4	1376.0	1380.0	1384.8	1383.2	1384.8	1388.0	1388.8	1390.4
7.5°	1405.6	1410.4	1416.8	1419.2	1426.4	1428.0	1435.2	1436.0	1437.6	1434.4	1431.2
10°	1431.2	1436.0	1444.0	1448.0	1460.8	1462.4	1468.0	1469.6	1472.8	1470.4	1468.0
12.5°	1444.0	1448.0	1456.8	1464.8	1482.4	1488.0	1497.6	1503.2	1507.2	1504.8	1496.8
15°	1470.4	1469.6	1474.4	1480.8	1496.8	1507.2	1520.8	1528.0	1532.8	1528.8	1518.4
17.5°	1531.2	1520.0	1520.0	1516.0	1528.0	1530.4	1536.0	1540.0	1538.4	1526.4	1509.6
20°	1615.2	1598.4	1588.0	1578.4	1574.4	1554.4	1544.0	1529.6	1516.8	1495.2	1476.0
22.5°	1724.0	1712.0	1688.0	1666.4	1636.0	1595.2	1551.2	1513.6	1485.6	1456.0	1423.2
25°	1888.8	1861.6	1827.2	1776.0	1736.8	1664.8	1591.2	1520.0	1460.0	1413.6	1358.4
27.5°	2044.0	1986.4	1921.6	1841.6	1769.6	1673.6	1580.0	1497.6	1419.2	1344.8	1281.6
30°	2173.6	2073.6	1968.0	1856.0	1753.6	1637.6	1528.8	1435.2	1346.4	1258.4	1198.4
32.5°	2271.2	2127.2	1986.4	1843.2	1716.8	1580.8	1456.0	1356.0	1255.2	1162.4	1092.8
35°	2359.2	2164.8	1980.8	1808.8	1659.2	1508.8	1374.4	1262.4	1152.0	1052.8	972.8
37.5°	2422.4	2177.6	1956.8	1759.2	1585.6	1420.8	1275.2	1156.0	1037.6	936.8	848.8
40°	2471.2	2171.2	1911.2	1683.2	1484.8	1313.6	1171.2	1046.4	928.0	827.2	735.2
42.5°	2504.0	2147.2	1842.4	1596.8	1400.8	1221.6	1082.4	951.2	832.8	727.2	625.6
45°	2546.4	2137.6	1800.0	1532.0	1324.8	1144.0	995.2	867.2	744.0	633.6	536.8
47.5°	2586.4	2132.0	1765.6	1478.4	1256.0	1073.6	926.4	792.0	668.0	560.0	472.0
50°	2610.4	2123.2	1729.6	1413.6	1179.2	1001.6	860.8	724.8	600.0	496.8	418.4
52.5°	2617.6	2105.6	1682.4	1340.0	1112.8	940.0	793.6	657.6	537.6	444.8	372.0
55°	2612.0	2071.2	1618.4	1280.0	1044.8	872.0	725.6	593.6	484.8	397.6	339.2
57.5°	2584.8	2002.4	1536.0	1204.0	967.2	786.4	642.4	521.6	424.8	355.2	310.4
60°	2524.0	1903.2	1435.2	1097.6	856.0	684.8	548.8	444.8	363.2	312.8	283.2
62.5°	2391.2	1760.0	1288.8	947.2	707.2	549.6	431.2	354.4	299.2	272.8	255.2
63°	2352.0	1710.4	1245.6	907.2	681.6	519.2	404.8	335.2	285.6	264.0	249.6
65°	2145.6	1481.6	1052.8	729.6	528.0	393.6	308.8	263.2	236.8	228.8	224.8
67.5°	1758.4	1152.8	740.8	489.6	354.4	272.0	228.0	210.4	200.8	200.0	202.4
70°	1242.4	764.8	458.4	313.6	244.0	205.6	188.8	180.8	176.0	177.6	182.4
72.5°	808.0	448.8	289.6	229.6	198.4	180.8	168.8	166.4	164.8	163.2	164.8
75°	427.2	280.8	219.2	192.0	173.6	159.2	151.2	148.0	148.8	148.8	148.8
77.5°	264.8	213.6	187.2	169.6	155.2	140.8	132.8	130.4	131.2	132.8	133.6
80°	203.2	186.4	164.8	152.0	131.2	119.2	115.2	114.4	116.0	116.0	118.4
82.5°	148.8	144.0	136.0	120.0	104.0	96.0	95.2	98.4	95.2	94.4	96.0
85°	87.2	81.6	88.8	76.0	69.6	64.8	68.0	74.4	77.6	73.6	72.0
87.5°	28.0	19.2	28.0	31.2	28.0	24.0	30.4	36.0	36.8	35.2	40.0
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: P145930

CATALOG NUMBER: VPL-E04-LED-E1-CPL

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1339.2	1344.8	1339.2	1341.6	1340.8	1339.2	1341.6	1338.4	1336.8	1341.6	1340.8
5°	1389.6	1390.4	1383.2	1384.0	1383.2	1376.8	1376.8	1373.6	1369.6	1370.4	1368.8
7.5°	1430.4	1428.8	1423.2	1420.8	1413.6	1408.8	1405.6	1400.8	1397.6	1394.4	1392.8
10°	1461.6	1457.6	1453.6	1446.4	1439.2	1435.2	1426.4	1419.2	1416.8	1412.0	1408.8
12.5°	1488.8	1481.6	1475.2	1466.4	1457.6	1451.2	1440.8	1435.2	1431.2	1424.8	1420.0
15°	1504.0	1490.4	1478.4	1464.8	1455.2	1445.6	1433.6	1431.2	1425.6	1419.2	1410.4
17.5°	1485.6	1466.4	1444.0	1429.6	1415.2	1400.8	1388.8	1388.8	1386.4	1379.2	1364.0
20°	1448.0	1419.2	1392.8	1369.6	1355.2	1334.4	1327.2	1316.0	1308.0	1295.2	1276.0
22.5°	1386.4	1356.0	1321.6	1298.4	1273.6	1250.4	1236.0	1218.4	1212.0	1191.2	1165.6
25°	1317.6	1273.6	1236.8	1206.4	1172.0	1144.8	1124.8	1100.8	1084.8	1064.8	1032.8
27.5°	1236.0	1190.4	1148.8	1115.2	1079.2	1041.6	1004.8	976.8	948.0	924.8	906.4
30°	1148.0	1100.8	1049.6	1010.4	968.8	921.6	891.2	853.6	831.2	805.6	781.6
32.5°	1032.8	991.2	931.2	885.6	834.4	797.6	772.8	736.8	710.4	688.8	675.2
35°	906.4	844.0	784.0	749.6	714.4	684.8	650.4	622.4	604.8	582.4	570.4
37.5°	768.8	696.0	644.8	614.4	578.4	564.0	542.4	525.6	509.6	494.4	484.8
40°	645.6	578.4	532.0	506.4	482.4	466.4	452.8	445.6	435.2	423.2	416.0
42.5°	543.2	489.6	444.0	420.0	401.6	400.0	391.2	385.6	381.6	374.4	363.2
45°	463.2	414.4	375.2	356.0	348.0	348.8	348.8	344.0	344.0	341.6	334.4
47.5°	409.6	365.6	336.8	324.0	320.8	321.6	319.2	317.6	318.4	317.6	313.6
50°	368.0	330.4	306.4	301.6	300.8	300.0	296.8	294.4	293.6	295.2	294.4
52.5°	325.6	294.4	280.8	279.2	280.0	280.0	279.2	278.4	280.0	281.6	279.2
55°	301.6	279.2	270.4	270.4	270.4	270.4	269.6	268.8	271.2	273.6	269.6
57.5°	279.2	263.2	260.0	260.0	260.0	258.4	258.4	259.2	262.4	267.2	262.4
60°	262.4	254.4	254.4	255.2	254.4	251.2	248.8	248.8	252.8	259.2	255.2
62.5°	246.4	242.4	244.0	243.2	241.6	237.6	234.4	234.4	239.2	245.6	247.2
63°	242.4	239.2	240.8	240.0	238.4	235.2	232.0	232.0	236.0	242.4	244.8
65°	224.8	225.6	226.4	227.2	226.4	225.6	221.6	220.0	223.2	228.0	231.2
67.5°	204.0	205.6	207.2	211.2	209.6	209.6	207.2	205.6	206.4	208.8	211.2
70°	184.8	186.4	188.8	190.4	191.2	192.0	190.4	188.0	188.8	189.6	191.2
72.5°	166.4	168.0	169.6	172.8	172.8	172.8	171.2	169.6	170.4	172.0	173.6
75°	149.6	150.4	152.0	154.4	155.2	153.6	153.6	152.0	152.8	155.2	156.8
77.5°	132.8	131.2	132.0	133.6	136.0	136.0	136.8	136.0	137.6	139.2	140.8
80°	113.6	112.0	110.4	111.2	114.4	118.4	122.4	122.4	124.8	125.6	128.0
82.5°	90.4	88.8	88.0	90.4	89.6	95.2	104.0	108.8	112.0	115.2	116.8
85°	70.4	66.4	68.0	68.0	66.4	75.2	83.2	89.6	90.4	95.2	96.0
87.5°	41.6	40.0	38.4	36.8	42.4	51.2	58.4	60.8	62.4	64.8	67.2
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: P145930

CATALOG NUMBER: VPL-E04-LED-E1-CPL

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1334.4	1340.8	1339.2	1338.4	1339.2	1338.4	1336.0	1336.8	1335.2	1336.0	1334.4
5°	1360.0	1363.2	1360.8	1356.8	1356.8	1351.2	1347.2	1344.0	1340.0	1338.4	1335.2
7.5°	1384.8	1382.4	1379.2	1372.0	1368.0	1360.8	1355.2	1348.8	1344.8	1340.0	1334.4
10°	1400.0	1395.2	1388.8	1380.0	1368.8	1362.4	1354.4	1344.8	1340.0	1337.6	1332.0
12.5°	1407.2	1394.4	1384.0	1368.0	1352.0	1340.0	1331.2	1321.6	1319.2	1316.0	1312.0
15°	1390.4	1372.0	1345.6	1324.0	1303.2	1286.4	1279.2	1268.8	1266.4	1265.6	1264.8
17.5°	1333.6	1305.6	1280.0	1251.2	1232.8	1217.6	1211.2	1208.8	1204.8	1203.2	1204.0
20°	1242.4	1218.4	1192.8	1183.2	1161.6	1157.6	1148.0	1141.6	1134.4	1132.0	1128.0
22.5°	1136.0	1106.4	1090.4	1083.2	1074.4	1053.6	1048.8	1042.4	1032.8	1025.6	1024.0
25°	1012.0	988.0	987.2	970.4	963.2	952.0	939.2	931.2	925.6	916.8	910.4
27.5°	885.6	876.8	861.6	848.8	844.0	837.6	818.4	814.4	808.0	800.8	793.6
30°	768.0	761.6	747.2	735.2	728.0	715.2	696.8	698.4	685.6	676.0	669.6
32.5°	653.6	648.8	635.2	632.0	608.8	602.4	583.2	568.8	556.0	546.4	538.4
35°	550.4	537.6	538.4	524.0	511.2	492.0	472.0	453.6	443.2	438.4	431.2
37.5°	476.0	464.0	452.0	436.0	421.6	408.0	396.0	390.4	384.0	385.6	386.4
40°	408.8	400.0	391.2	380.0	371.2	365.6	362.4	362.4	363.2	367.2	370.4
42.5°	360.8	353.6	348.8	344.8	346.4	346.4	348.8	352.8	356.8	362.4	365.6
45°	328.8	324.8	323.2	324.8	329.6	333.6	339.2	345.6	352.0	357.6	360.0
47.5°	309.6	307.2	307.2	311.2	318.4	324.8	333.6	340.0	347.2	352.0	353.6
50°	288.8	288.0	288.0	291.2	297.6	305.6	314.4	320.8	327.2	331.2	332.8
52.5°	276.8	274.4	273.6	277.6	283.2	291.2	300.0	306.4	311.2	314.4	315.2
55°	266.4	264.0	262.4	267.2	273.6	280.8	291.2	298.4	303.2	307.2	310.4
57.5°	257.6	255.2	253.6	259.2	265.6	274.4	283.2	291.2	297.6	302.4	305.6
60°	250.4	247.2	245.6	252.0	258.4	267.2	276.0	284.8	293.6	299.2	300.8
62.5°	241.6	239.2	236.8	240.8	244.0	250.4	258.4	267.2	275.2	280.8	280.8
63°	239.2	238.4	235.2	238.4	241.6	247.2	255.2	263.2	271.2	277.6	276.8
65°	228.8	228.8	227.2	230.4	233.6	239.2	245.6	254.4	261.6	266.4	267.2
67.5°	212.0	212.8	214.4	217.6	224.0	229.6	236.8	244.8	251.2	254.4	256.0
70°	192.8	194.4	197.6	202.4	208.0	212.8	217.6	225.6	231.2	234.4	236.0
72.5°	174.4	178.4	180.8	184.8	188.0	192.8	196.8	204.8	209.6	212.0	216.0
75°	157.6	160.8	162.4	164.8	168.0	169.6	174.4	177.6	184.0	187.2	192.0
77.5°	141.6	143.2	145.6	149.6	150.4	152.8	154.4	159.2	162.4	165.6	169.6
80°	127.2	128.8	132.0	134.4	135.2	136.8	137.6	136.8	136.0	133.6	136.8
82.5°	114.4	116.0	120.0	122.4	124.8	124.8	124.0	115.2	111.2	112.8	115.2
85°	94.4	96.0	100.0	104.8	105.6	104.8	105.6	96.8	91.2	88.8	91.2
87.5°	59.2	57.6	71.2	77.6	72.8	74.4	75.2	70.4	65.6	56.0	58.4
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: P145930  
 CATALOG NUMBER: VPL-E04-LED-E1-CPL

REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	0°
2.5°	1336.0	1330.4	1331.2	1332.8	1332.8	1335.2	1332.0	1328.0	1330.4	1326.4	1325.6	2.5°
5°	1335.2	1328.0	1328.0	1329.6	1328.0	1329.6	1327.2	1323.2	1325.6	1320.8	1320.0	5°
7.5°	1332.0	1328.0	1329.6	1331.2	1328.8	1329.6	1328.8	1323.2	1324.0	1321.6	1316.0	7.5°
10°	1330.4	1328.0	1331.2	1336.0	1336.0	1336.8	1334.4	1328.0	1324.0	1321.6	1316.8	10°
12.5°	1313.6	1316.8	1323.2	1334.4	1338.4	1344.8	1348.0	1344.8	1346.4	1343.2	1341.6	12.5°
15°	1265.6	1273.6	1284.0	1300.8	1312.8	1327.2	1344.8	1352.8	1368.0	1380.0	1388.0	15°
17.5°	1208.0	1213.6	1224.8	1244.0	1259.2	1288.0	1312.0	1339.2	1368.8	1400.8	1428.8	17.5°
20°	1136.8	1132.8	1150.4	1171.2	1197.6	1229.6	1264.8	1305.6	1354.4	1405.6	1454.4	20°
22.5°	1032.0	1032.0	1050.4	1075.2	1107.2	1144.0	1192.8	1236.8	1300.8	1375.2	1447.2	22.5°
25°	912.0	914.4	927.2	955.2	977.6	1030.4	1076.0	1132.8	1209.6	1291.2	1387.2	25°
27.5°	784.0	800.0	796.8	826.4	856.0	908.0	970.4	1028.0	1113.6	1200.8	1310.4	27.5°
30°	668.0	665.6	664.8	700.0	729.6	776.8	828.0	900.8	987.2	1099.2	1225.6	30°
32.5°	524.0	532.8	539.2	560.0	592.0	636.0	691.2	767.2	871.2	984.0	1126.4	32.5°
35°	432.8	435.2	444.0	456.0	484.0	520.8	578.4	645.6	736.8	853.6	1004.8	35°
37.5°	388.0	390.4	400.0	411.2	431.2	458.4	497.6	549.6	633.6	742.4	883.2	37.5°
40°	373.6	376.0	381.6	392.0	410.4	433.6	464.8	504.8	565.6	650.4	773.6	40°
42.5°	367.2	367.2	368.0	376.0	394.4	421.6	455.2	491.2	536.0	600.0	700.0	42.5°
45°	360.0	360.0	359.2	364.8	379.2	410.4	451.2	495.2	544.0	599.2	677.6	45°
47.5°	353.6	352.0	350.4	352.8	364.8	396.8	444.0	497.6	560.0	628.8	708.0	47.5°
50°	331.2	331.2	330.4	331.2	342.4	376.0	430.4	495.2	574.4	663.2	759.2	50°
52.5°	315.2	316.0	316.8	316.8	325.6	360.0	420.0	496.0	590.4	696.8	818.4	52.5°
55°	311.2	312.8	312.8	311.2	318.4	349.6	410.4	493.6	601.6	734.4	881.6	55°
57.5°	306.4	307.2	308.0	306.4	311.2	338.4	396.8	482.4	598.4	748.8	928.8	57.5°
60°	300.0	296.8	296.0	293.6	296.8	318.4	372.8	458.4	579.2	742.4	944.8	60°
62.5°	282.4	280.0	277.6	275.2	277.6	293.6	346.4	428.8	547.2	716.8	932.0	62.5°
63°	278.4	276.8	274.4	272.0	272.0	289.6	337.6	421.6	539.2	709.6	927.2	63°
65°	267.2	266.4	264.8	262.4	261.6	275.2	317.6	388.8	501.6	677.6	896.8	65°
67.5°	254.4	254.4	253.6	250.4	246.4	254.4	284.0	340.0	436.0	595.2	821.6	67.5°
70°	236.0	236.0	235.2	233.6	228.8	234.4	253.6	290.4	359.2	486.4	688.8	70°
72.5°	217.6	217.6	220.0	219.2	220.0	220.8	230.4	250.4	292.0	378.4	520.8	72.5°
75°	193.6	197.6	198.4	200.0	200.8	200.0	204.8	216.8	240.8	290.4	380.0	75°
77.5°	173.6	179.2	178.4	176.8	176.0	176.8	176.0	181.6	199.2	230.4	281.6	77.5°
80°	143.2	148.8	148.8	148.0	146.4	148.0	146.4	152.0	166.4	193.6	224.0	80°
82.5°	117.6	121.6	124.0	125.6	124.0	130.4	130.4	128.8	140.0	164.0	188.8	82.5°
85°	94.4	98.4	100.8	104.0	105.6	104.0	103.2	101.6	108.0	127.2	144.0	85°
87.5°	60.0	63.2	63.2	64.0	64.0	66.4	61.6	56.0	51.2	72.8	76.0	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: P145930

NUMBER: VPL-E04-LED-E1-CPL

**DISTRIBUTION (continued):**

330°	335°	340°	345°	350°	355°	360°
1323.2	1323.2	1323.2	1323.2	1323.2	1323.2	1323.2
1323.2	1323.2	1324.0	1321.6	1324.0	1324.0	1321.6
1317.6	1316.0	1316.0	1315.2	1316.8	1316.0	1315.2
1312.8	1312.8	1309.6	1307.2	1306.4	1309.6	1308.0
1311.2	1309.6	1308.8	1307.2	1308.0	1310.4	1312.0
1340.0	1334.4	1336.0	1335.2	1336.0	1338.4	1343.2
1392.8	1392.8	1396.8	1388.0	1392.0	1396.0	1402.4
1452.0	1466.4	1473.6	1472.8	1474.4	1477.6	1484.8
1502.4	1548.0	1580.0	1588.0	1609.6	1614.4	1603.2
1524.8	1606.4	1678.4	1726.4	1780.0	1801.6	1808.0
1479.2	1596.8	1715.2	1825.6	1931.2	1992.0	2045.6
1432.0	1571.2	1728.8	1893.6	2065.6	2220.8	2336.8
1366.4	1550.4	1763.2	1985.6	2213.6	2429.6	2623.2
1294.4	1516.8	1766.4	2036.8	2318.4	2587.2	2821.6
1191.2	1438.4	1715.2	2028.8	2355.2	2692.0	2984.8
1072.8	1313.6	1624.0	1982.4	2352.8	2745.6	3096.8
946.4	1192.8	1519.2	1903.2	2321.6	2762.4	3175.2
851.2	1095.2	1415.2	1828.0	2275.2	2751.2	3212.8
802.4	1011.2	1330.4	1754.4	2223.2	2724.0	3228.8
812.0	988.8	1280.0	1693.6	2176.8	2694.4	3224.8
865.6	1022.4	1279.2	1671.2	2147.2	2667.2	3213.6
946.4	1098.4	1325.6	1697.6	2163.2	2664.8	3212.8
1037.6	1204.8	1437.6	1768.8	2231.2	2708.0	3232.0
1125.6	1334.4	1581.6	1928.0	2360.0	2816.0	3309.6
1177.6	1452.8	1766.4	2152.8	2558.4	3005.6	3480.0
1189.6	1524.0	1930.4	2373.6	2830.4	3280.0	3745.6
<b>1188.8</b>	<b>1531.2</b>	<b>1958.4</b>	<b>2419.2</b>	<b>2885.6</b>	<b>3343.2</b>	<b>3813.6</b>
1170.4	1545.6	2033.6	2569.6	3107.2	3614.4	4097.6
1112.8	1520.0	2075.2	2709.6	3327.2	3913.6	4524.8
980.8	1403.2	2026.4	2755.2	3458.4	4112.0	4809.6
768.0	1157.6	1749.6	2518.4	3280.8	3934.4	4816.8
540.0	818.4	1346.4	2068.0	2681.6	3324.8	4302.4
376.0	530.4	874.4	1391.2	1935.2	2425.6	3198.4
275.2	352.8	524.0	832.0	1174.4	1516.0	1984.8
212.0	254.4	335.2	502.4	663.2	848.8	1196.8
148.8	168.0	207.2	310.4	444.8	607.2	876.8
64.8	76.0	100.0	183.2	300.8	289.6	276.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0

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