

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: P159705

Luminaire Tested: **VTS-F09-LED-E1-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159705
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: VTS-F09-LED-E1-T4
Description: VENTUS LED SITE LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

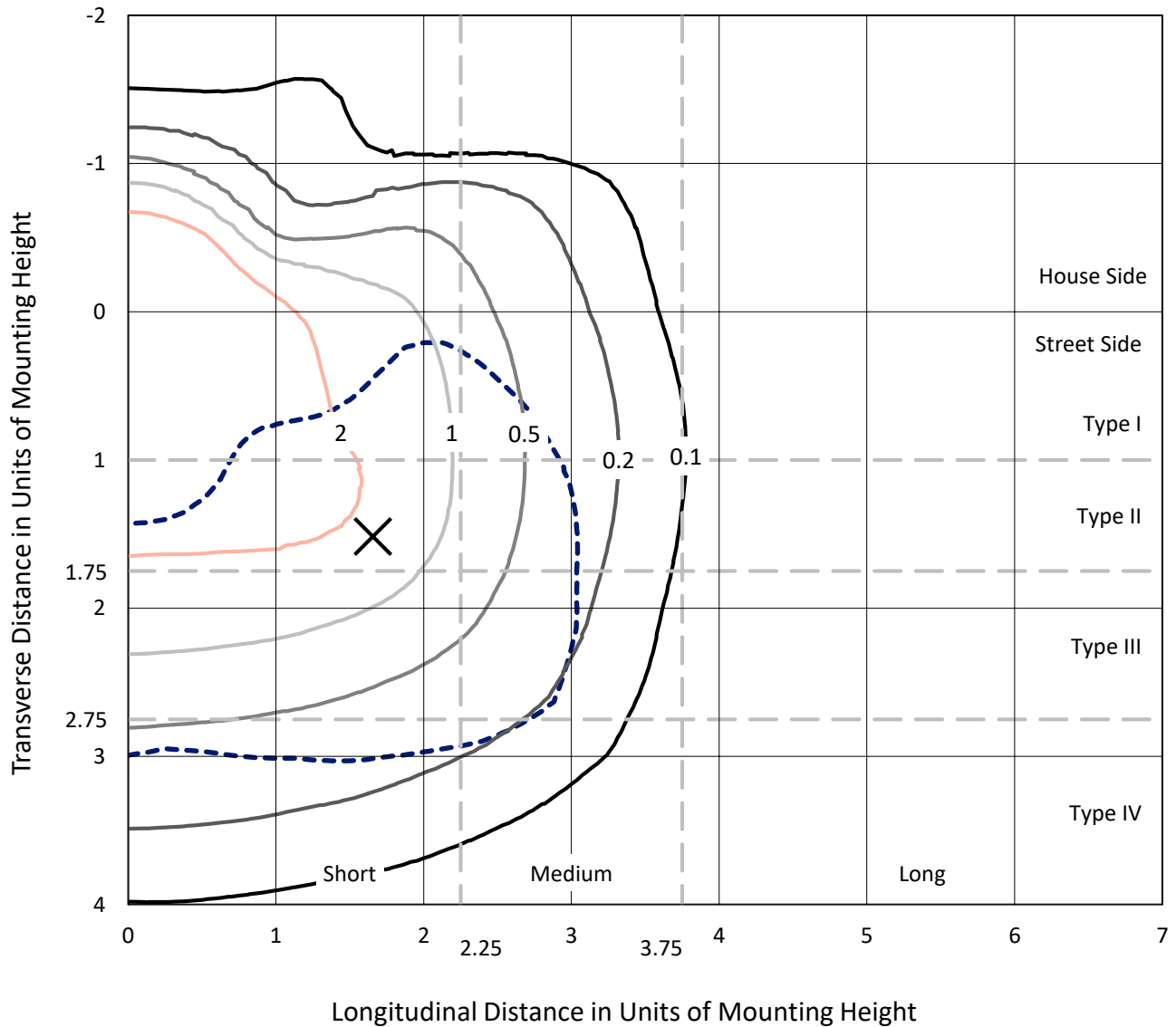
Lumens per Lamp: N/A
Luminaire Lumens: 22113.5 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 234.8
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

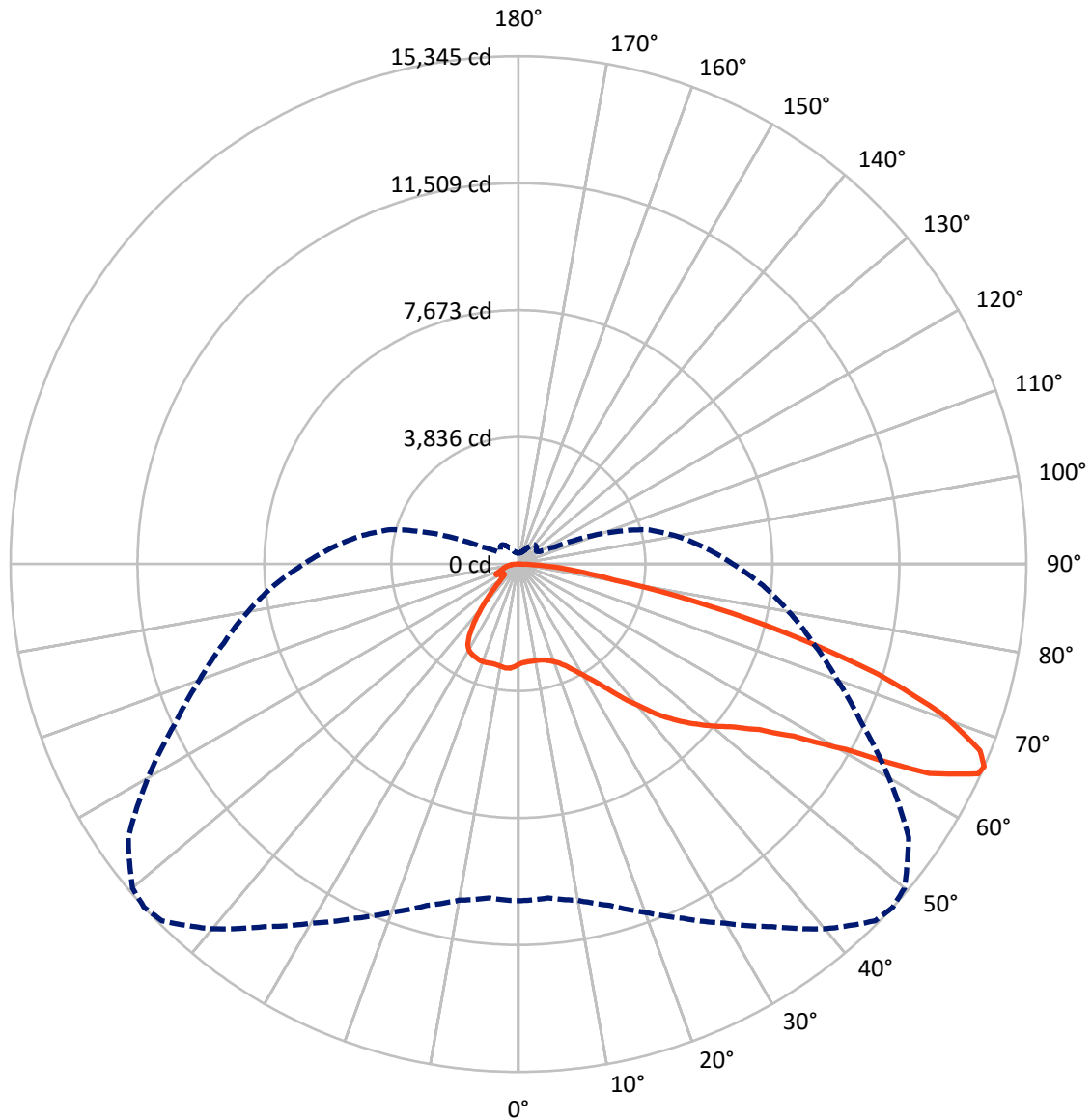
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4578.5 | 0.0 | 4578.5 |
| | % Fixture | 20.7 | 0.0 | 20.7 |
| Street Side | Lumens | 17535.0 | 0.0 | 17535.0 |
| | % Fixture | 79.3 | 0.0 | 79.3 |
| Total | Lumens | 22113.5 | 0.0 | 22113.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 291.6 | 1.3 |
| 10°-20° | 874.4 | 4.0 |
| 20°-30° | 1492.0 | 6.7 |
| 30°-40° | 2251.9 | 10.2 |
| 40°-50° | 2927.0 | 13.2 |
| 50°-60° | 4015.6 | 18.2 |
| 60°-70° | 6177.2 | 27.9 |
| 70°-80° | 3570.8 | 16.1 |
| 80°-90° | 513.0 | 2.3 |
| 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° | 22113.5 | 100.0 |
| 0°-180° | 22113.5 | 100.0 |



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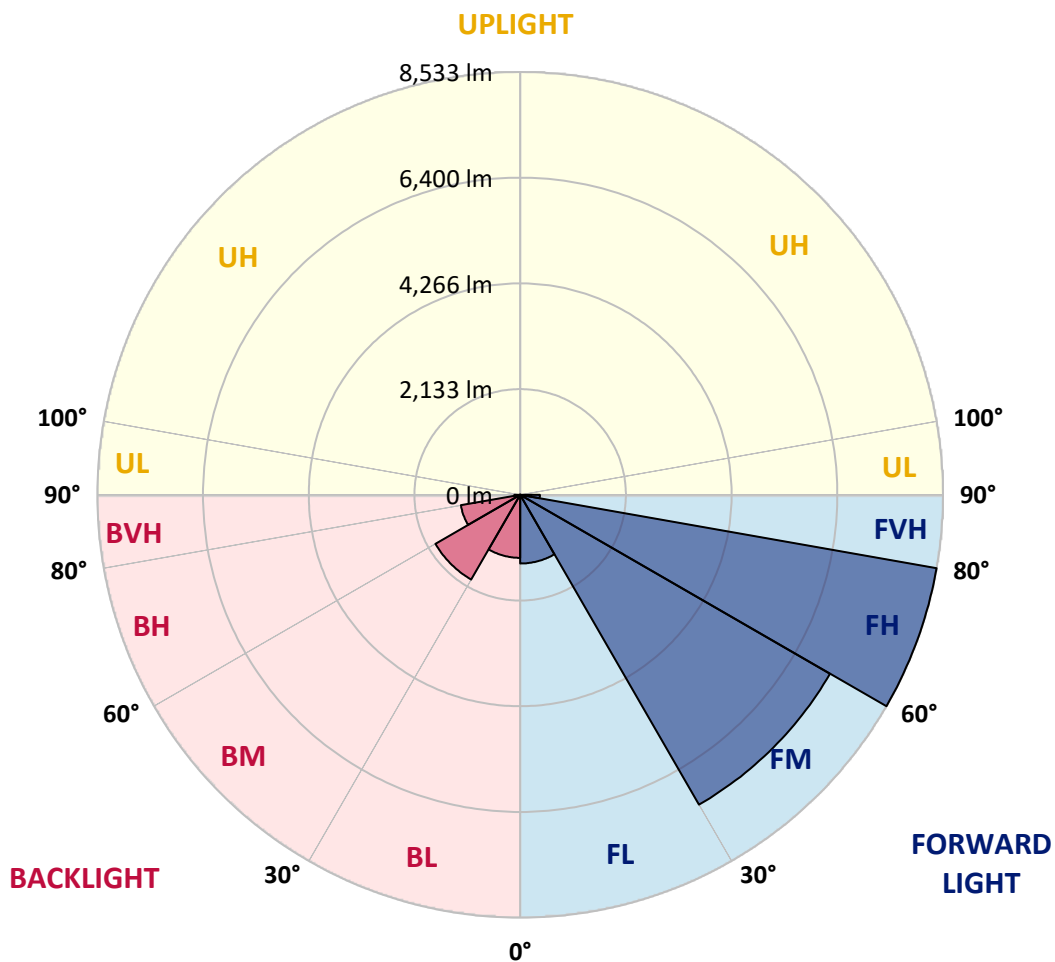
CATALOG NUMBER: VTS-F09-LED-E1-T4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1386.1 | 6.3 | | | |
| FM | (30°-60°) | 7219.1 | 32.6 | | | |
| FH | (60°-80°) | 8532.9 | 38.6 | | | G4/12000 |
| FVH | (80°-90°) | 397.0 | 1.8 | | | G3/500 |
| BL | (0°-30°) | 1271.9 | 5.8 | B3/2500 | | |
| BM | (30°-60°) | 1975.4 | 8.9 | B2/2500 | | |
| BH | (60°-80°) | 1215.2 | 5.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 116.0 | 0.5 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CATALOG NUMBER: VTS-F09-LED-E1-T4

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 47.5° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 |
| 2.5° | 2948.1 | 2949.6 | 2951.1 | 2951.1 | 2955.5 | 2955.5 | 2963.0 | 2967.4 | 2968.9 | 2977.8 | 2983.8 |
| 5° | 2893.1 | 2891.6 | 2893.1 | 2896.1 | 2903.5 | 2909.5 | 2924.3 | 2934.7 | 2943.7 | 2958.5 | 2965.9 |
| 7.5° | 2869.4 | 2872.3 | 2875.3 | 2876.8 | 2882.7 | 2897.6 | 2911.0 | 2921.4 | 2939.2 | 2957.0 | 2964.5 |
| 10° | 2900.6 | 2905.0 | 2900.6 | 2903.5 | 2903.5 | 2916.9 | 2922.9 | 2930.3 | 2943.7 | 2960.0 | 2964.5 |
| 12.5° | 2973.4 | 2982.3 | 2973.4 | 2965.9 | 2960.0 | 2971.9 | 2968.9 | 2963.0 | 2970.4 | 2974.9 | 2974.9 |
| 15° | 3093.7 | 3093.7 | 3087.8 | 3077.4 | 3062.5 | 3064.0 | 3050.6 | 3037.3 | 3031.3 | 3020.9 | 3013.5 |
| 17.5° | 3211.1 | 3208.2 | 3194.8 | 3181.4 | 3171.0 | 3166.5 | 3147.2 | 3129.4 | 3108.6 | 3092.3 | 3074.4 |
| 20° | 3325.5 | 3337.4 | 3321.1 | 3301.8 | 3285.4 | 3275.0 | 3260.2 | 3224.5 | 3199.2 | 3172.5 | 3154.7 |
| 22.5° | 3523.2 | 3512.8 | 3494.9 | 3466.7 | 3450.4 | 3432.5 | 3401.3 | 3362.7 | 3324.1 | 3291.4 | 3269.1 |
| 25° | 3726.7 | 3716.3 | 3691.1 | 3670.3 | 3646.5 | 3631.6 | 3597.5 | 3549.9 | 3512.8 | 3462.3 | 3432.5 |
| 27.5° | 3945.2 | 3936.3 | 3906.5 | 3890.2 | 3873.9 | 3856.0 | 3826.3 | 3777.3 | 3743.1 | 3685.1 | 3653.9 |
| 30° | 4191.9 | 4190.4 | 4150.2 | 4147.3 | 4123.5 | 4104.2 | 4083.4 | 4041.8 | 4007.6 | 3949.6 | 3912.5 |
| 32.5° | 4454.9 | 4448.9 | 4420.7 | 4411.8 | 4428.1 | 4414.7 | 4385.0 | 4341.9 | 4297.4 | 4263.2 | 4221.6 |
| 35° | 4829.3 | 4818.9 | 4802.6 | 4810.0 | 4820.4 | 4857.6 | 4811.5 | 4774.3 | 4720.8 | 4676.3 | 4618.3 |
| 37.5° | 5102.7 | 5087.9 | 5107.2 | 5148.8 | 5208.2 | 5236.5 | 5276.6 | 5278.1 | 5252.8 | 5193.4 | 5142.9 |
| 40° | 5353.9 | 5347.9 | 5392.5 | 5450.4 | 5560.4 | 5640.6 | 5716.4 | 5753.6 | 5762.5 | 5723.9 | 5648.1 |
| 42.5° | 5566.3 | 5584.2 | 5643.6 | 5732.8 | 5887.3 | 6009.2 | 6150.3 | 6238.0 | 6293.0 | 6272.2 | 6238.0 |
| 45° | 5819.0 | 5827.9 | 5900.7 | 6013.6 | 6160.7 | 6362.8 | 6548.6 | 6697.2 | 6793.7 | 6792.3 | 6753.6 |
| 47.5° | 6135.5 | 6137.0 | 6199.4 | 6331.6 | 6489.1 | 6694.2 | 6929.0 | 7126.6 | 7254.4 | 7260.3 | 7230.6 |
| 50° | 6511.4 | 6508.4 | 6576.8 | 6701.6 | 6869.5 | 7067.2 | 7316.8 | 7563.5 | 7741.8 | 7741.8 | 7698.7 |
| 52.5° | 6995.8 | 6989.9 | 7027.0 | 7137.0 | 7299.0 | 7507.0 | 7755.1 | 8040.4 | 8233.6 | 8275.2 | 8181.6 |
| 55° | 7642.2 | 7651.1 | 7660.0 | 7756.6 | 7894.8 | 8059.8 | 8345.1 | 8608.1 | 8866.6 | 8890.4 | 8835.4 |
| 57.5° | 8389.6 | 8359.9 | 8423.8 | 8581.3 | 8738.8 | 8945.4 | 9147.5 | 9458.0 | 9764.1 | 9816.2 | 9808.7 |
| 60° | 9557.6 | 9519.0 | 9584.3 | 9784.9 | 9958.8 | 10284.2 | 10630.4 | 11031.7 | 11394.2 | 11501.2 | 11371.9 |
| 62.5° | 10631.9 | 10679.5 | 10768.6 | 11001.9 | 11254.5 | 11688.4 | 12208.5 | 12896.5 | 13584.5 | 13959.0 | 13932.2 |
| 65° | 10535.3 | 10490.8 | 10661.7 | 10979.6 | 11437.3 | 11990.1 | 12636.5 | 13465.6 | 14456.8 | 15208.6 | 15275.5 |
| 66° | 10177.2 | 10131.2 | 10315.4 | 10679.5 | 11202.5 | 11817.7 | 12535.4 | 13379.4 | 14392.9 | 15242.8 | 15345.4 |
| 67.5° | 9585.8 | 9539.8 | 9747.8 | 10079.2 | 10618.6 | 11392.7 | 12168.4 | 13091.2 | 14144.7 | 14959.0 | 15042.2 |
| 70° | 8444.6 | 8382.2 | 8544.2 | 8918.6 | 9355.5 | 10104.4 | 10842.9 | 11820.7 | 12902.5 | 13553.3 | 13584.5 |
| 72.5° | 7153.3 | 7007.7 | 7180.1 | 7468.4 | 7780.4 | 8400.0 | 9043.5 | 9712.1 | 10574.0 | 11175.8 | 11348.2 |
| 75° | 5190.4 | 5266.2 | 5316.7 | 5506.9 | 5713.5 | 6226.1 | 6603.5 | 7163.7 | 7830.9 | 8266.3 | 8404.5 |
| 77.5° | 2753.5 | 2867.9 | 2939.2 | 3129.4 | 3471.2 | 3862.0 | 4270.6 | 4616.8 | 5055.2 | 5298.9 | 5468.3 |
| 80° | 1545.4 | 1625.6 | 1741.5 | 1891.6 | 2058.0 | 2358.2 | 2600.4 | 2778.7 | 2841.1 | 2884.2 | 2922.9 |
| 82.5° | 850.0 | 1053.5 | 1225.9 | 1329.9 | 1428.0 | 1548.4 | 1692.5 | 1841.1 | 1888.6 | 1817.3 | 1780.2 |
| 85° | 132.2 | 194.7 | 592.9 | 723.7 | 787.6 | 879.7 | 983.7 | 1093.7 | 1095.1 | 942.1 | 1028.3 |
| 87.5° | 37.1 | 41.6 | 84.7 | 127.8 | 124.8 | 101.0 | 124.8 | 227.3 | 133.7 | 66.9 | 77.3 |
| 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: VTS-F09-LED-E1-T4

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° |
|-------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 0° | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 |
| 2.5° | 2986.7 | 2989.7 | 2997.2 | 3004.6 | 3012.0 | 3019.4 | 3023.9 | 3031.3 | 3037.3 | 3046.2 | 3056.6 |
| 5° | 2974.9 | 2982.3 | 2995.7 | 3012.0 | 3026.9 | 3040.2 | 3050.6 | 3065.5 | 3078.9 | 3090.8 | 3108.6 |
| 7.5° | 2974.9 | 2989.7 | 3012.0 | 3029.8 | 3043.2 | 3059.6 | 3075.9 | 3090.8 | 3105.6 | 3117.5 | 3129.4 |
| 10° | 2976.3 | 2991.2 | 3013.5 | 3034.3 | 3049.2 | 3067.0 | 3080.4 | 3093.7 | 3110.1 | 3117.5 | 3132.4 |
| 12.5° | 2982.3 | 2988.2 | 3004.6 | 3025.4 | 3043.2 | 3061.0 | 3074.4 | 3087.8 | 3105.6 | 3108.6 | 3119.0 |
| 15° | 3012.0 | 3003.1 | 3007.6 | 3022.4 | 3041.7 | 3056.6 | 3071.4 | 3081.8 | 3093.7 | 3090.8 | 3099.7 |
| 17.5° | 3067.0 | 3044.7 | 3035.8 | 3037.3 | 3046.2 | 3056.6 | 3062.5 | 3064.0 | 3065.5 | 3052.1 | 3053.6 |
| 20° | 3141.3 | 3110.1 | 3089.3 | 3078.9 | 3067.0 | 3056.6 | 3040.2 | 3020.9 | 3003.1 | 2976.3 | 2973.4 |
| 22.5° | 3252.7 | 3206.7 | 3184.4 | 3156.1 | 3120.5 | 3075.9 | 3035.8 | 2988.2 | 2949.6 | 2909.5 | 2894.6 |
| 25° | 3414.7 | 3367.2 | 3343.4 | 3298.8 | 3234.9 | 3171.0 | 3113.1 | 3049.2 | 2992.7 | 2945.1 | 2922.9 |
| 27.5° | 3631.6 | 3584.1 | 3558.8 | 3512.8 | 3434.0 | 3370.1 | 3289.9 | 3221.5 | 3153.2 | 3083.3 | 3055.1 |
| 30° | 3894.7 | 3853.1 | 3824.8 | 3787.7 | 3719.3 | 3649.5 | 3555.9 | 3450.4 | 3341.9 | 3230.4 | 3175.5 |
| 32.5° | 4205.2 | 4159.2 | 4138.4 | 4095.3 | 4023.9 | 3951.1 | 3847.1 | 3711.9 | 3530.6 | 3355.3 | 3245.3 |
| 35° | 4593.1 | 4541.0 | 4517.3 | 4460.8 | 4377.6 | 4270.6 | 4159.2 | 3977.9 | 3732.7 | 3489.0 | 3309.2 |
| 37.5° | 5111.7 | 4995.7 | 4917.0 | 4787.7 | 4654.0 | 4503.9 | 4344.9 | 4159.2 | 3869.4 | 3567.8 | 3318.1 |
| 40° | 5570.8 | 5453.4 | 5301.9 | 5116.1 | 4908.1 | 4701.5 | 4520.2 | 4309.2 | 3994.2 | 3624.2 | 3289.9 |
| 42.5° | 6141.4 | 5933.4 | 5691.2 | 5440.0 | 5163.7 | 4909.6 | 4694.1 | 4445.9 | 4078.9 | 3639.1 | 3211.1 |
| 45° | 6663.0 | 6414.8 | 6090.9 | 5756.6 | 5413.3 | 5093.8 | 4851.6 | 4575.2 | 4151.7 | 3639.1 | 3116.0 |
| 47.5° | 7138.5 | 6841.3 | 6453.5 | 6037.4 | 5637.7 | 5288.5 | 5013.6 | 4707.5 | 4254.3 | 3685.1 | 3087.8 |
| 50° | 7578.3 | 7236.6 | 6795.2 | 6312.3 | 5863.5 | 5490.6 | 5194.9 | 4876.9 | 4410.3 | 3804.0 | 3156.1 |
| 52.5° | 8041.9 | 7679.4 | 7141.5 | 6628.8 | 6134.0 | 5734.3 | 5419.2 | 5086.4 | 4612.4 | 3991.2 | 3276.5 |
| 55° | 8649.7 | 8224.7 | 7614.0 | 7049.3 | 6505.5 | 6064.1 | 5706.0 | 5337.5 | 4833.8 | 4202.3 | 3423.6 |
| 57.5° | 9608.1 | 8991.5 | 8380.7 | 7646.7 | 7134.0 | 6553.0 | 6160.7 | 5737.2 | 5193.4 | 4477.2 | 3645.0 |
| 60° | 11285.8 | 10527.9 | 9793.9 | 8949.8 | 8316.8 | 7709.1 | 7116.2 | 6563.4 | 5908.1 | 5098.3 | 4130.9 |
| 62.5° | 13681.1 | 12911.4 | 11758.3 | 10725.6 | 9770.1 | 8964.7 | 8192.0 | 7489.2 | 6648.1 | 5762.5 | 4729.8 |
| 65° | 15112.1 | 14230.9 | 12856.4 | 11468.5 | 10308.0 | 9309.4 | 8425.3 | 7564.9 | 6657.0 | 5793.7 | 4911.0 |
| 66° | 15226.5 | 14392.9 | 12924.7 | 11458.1 | 10253.0 | 9217.3 | 8297.5 | 7407.4 | 6477.2 | 5651.0 | 4851.6 |
| 67.5° | 15014.0 | 14296.3 | 12785.1 | 11256.0 | 10024.2 | 8905.3 | 7960.2 | 7027.0 | 6092.4 | 5327.1 | 4654.0 |
| 70° | 13514.7 | 12996.1 | 11700.3 | 10267.9 | 9039.0 | 8052.3 | 7055.3 | 6157.8 | 5272.1 | 4628.7 | 4129.4 |
| 72.5° | 11079.2 | 10422.4 | 9516.0 | 8553.1 | 7585.7 | 6710.5 | 5804.1 | 5040.3 | 4297.4 | 3829.3 | 3475.6 |
| 75° | 8138.5 | 7547.1 | 6548.6 | 5948.2 | 5309.3 | 4759.5 | 4148.8 | 3425.1 | 2897.6 | 2662.8 | 2576.6 |
| 77.5° | 5159.2 | 4517.3 | 3674.7 | 3012.0 | 2590.0 | 2225.9 | 1754.9 | 1395.3 | 1117.4 | 1163.5 | 1288.3 |
| 80° | 2606.3 | 2245.3 | 1680.6 | 1326.9 | 1147.1 | 954.0 | 754.9 | 572.1 | 417.6 | 477.0 | 539.4 |
| 82.5° | 1673.2 | 1396.8 | 1113.0 | 876.7 | 740.0 | 652.3 | 521.6 | 378.9 | 282.3 | 318.0 | 389.3 |
| 85° | 1007.5 | 851.4 | 679.1 | 555.7 | 482.9 | 402.7 | 295.7 | 209.5 | 208.0 | 222.9 | 274.9 |
| 87.5° | 153.1 | 218.4 | 126.3 | 135.2 | 142.7 | 153.1 | 135.2 | 114.4 | 99.6 | 129.3 | 163.5 |
| 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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CANDELA DISTRIBUTION (continued):

| | 105° | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 | 3025.4 |
| 2.5° | 3067.0 | 3070.0 | 3075.9 | 3083.3 | 3081.8 | 3092.3 | 3098.2 | 3092.3 | 3105.6 | 3105.6 | 3113.1 |
| 5° | 3123.5 | 3127.9 | 3138.3 | 3145.7 | 3148.7 | 3157.6 | 3160.6 | 3159.1 | 3162.1 | 3163.6 | 3166.5 |
| 7.5° | 3139.8 | 3151.7 | 3156.1 | 3160.6 | 3162.1 | 3165.1 | 3165.1 | 3162.1 | 3162.1 | 3160.6 | 3163.6 |
| 10° | 3135.3 | 3139.8 | 3142.8 | 3141.3 | 3141.3 | 3138.3 | 3136.8 | 3135.3 | 3135.3 | 3132.4 | 3136.8 |
| 12.5° | 3120.5 | 3120.5 | 3120.5 | 3117.5 | 3117.5 | 3116.0 | 3116.0 | 3116.0 | 3119.0 | 3120.5 | 3127.9 |
| 15° | 3090.8 | 3090.8 | 3093.7 | 3092.3 | 3096.7 | 3104.1 | 3113.1 | 3119.0 | 3126.4 | 3127.9 | 3132.4 |
| 17.5° | 3044.7 | 3046.2 | 3055.1 | 3074.4 | 3093.7 | 3116.0 | 3132.4 | 3136.8 | 3130.9 | 3116.0 | 3105.6 |
| 20° | 2964.5 | 2983.8 | 3019.4 | 3065.5 | 3108.6 | 3136.8 | 3144.3 | 3126.4 | 3098.2 | 3059.6 | 3038.8 |
| 22.5° | 2893.1 | 2931.8 | 2995.7 | 3071.4 | 3124.9 | 3144.3 | 3122.0 | 3080.4 | 3029.8 | 2985.3 | 2954.1 |
| 25° | 2921.4 | 2965.9 | 3032.8 | 3098.2 | 3132.4 | 3122.0 | 3077.4 | 3018.0 | 2964.5 | 2912.5 | 2861.9 |
| 27.5° | 3040.2 | 3084.8 | 3132.4 | 3151.7 | 3139.8 | 3101.2 | 3038.8 | 2974.9 | 2903.5 | 2829.2 | 2766.8 |
| 30° | 3153.2 | 3178.4 | 3181.4 | 3162.1 | 3119.0 | 3056.6 | 2983.8 | 2909.5 | 2818.8 | 2729.7 | 2650.9 |
| 32.5° | 3188.8 | 3159.1 | 3105.6 | 3050.6 | 2991.2 | 2927.3 | 2842.6 | 2744.5 | 2648.0 | 2546.9 | 2459.2 |
| 35° | 3178.4 | 3058.1 | 2925.8 | 2808.4 | 2737.1 | 2664.3 | 2587.0 | 2456.3 | 2347.8 | 2261.6 | 2205.1 |
| 37.5° | 3084.8 | 2864.9 | 2661.3 | 2490.4 | 2379.0 | 2292.8 | 2178.4 | 2069.9 | 1976.3 | 1937.7 | 1891.6 |
| 40° | 2954.1 | 2618.2 | 2335.9 | 2096.7 | 1980.8 | 1870.8 | 1743.0 | 1659.8 | 1633.1 | 1597.4 | 1598.9 |
| 42.5° | 2766.8 | 2330.0 | 1965.9 | 1691.0 | 1564.7 | 1444.3 | 1353.7 | 1304.7 | 1306.1 | 1276.4 | 1282.4 |
| 45° | 2569.2 | 2040.2 | 1582.5 | 1309.1 | 1184.3 | 1081.8 | 1031.2 | 1016.4 | 1017.9 | 1019.4 | 1010.4 |
| 47.5° | 2448.8 | 1814.3 | 1269.0 | 992.6 | 882.7 | 824.7 | 798.0 | 790.5 | 792.0 | 793.5 | 783.1 |
| 50° | 2431.0 | 1696.9 | 1059.5 | 759.3 | 688.0 | 655.3 | 641.9 | 634.5 | 634.5 | 628.6 | 619.6 |
| 52.5° | 2481.5 | 1667.2 | 956.9 | 658.3 | 589.9 | 560.2 | 549.8 | 543.9 | 534.9 | 523.1 | 506.7 |
| 55° | 2561.8 | 1694.0 | 925.7 | 624.1 | 557.2 | 527.5 | 514.1 | 511.2 | 496.3 | 474.0 | 447.3 |
| 57.5° | 2710.4 | 1790.6 | 946.5 | 633.0 | 563.2 | 536.4 | 527.5 | 524.5 | 503.7 | 469.6 | 435.4 |
| 60° | 3136.8 | 2071.4 | 1050.6 | 683.5 | 606.3 | 584.0 | 584.0 | 579.5 | 551.3 | 502.2 | 453.2 |
| 62.5° | 3725.3 | 2483.0 | 1191.7 | 753.4 | 665.7 | 662.7 | 688.0 | 689.5 | 639.0 | 560.2 | 482.9 |
| 65° | 4009.1 | 2676.2 | 1240.8 | 768.2 | 682.0 | 716.2 | 766.7 | 766.7 | 695.4 | 586.9 | 487.4 |
| 66° | 4010.6 | 2671.7 | 1225.9 | 750.4 | 664.2 | 708.8 | 760.8 | 760.8 | 686.5 | 579.5 | 480.0 |
| 67.5° | 3908.0 | 2588.5 | 1176.9 | 717.7 | 624.1 | 665.7 | 711.8 | 710.3 | 643.4 | 549.8 | 459.2 |
| 70° | 3505.3 | 2289.8 | 1037.2 | 664.2 | 576.5 | 578.0 | 594.4 | 584.0 | 539.4 | 475.5 | 417.6 |
| 72.5° | 3022.4 | 1915.4 | 899.0 | 630.0 | 539.4 | 511.2 | 497.8 | 488.9 | 460.6 | 422.0 | 386.3 |
| 75° | 2318.1 | 1487.4 | 783.1 | 598.8 | 506.7 | 457.7 | 439.8 | 432.4 | 413.1 | 390.8 | 362.6 |
| 77.5° | 1420.6 | 1019.4 | 664.2 | 548.3 | 469.6 | 425.0 | 405.7 | 390.8 | 371.5 | 350.7 | 331.4 |
| 80° | 612.2 | 615.2 | 532.0 | 465.1 | 408.6 | 356.6 | 331.4 | 313.5 | 303.1 | 295.7 | 285.3 |
| 82.5° | 428.0 | 441.3 | 405.7 | 361.1 | 312.0 | 274.9 | 252.6 | 248.2 | 249.6 | 249.6 | 246.7 |
| 85° | 321.0 | 315.0 | 283.8 | 258.6 | 236.3 | 212.5 | 194.7 | 193.2 | 199.1 | 199.1 | 194.7 |
| 87.5° | 185.7 | 187.2 | 160.5 | 150.1 | 156.0 | 133.7 | 121.8 | 123.3 | 138.2 | 136.7 | 133.7 |
| 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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| 7.5° | 3162.1 | 3163.6 | 3163.6 | 3163.6 | 3162.1 |
| 10° | 3139.8 | 3145.7 | 3148.7 | 3154.7 | 3153.2 |
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| 50° | 594.4 | 589.9 | 582.5 | 576.5 | 570.6 |
| 52.5° | 478.5 | 469.6 | 448.8 | 442.8 | 436.9 |
| 55° | 422.0 | 405.7 | 390.8 | 384.9 | 384.9 |
| 57.5° | 405.7 | 384.9 | 368.5 | 361.1 | 358.1 |
| 60° | 408.6 | 378.9 | 358.1 | 346.2 | 341.8 |
| 62.5° | 422.0 | 380.4 | 352.2 | 338.8 | 334.3 |
| 65° | 420.5 | 377.4 | 350.7 | 335.8 | 331.4 |
| 66° | 413.1 | 373.0 | 347.7 | 334.3 | 331.4 |
| 67.5° | 401.2 | 367.0 | 344.7 | 332.9 | 328.4 |
| 70° | 377.4 | 355.1 | 338.8 | 328.4 | 323.9 |
| 72.5° | 358.1 | 343.3 | 328.4 | 316.5 | 313.5 |
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