

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: ITL53279

Luminaire Tested: **GSM-XX-400-HPS-XX-5S-FG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: ITL53279
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GSM-XX-400-HPS-XX-5S-FG
Description: ARCHITECTURAL AREA LUMINAIRE - TYPE v DISTRIBUTION
Light Source: 400-WATT CLEAR E-18 HIGH PRESSURE SODIUM
Ballast/Driver: -

Summary

Lumens per Lamp: 50000 (1 lamp)
Luminaire Lumens: 36546.8 lumens
Efficiency: 73.1%
Efficacy: 91.4 lumens/watt
Luminous Opening: Rectangular (W 1.03' x L: 1.01' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

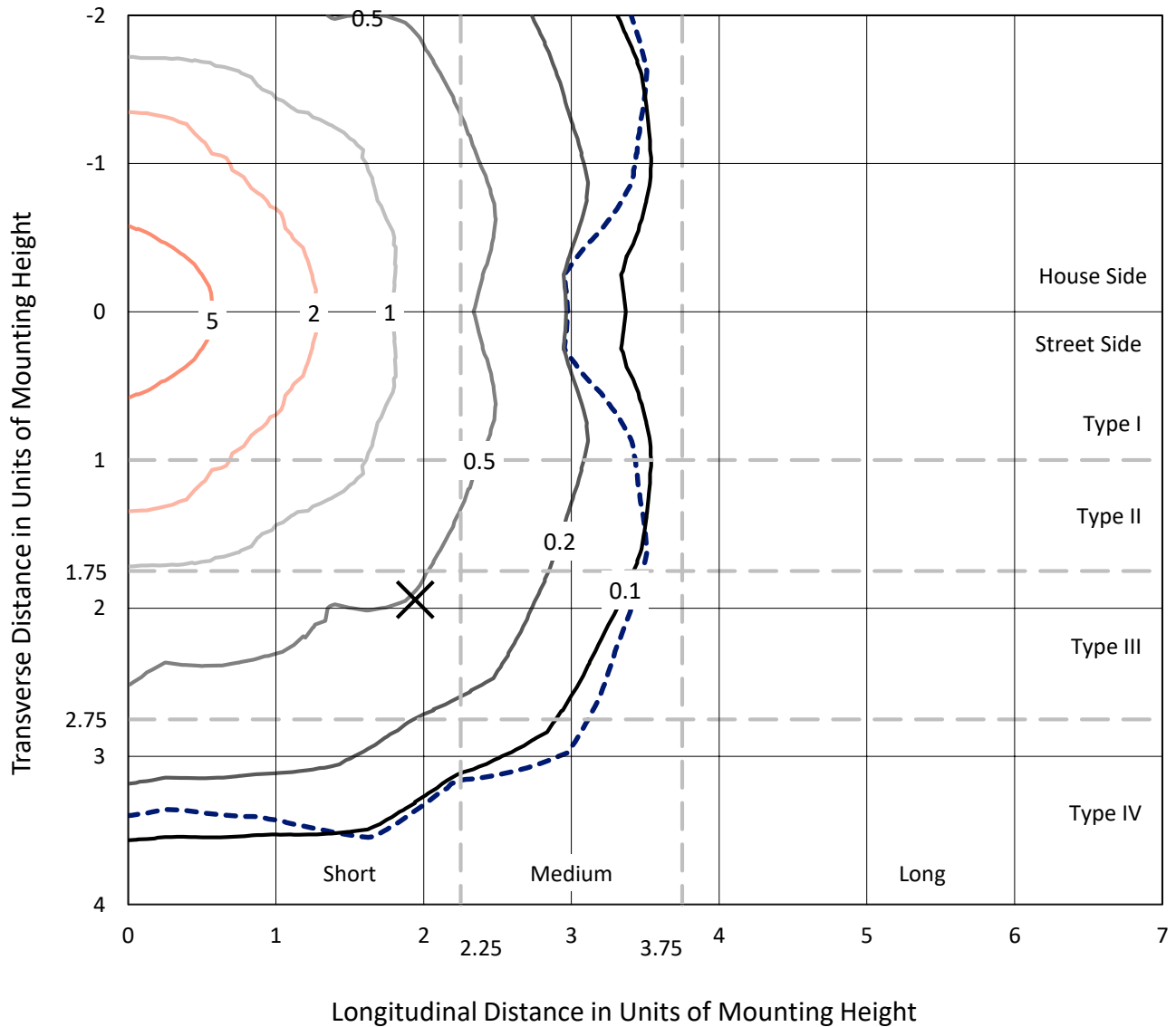
Input Watts (W): 400
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

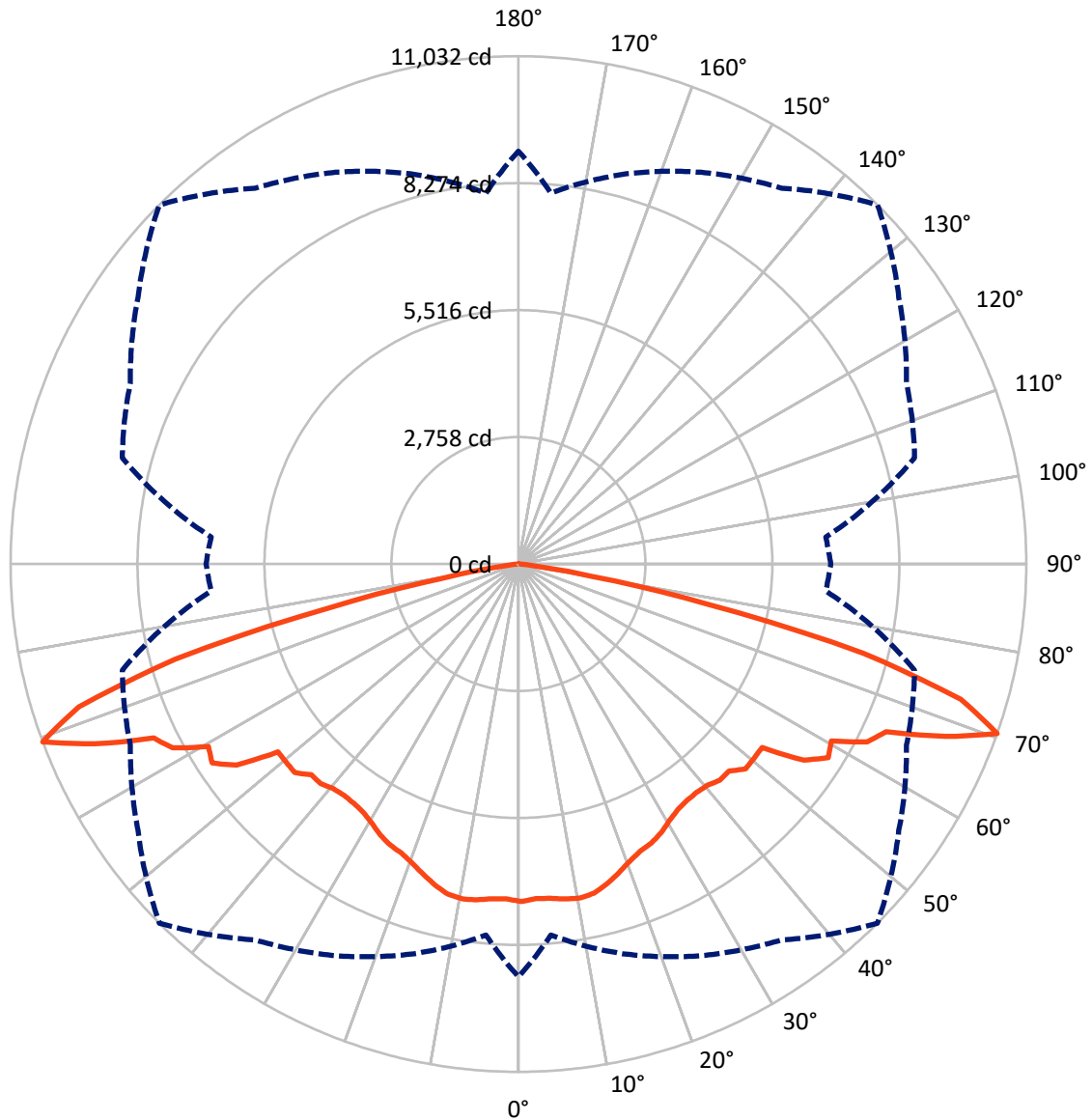
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.1 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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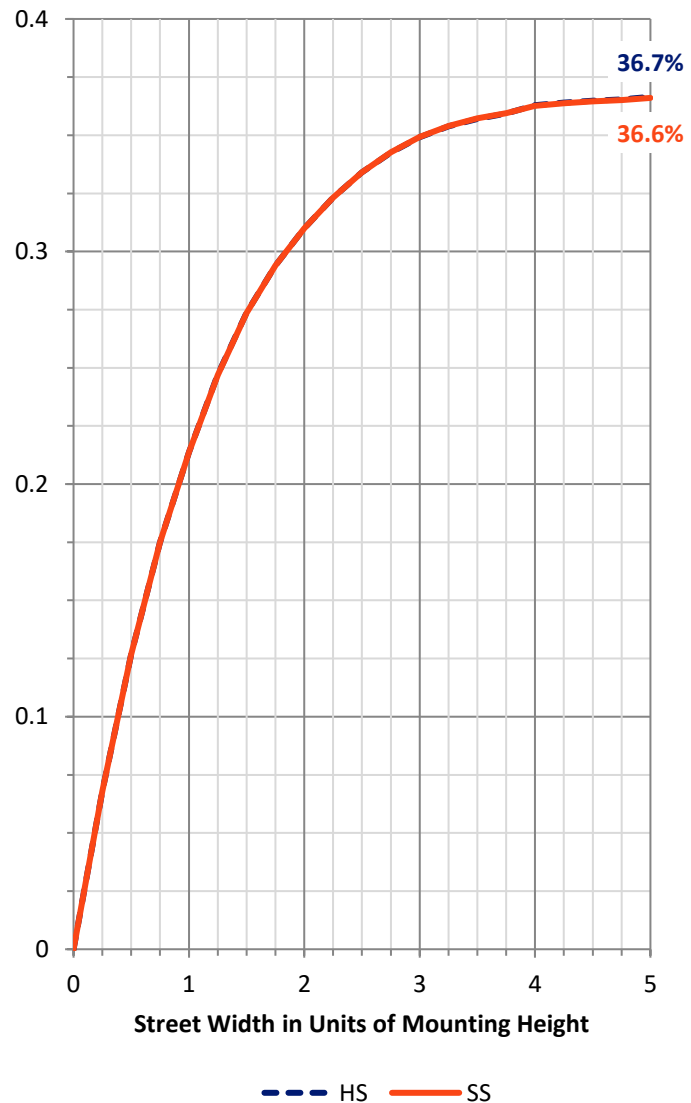
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|--------|----------|--------|---------|
| House Side | Lumens | 18273.4 | 0.0 | 18273.4 |
| | % Lamp | 36.5 | 0.0 | 36.5 |
| Street Side | Lumens | 18273.4 | 0.0 | 18273.4 |
| | % Lamp | 36.5 | 0.0 | 36.5 |
| Total | Lumens | 36546.8 | 0.0 | 36546.8 |
| | % Lamp | 73.1 | 0.0 | 73.1 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|---------|-----------|--------|
| 0°-10° | 695.2 | 1.9 | 1.4 |
| 10°-20° | 2011.6 | 5.5 | 4.0 |
| 20°-30° | 3147.4 | 8.6 | 6.3 |
| 30°-40° | 4071.1 | 11.1 | 8.1 |
| 40°-50° | 5238.0 | 14.3 | 10.5 |
| 50°-60° | 7074.8 | 19.4 | 14.1 |
| 60°-70° | 8436.5 | 23.1 | 16.9 |
| 70°-80° | 5581.0 | 15.3 | 11.2 |
| 80°-90° | 291.2 | 0.8 | 0.6 |
| 90°-100° | 0.0 | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-90° | 36546.8 | 100.0 | 73.1 |
| 0°-180° | 36546.8 | 100.0 | 73.1 |



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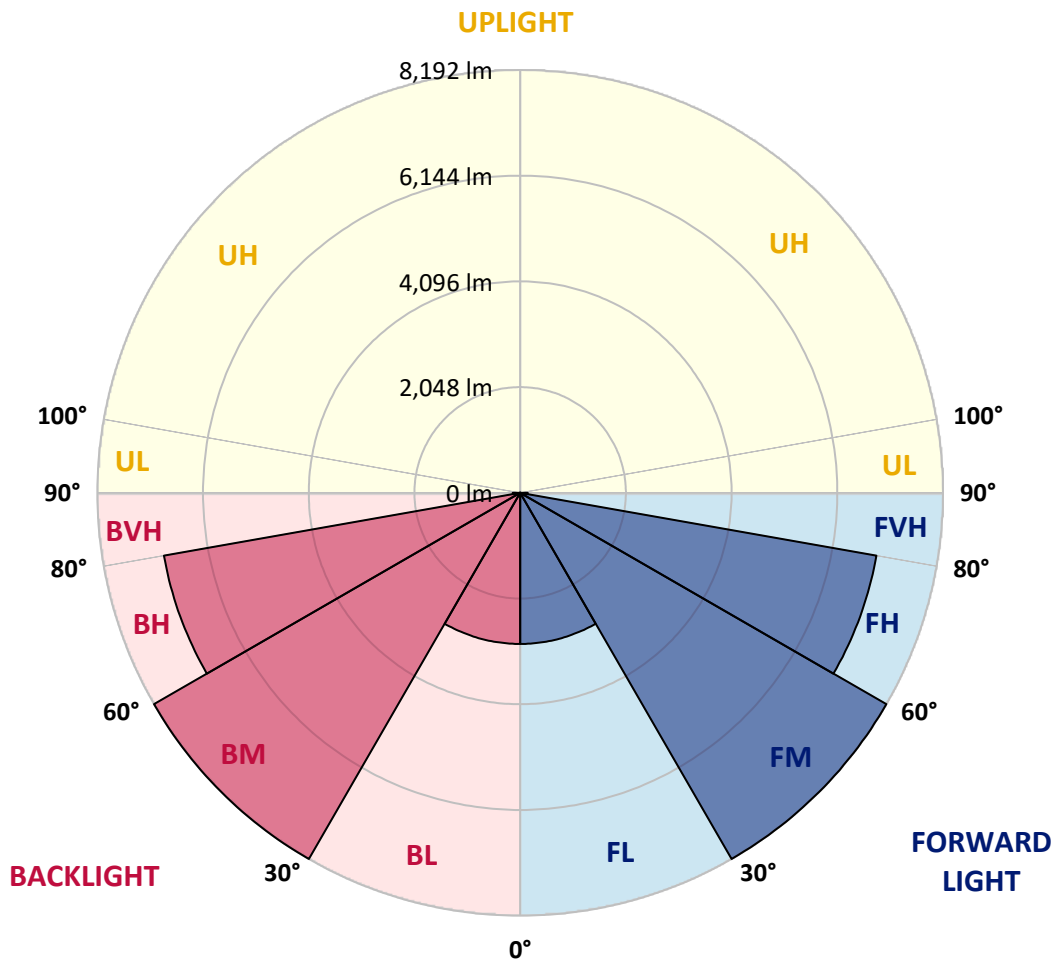
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Lamp | Zone Rating/Lumen Limit | | |
|----------------|---------|--------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2927.1 | 5.9 | | | |
| FM (30°-60°) | 8192.0 | 16.4 | | | |
| FH (60°-80°) | 7008.7 | 14.0 | | | G3/7500 |
| FVH (80°-90°) | 145.6 | 0.3 | | | G2/225 |
| BL (0°-30°) | 2927.1 | 5.9 | B4/5000 | | |
| BM (30°-60°) | 8192.0 | 16.4 | B4/8500 | | |
| BH (60°-80°) | 7008.7 | 14.0 | B5 | | G3/7500 |
| BVH (80°-90°) | 145.6 | 0.3 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |
| Trapped Light | 13453.2 | 26.9 | | | |

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|------|------|------|------|------|-------|-------|------|-------|------|------|
| 0° | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 |
| 2.5° | 7395 | 7372 | 7330 | 7298 | 7298 | 7279 | 7270 | 7265 | 7261 | 7265 | 7274 |
| 5° | 7358 | 7344 | 7325 | 7302 | 7302 | 7293 | 7270 | 7242 | 7228 | 7223 | 7219 |
| 7.5° | 7256 | 7237 | 7242 | 7279 | 7321 | 7348 | 7330 | 7307 | 7265 | 7242 | 7247 |
| 10° | 7108 | 7099 | 7117 | 7186 | 7288 | 7376 | 7409 | 7367 | 7307 | 7242 | 7237 |
| 12.5° | 6960 | 6950 | 6969 | 7052 | 7186 | 7335 | 7427 | 7422 | 7316 | 7205 | 7191 |
| 15° | 6830 | 6812 | 6826 | 6881 | 7020 | 7210 | 7409 | 7432 | 7335 | 7177 | 7163 |
| 17.5° | 6719 | 6696 | 6705 | 6738 | 6858 | 7052 | 7302 | 7418 | 7325 | 7168 | 7154 |
| 20° | 6627 | 6599 | 6599 | 6627 | 6724 | 6895 | 7145 | 7344 | 7284 | 7136 | 7108 |
| 22.5° | 6627 | 6590 | 6548 | 6525 | 6631 | 6775 | 6978 | 7196 | 7210 | 7089 | 7080 |
| 25° | 6719 | 6677 | 6580 | 6548 | 6631 | 6710 | 6849 | 7034 | 7112 | 7062 | 7034 |
| 27.5° | 7006 | 6937 | 6687 | 6566 | 6562 | 6608 | 6724 | 6881 | 7006 | 7006 | 6997 |
| 30° | 7228 | 7094 | 6664 | 6400 | 6386 | 6465 | 6594 | 6738 | 6872 | 6909 | 6904 |
| 32.5° | 6950 | 6863 | 6497 | 6275 | 6261 | 6358 | 6506 | 6636 | 6751 | 6821 | 6821 |
| 35° | 6627 | 6585 | 6409 | 6229 | 6196 | 6307 | 6451 | 6562 | 6677 | 6756 | 6765 |
| 37.5° | 6284 | 6261 | 6298 | 6256 | 6205 | 6293 | 6423 | 6543 | 6640 | 6705 | 6728 |
| 40° | 5979 | 5969 | 6113 | 6247 | 6247 | 6321 | 6418 | 6562 | 6677 | 6710 | 6719 |
| 42.5° | 6062 | 6043 | 6108 | 6215 | 6340 | 6418 | 6418 | 6585 | 6802 | 6798 | 6765 |
| 45° | 6849 | 6839 | 6728 | 6534 | 6349 | 6418 | 6474 | 6654 | 6964 | 7025 | 6987 |
| 47.5° | 7959 | 7816 | 7279 | 6622 | 6594 | 6645 | 6418 | 6756 | 7464 | 7270 | 7154 |
| 50° | 8459 | 8478 | 8186 | 7376 | 7274 | 6631 | 7307 | 7089 | 7626 | 7534 | 7358 |
| 52.5° | 8931 | 9037 | 8556 | 7223 | 6377 | 6627 | 6756 | 6890 | 7589 | 7631 | 7487 |
| 55° | 7969 | 7885 | 7751 | 7298 | 7663 | 7520 | 7163 | 7793 | 8783 | 8218 | 7913 |
| 57.5° | 7682 | 7913 | 8260 | 8380 | 8635 | 7936 | 9843 | 9204 | 8968 | 8700 | 8154 |
| 60° | 6923 | 6821 | 7376 | 7723 | 7140 | 7811 | 9329 | 8158 | 8519 | 8130 | 7663 |
| 62.5° | 6821 | 6576 | 6927 | 7783 | 7330 | 8505 | 9042 | 8390 | 8561 | 7626 | 7089 |
| 65° | 7737 | 7131 | 7672 | 8769 | 8542 | 8778 | 9838 | 9491 | 9084 | 7770 | 7173 |
| 67.5° | 8959 | 7742 | 8459 | 8769 | 7825 | 10000 | 10171 | 9875 | 10227 | 7871 | 7459 |
| 70° | 8968 | 8089 | 8764 | 9389 | 9968 | 11032 | 10088 | 9301 | 8908 | 6701 | 6784 |
| 72.5° | 6775 | 6441 | 7325 | 8880 | 8709 | 10046 | 8732 | 7547 | 7270 | 4308 | 4387 |
| 75° | 3730 | 3707 | 4484 | 6182 | 5914 | 7733 | 6363 | 5909 | 4646 | 2814 | 3110 |
| 77.5° | 1684 | 1615 | 2110 | 3373 | 3272 | 4188 | 4040 | 3586 | 2827 | 1920 | 2027 |
| 80° | 713 | 694 | 842 | 1055 | 1161 | 1606 | 1902 | 1805 | 1365 | 801 | 888 |
| 82.5° | 315 | 310 | 324 | 338 | 305 | 333 | 278 | 342 | 333 | 273 | 268 |
| 85° | 130 | 125 | 130 | 139 | 120 | 130 | 111 | 125 | 120 | 111 | 102 |
| 87.5° | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: GSM-XX-400-HPS-XX-5S-FG

CANDELA DISTRIBUTION (continued):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|------|-------|------|-------|-------|------|------|------|------|------|
| 0° | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 | 7331 |
| 2.5° | 7265 | 7261 | 7265 | 7270 | 7279 | 7298 | 7298 | 7330 | 7372 | 7395 |
| 5° | 7223 | 7228 | 7242 | 7270 | 7293 | 7302 | 7302 | 7325 | 7344 | 7358 |
| 7.5° | 7242 | 7265 | 7307 | 7330 | 7348 | 7321 | 7279 | 7242 | 7237 | 7256 |
| 10° | 7242 | 7307 | 7367 | 7409 | 7376 | 7288 | 7186 | 7117 | 7099 | 7108 |
| 12.5° | 7205 | 7316 | 7422 | 7427 | 7335 | 7186 | 7052 | 6969 | 6950 | 6960 |
| 15° | 7177 | 7335 | 7432 | 7409 | 7210 | 7020 | 6881 | 6826 | 6812 | 6830 |
| 17.5° | 7168 | 7325 | 7418 | 7302 | 7052 | 6858 | 6738 | 6705 | 6696 | 6719 |
| 20° | 7136 | 7284 | 7344 | 7145 | 6895 | 6724 | 6627 | 6599 | 6599 | 6627 |
| 22.5° | 7089 | 7210 | 7196 | 6978 | 6775 | 6631 | 6525 | 6548 | 6590 | 6627 |
| 25° | 7062 | 7112 | 7034 | 6849 | 6710 | 6631 | 6548 | 6580 | 6677 | 6719 |
| 27.5° | 7006 | 7006 | 6881 | 6724 | 6608 | 6562 | 6566 | 6687 | 6937 | 7006 |
| 30° | 6909 | 6872 | 6738 | 6594 | 6465 | 6386 | 6400 | 6664 | 7094 | 7228 |
| 32.5° | 6821 | 6751 | 6636 | 6506 | 6358 | 6261 | 6275 | 6497 | 6863 | 6950 |
| 35° | 6756 | 6677 | 6562 | 6451 | 6307 | 6196 | 6229 | 6409 | 6585 | 6627 |
| 37.5° | 6705 | 6640 | 6543 | 6423 | 6293 | 6205 | 6256 | 6298 | 6261 | 6284 |
| 40° | 6710 | 6677 | 6562 | 6418 | 6321 | 6247 | 6247 | 6113 | 5969 | 5979 |
| 42.5° | 6798 | 6802 | 6585 | 6418 | 6418 | 6340 | 6215 | 6108 | 6043 | 6062 |
| 45° | 7025 | 6964 | 6654 | 6474 | 6418 | 6349 | 6534 | 6728 | 6839 | 6849 |
| 47.5° | 7270 | 7464 | 6756 | 6418 | 6645 | 6594 | 6622 | 7279 | 7816 | 7959 |
| 50° | 7534 | 7626 | 7089 | 7307 | 6631 | 7274 | 7376 | 8186 | 8478 | 8459 |
| 52.5° | 7631 | 7589 | 6890 | 6756 | 6627 | 6377 | 7223 | 8556 | 9037 | 8931 |
| 55° | 8218 | 8783 | 7793 | 7163 | 7520 | 7663 | 7298 | 7751 | 7885 | 7969 |
| 57.5° | 8700 | 8968 | 9204 | 9843 | 7936 | 8635 | 8380 | 8260 | 7913 | 7682 |
| 60° | 8130 | 8519 | 8158 | 9329 | 7811 | 7140 | 7723 | 7376 | 6821 | 6923 |
| 62.5° | 7626 | 8561 | 8390 | 9042 | 8505 | 7330 | 7783 | 6927 | 6576 | 6821 |
| 65° | 7770 | 9084 | 9491 | 9838 | 8778 | 8542 | 8769 | 7672 | 7131 | 7737 |
| 67.5° | 7871 | 10227 | 9875 | 10171 | 10000 | 7825 | 8769 | 8459 | 7742 | 8959 |
| 70° | 6701 | 8908 | 9301 | 10088 | 11032 | 9968 | 9389 | 8764 | 8089 | 8968 |
| 72.5° | 4308 | 7270 | 7547 | 8732 | 10046 | 8709 | 8880 | 7325 | 6441 | 6775 |
| 75° | 2814 | 4646 | 5909 | 6363 | 7733 | 5914 | 6182 | 4484 | 3707 | 3730 |
| 77.5° | 1920 | 2827 | 3586 | 4040 | 4188 | 3272 | 3373 | 2110 | 1615 | 1684 |
| 80° | 801 | 1365 | 1805 | 1902 | 1606 | 1161 | 1055 | 842 | 694 | 713 |
| 82.5° | 273 | 333 | 342 | 278 | 333 | 305 | 338 | 324 | 310 | 315 |
| 85° | 111 | 120 | 125 | 111 | 130 | 120 | 139 | 130 | 125 | 130 |
| 87.5° | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)