

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: LUMARK

Report Number: P1436757

Luminaire Tested: XAS180-SFPM (5000K-144W-T5)

Issue Date: 3/25/2026

Test Information

Test Method: LM-79-2024
Report Number: P1436757
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA ()
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 3/25/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: LUMARK
Catalog Number: XAS180-SFPM (5000K-144W-T5)
Description: XAS180 ALL-SELECTABLE AREA SITE LUMINAIRE.
LUMEN OUTPUT - 80% (144W)
OPTICS - TYPE 5
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

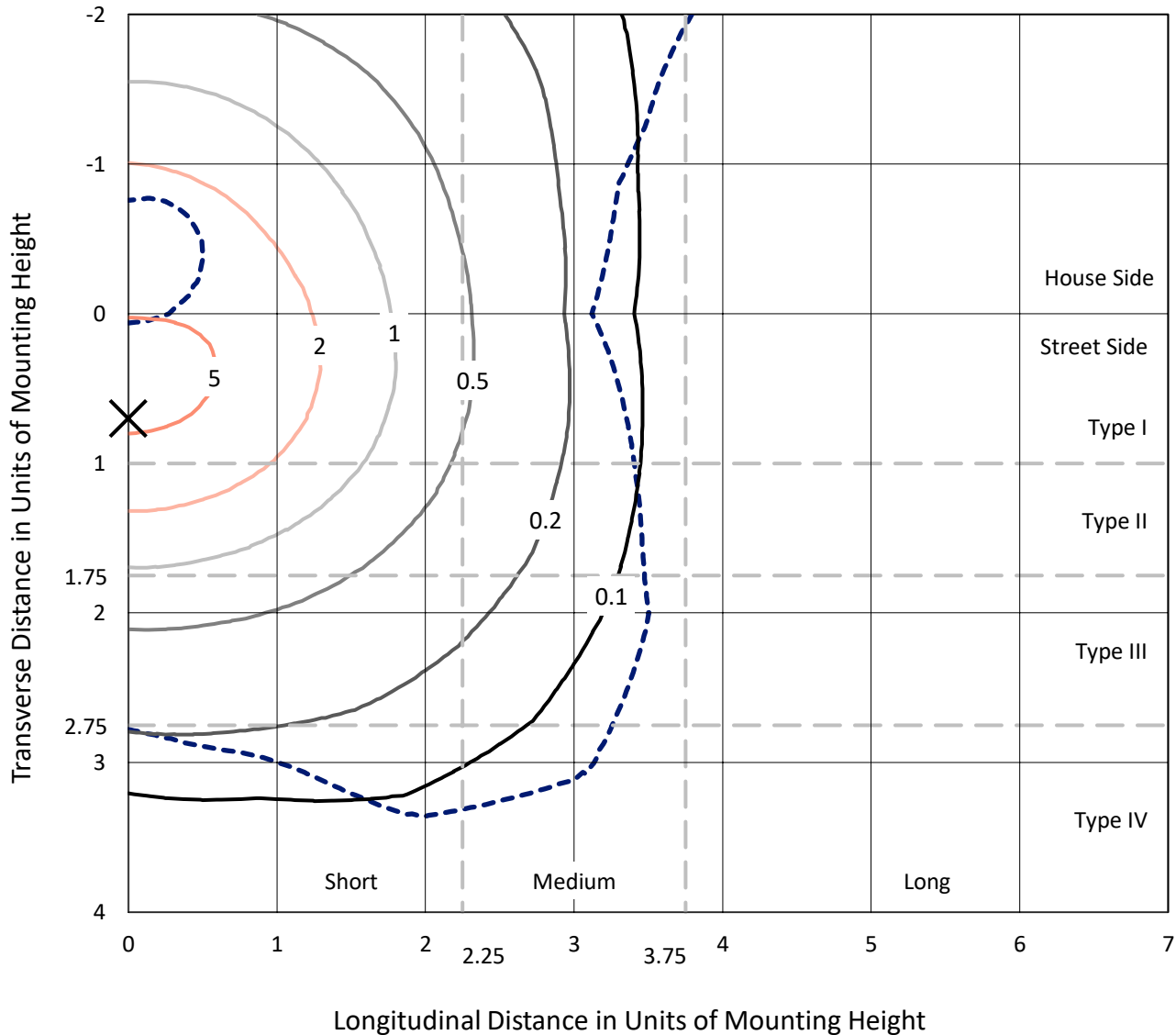
Lumens per Lamp: 28628 (1 lamp)
Luminaire Lumens: 22674.2 lumens
Efficiency: 79.2%
Efficacy: 155.3 lumens/watt
Luminous Opening: Rectangular (W 0.29m x L: 0.35m x H: 0m)
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 146
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

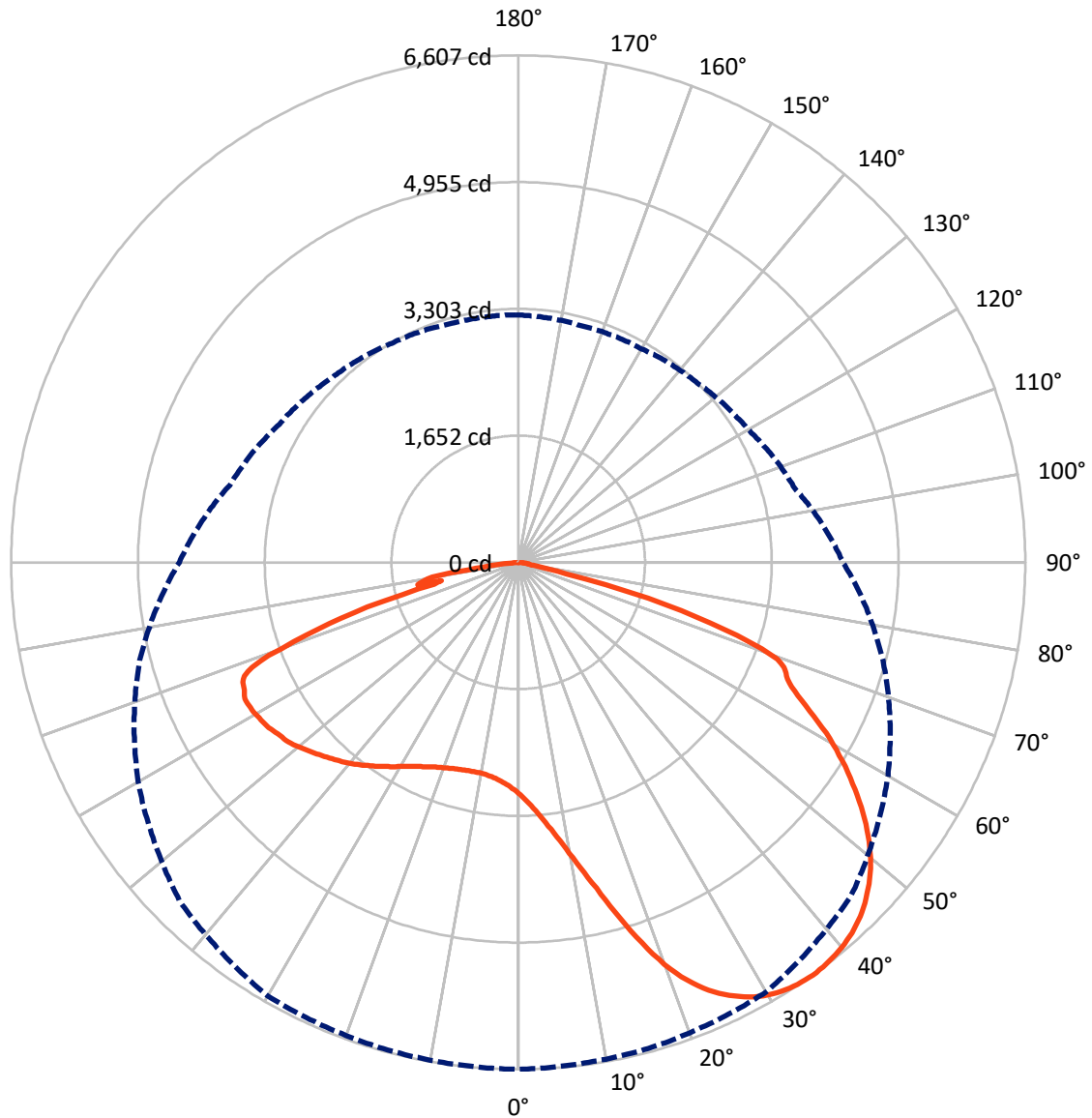
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 35-Deg Vertical

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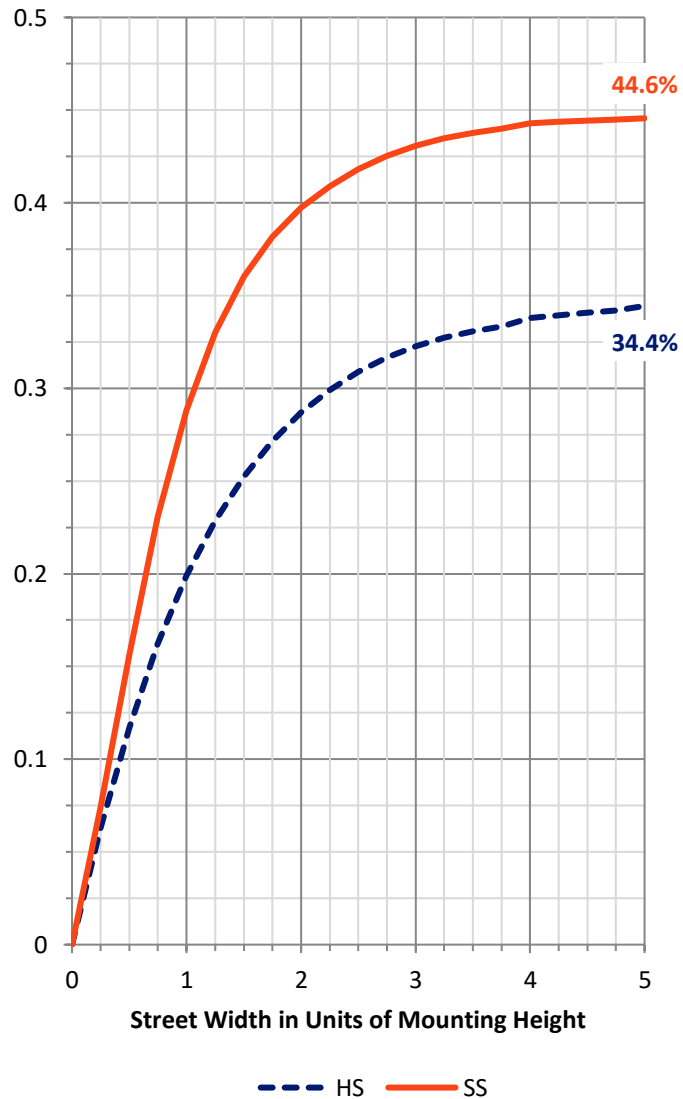
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|--------|----------|--------|---------|
| House Side | Lumens | 9926.5 | 0.0 | 9926.5 |
| | % Lamp | 34.7 | 0.0 | 34.7 |
| Street Side | Lumens | 12747.8 | 0.0 | 12747.8 |
| | % Lamp | 44.5 | 0.0 | 44.5 |
| Total | Lumens | 22674.2 | 0.0 | 22674.2 |
| | % Lamp | 79.2 | 0.0 | 79.2 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|---------|-----------|--------|
| 0°-10° | 300.4 | 1.3 | 1.0 |
| 10°-20° | 1019.4 | 4.5 | 3.6 |
| 20°-30° | 1956.9 | 8.6 | 6.8 |
| 30°-40° | 2947.8 | 13.0 | 10.3 |
| 40°-50° | 3855.1 | 17.0 | 13.5 |
| 50°-60° | 4533.7 | 20.0 | 15.8 |
| 60°-70° | 4730.2 | 20.9 | 16.5 |
| 70°-80° | 3028.4 | 13.4 | 10.6 |
| 80°-90° | 302.2 | 1.3 | 1.1 |
| 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° | 22674.2 | 100.0 | 79.2 |
| 0°-180° | 22674.2 | 100.0 | 79.2 |

Coefficient of Utilization



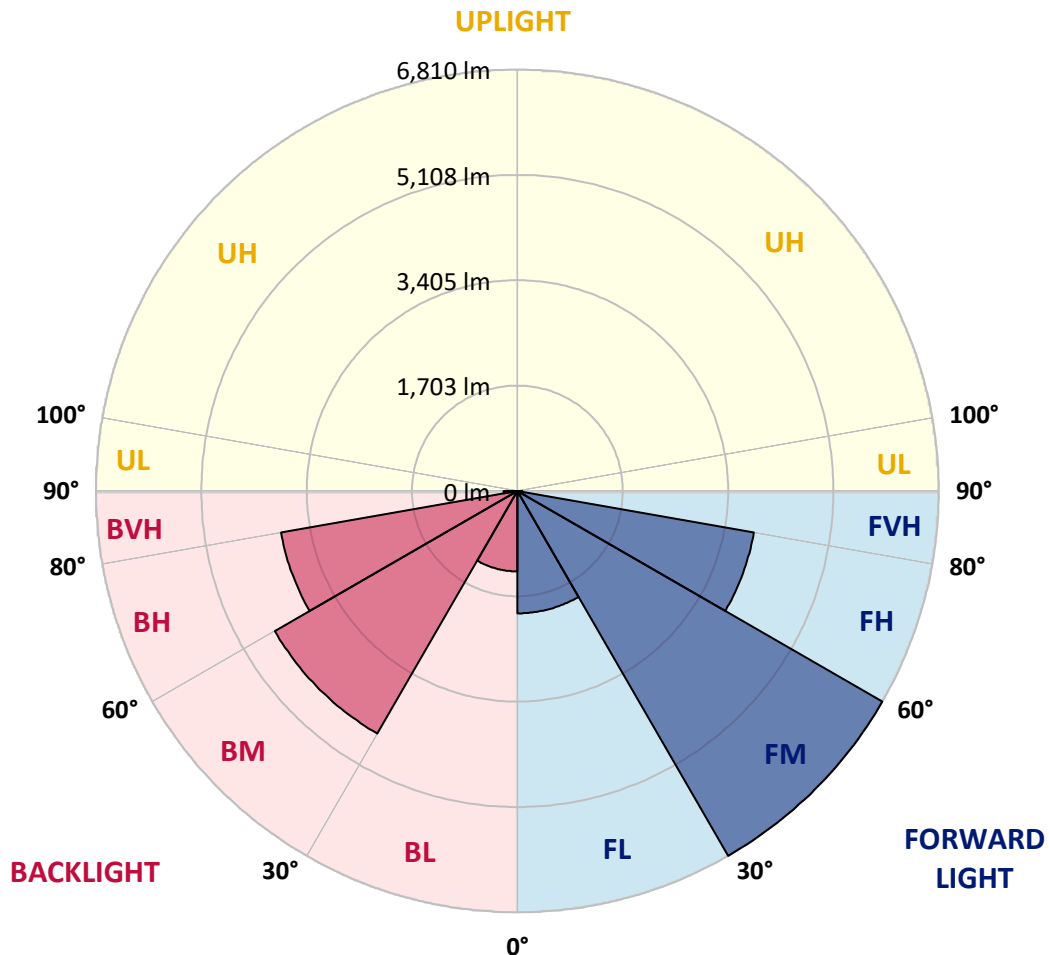
REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Lamp | Zone Rating/Lumen Limit | | |
|----------------|--------|--------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1977.4 | 6.9 | | | |
| FM (30°-60°) | 6810.3 | 23.8 | | | |
| FH (60°-80°) | 3880.4 | 13.6 | | | G2/5000 |
| FVH (80°-90°) | 79.6 | 0.3 | | | G1/100 |
| BL (0°-30°) | 1299.4 | 4.5 | B3/2500 | | |
| BM (30°-60°) | 4526.3 | 15.8 | B3/5000 | | |
| BH (60°-80°) | 3878.2 | 13.5 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 222.6 | 0.8 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |
| Trapped Light | 5953.8 | 20.8 | | | |

BUG Rating: B4-U0-G4
 Type IV Short



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CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (FULL):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 |
| 1° | 3079.7 | 3078.8 | 3074.7 | 3067.3 | 3057.1 | 3046.3 | 3022.9 | 3010.6 | 3000.7 | 2992.3 | 2987.0 |
| 2° | 3139.2 | 3136.4 | 3126.0 | 3108.1 | 3084.7 | 3060.1 | 3023.8 | 3000.5 | 2980.0 | 2963.2 | 2952.4 |
| 3° | 3206.3 | 3200.9 | 3182.1 | 3153.5 | 3118.2 | 3079.0 | 3029.1 | 2993.8 | 2963.2 | 2939.0 | 2921.9 |
| 4° | 3280.9 | 3271.7 | 3244.8 | 3204.6 | 3154.9 | 3100.6 | 3036.2 | 2989.8 | 2949.9 | 2919.1 | 2897.1 |
| 5° | 3364.8 | 3352.2 | 3315.6 | 3260.4 | 3196.0 | 3126.0 | 3046.1 | 2987.8 | 2939.5 | 2902.2 | 2875.8 |
| 6° | 3457.4 | 3439.6 | 3394.0 | 3323.3 | 3240.6 | 3153.3 | 3057.8 | 2988.6 | 2932.1 | 2889.1 | 2858.2 |
| 7° | 3558.2 | 3536.2 | 3479.4 | 3393.3 | 3289.4 | 3184.2 | 3073.8 | 2992.6 | 2927.2 | 2878.8 | 2844.9 |
| 8° | 3668.5 | 3640.8 | 3572.3 | 3467.0 | 3342.1 | 3219.4 | 3092.5 | 2999.9 | 2925.6 | 2870.4 | 2833.8 |
| 9° | 3787.5 | 3757.1 | 3672.1 | 3546.8 | 3401.6 | 3256.2 | 3113.4 | 3008.3 | 2926.9 | 2865.5 | 2825.4 |
| 10° | 3916.2 | 3876.9 | 3779.8 | 3634.0 | 3465.5 | 3296.6 | 3137.4 | 3020.4 | 2930.4 | 2864.5 | 2819.7 |
| 11° | 4056.2 | 4011.8 | 3895.8 | 3727.8 | 3532.4 | 3340.2 | 3163.0 | 3035.0 | 2936.1 | 2865.8 | 2817.4 |
| 12° | 4207.1 | 4152.3 | 4018.8 | 3824.7 | 3601.3 | 3388.0 | 3191.2 | 3050.6 | 2944.1 | 2868.8 | 2819.0 |
| 13° | 4367.0 | 4306.2 | 4152.5 | 3928.8 | 3675.9 | 3438.4 | 3220.8 | 3068.0 | 2953.5 | 2874.4 | 2822.5 |
| 14° | 4543.8 | 4472.7 | 4295.2 | 4040.0 | 3755.1 | 3488.9 | 3250.8 | 3085.3 | 2963.9 | 2881.6 | 2826.7 |
| 15° | 4732.2 | 4651.3 | 4445.8 | 4156.9 | 3836.4 | 3541.5 | 3282.9 | 3104.0 | 2976.3 | 2890.3 | 2832.9 |
| 16° | 4926.3 | 4833.1 | 4602.9 | 4282.5 | 3924.0 | 3597.6 | 3317.5 | 3125.4 | 2989.3 | 2900.0 | 2841.1 |
| 17° | 5120.0 | 5017.2 | 4759.5 | 4411.3 | 4015.3 | 3655.7 | 3353.5 | 3146.8 | 3004.4 | 2910.3 | 2850.3 |
| 18° | 5310.8 | 5197.0 | 4916.7 | 4540.9 | 4110.8 | 3715.1 | 3391.0 | 3171.2 | 3020.6 | 2923.1 | 2859.0 |
| 19° | 5490.2 | 5369.7 | 5071.7 | 4666.7 | 4209.4 | 3777.1 | 3430.1 | 3196.5 | 3037.1 | 2936.6 | 2869.9 |
| 20° | 5655.4 | 5532.8 | 5218.6 | 4792.1 | 4309.9 | 3841.9 | 3471.4 | 3223.5 | 3054.9 | 2950.8 | 2882.3 |
| 21° | 5804.2 | 5684.0 | 5361.2 | 4914.0 | 4409.1 | 3909.1 | 3513.2 | 3251.7 | 3073.6 | 2964.5 | 2895.8 |
| 22° | 5932.5 | 5813.3 | 5494.7 | 5032.5 | 4509.1 | 3978.1 | 3557.1 | 3280.9 | 3095.1 | 2980.6 | 2910.8 |
| 23° | 6048.8 | 5937.8 | 5618.9 | 5146.1 | 4608.1 | 4050.3 | 3602.5 | 3310.8 | 3118.4 | 2997.8 | 2927.5 |
| 24° | 6151.0 | 6045.2 | 5734.0 | 5252.8 | 4705.0 | 4124.5 | 3648.8 | 3342.4 | 3142.4 | 3017.3 | 2945.4 |
| 25° | 6238.8 | 6141.1 | 5840.7 | 5357.2 | 4800.0 | 4199.6 | 3697.6 | 3375.1 | 3167.0 | 3038.3 | 2963.6 |
| 26° | 6314.6 | 6225.9 | 5940.6 | 5454.9 | 4891.4 | 4274.1 | 3747.3 | 3408.9 | 3192.7 | 3059.7 | 2983.7 |
| 27° | 6382.7 | 6298.1 | 6028.9 | 5548.7 | 4980.3 | 4350.1 | 3797.1 | 3443.1 | 3218.8 | 3082.6 | 3004.6 |
| 28° | 6440.1 | 6359.6 | 6108.6 | 5638.7 | 5064.4 | 4425.4 | 3848.8 | 3476.4 | 3246.3 | 3107.4 | 3026.7 |
| 29° | 6487.8 | 6413.3 | 6181.4 | 5724.0 | 5144.1 | 4500.4 | 3901.6 | 3511.3 | 3273.2 | 3134.3 | 3049.9 |
| 30° | 6525.3 | 6456.2 | 6246.6 | 5806.5 | 5223.2 | 4573.1 | 3956.2 | 3546.8 | 3302.4 | 3160.9 | 3073.9 |
| 31° | 6556.1 | 6490.6 | 6303.6 | 5882.4 | 5296.4 | 4645.2 | 4010.6 | 3581.6 | 3332.6 | 3188.0 | 3099.0 |
| 32° | 6578.5 | 6518.8 | 6354.0 | 5953.2 | 5366.7 | 4716.1 | 4065.8 | 3618.1 | 3362.6 | 3216.2 | 3126.0 |
| 33° | 6595.5 | 6539.1 | 6398.0 | 6020.5 | 5434.4 | 4785.0 | 4120.7 | 3656.0 | 3394.2 | 3244.1 | 3154.0 |
| 34° | 6603.2 | 6551.2 | 6433.1 | 6080.8 | 5498.9 | 4852.3 | 4176.0 | 3691.9 | 3426.1 | 3273.1 | 3182.6 |
| 35° | 6606.7 | 6557.0 | 6462.8 | 6136.5 | 5562.5 | 4917.2 | 4231.2 | 3728.7 | 3458.8 | 3303.1 | 3213.1 |
| 36° | 6604.8 | 6558.7 | 6486.2 | 6187.8 | 5621.0 | 4980.2 | 4286.2 | 3765.4 | 3492.0 | 3333.5 | 3244.8 |
| 37° | 6595.7 | 6553.5 | 6502.8 | 6234.5 | 5677.9 | 5040.8 | 4340.0 | 3803.5 | 3525.8 | 3365.4 | 3277.3 |
| 38° | 6582.0 | 6544.2 | 6513.9 | 6276.4 | 5732.5 | 5100.4 | 4395.5 | 3842.3 | 3559.4 | 3398.7 | 3310.3 |
| 39° | 6565.2 | 6532.6 | 6517.9 | 6311.8 | 5785.1 | 5158.8 | 4451.0 | 3881.1 | 3593.8 | 3431.9 | 3343.1 |
| 40° | 6543.0 | 6516.0 | 6517.7 | 6344.0 | 5834.7 | 5215.3 | 4507.5 | 3922.3 | 3629.2 | 3466.1 | 3376.3 |
| 41° | 6512.5 | 6493.4 | 6510.6 | 6371.1 | 5880.8 | 5269.7 | 4561.0 | 3965.6 | 3665.7 | 3500.7 | 3410.2 |
| 42° | 6478.9 | 6465.4 | 6498.7 | 6394.5 | 5926.6 | 5323.1 | 4613.0 | 4009.1 | 3702.5 | 3536.9 | 3444.7 |
| 43° | 6437.8 | 6434.6 | 6482.6 | 6411.7 | 5967.9 | 5376.2 | 4664.2 | 4051.3 | 3739.2 | 3574.6 | 3479.6 |
| 44° | 6389.8 | 6399.2 | 6460.4 | 6421.6 | 6007.2 | 5426.9 | 4711.0 | 4095.5 | 3777.2 | 3612.2 | 3515.9 |



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CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 6334.1 | 6355.2 | 6430.2 | 6429.1 | 6045.5 | 5477.5 | 4759.2 | 4142.0 | 3817.6 | 3650.4 | 3552.4 |
| 46° | 6268.7 | 6308.6 | 6399.4 | 6430.4 | 6081.8 | 5527.6 | 4806.0 | 4190.1 | 3859.2 | 3689.8 | 3590.0 |
| 47° | 6198.4 | 6251.5 | 6361.5 | 6426.0 | 6117.0 | 5578.4 | 4851.4 | 4238.7 | 3901.5 | 3729.4 | 3629.1 |
| 48° | 6123.1 | 6189.3 | 6317.7 | 6414.1 | 6148.2 | 5624.6 | 4893.9 | 4287.9 | 3945.5 | 3769.8 | 3668.7 |
| 49° | 6037.5 | 6118.6 | 6269.8 | 6400.3 | 6175.6 | 5669.5 | 4934.7 | 4337.5 | 3990.9 | 3812.6 | 3709.2 |
| 50° | 5945.1 | 6039.1 | 6211.9 | 6377.4 | 6200.0 | 5713.7 | 4974.1 | 4386.7 | 4036.5 | 3855.7 | 3751.8 |
| 51° | 5840.9 | 5952.1 | 6148.5 | 6349.9 | 6220.9 | 5754.1 | 5013.7 | 4436.5 | 4084.5 | 3902.0 | 3794.4 |
| 52° | 5730.4 | 5853.6 | 6075.9 | 6313.6 | 6237.6 | 5791.2 | 5050.8 | 4488.4 | 4133.6 | 3950.0 | 3840.8 |
| 53° | 5612.6 | 5748.6 | 5998.7 | 6270.4 | 6249.9 | 5825.0 | 5085.8 | 4537.5 | 4183.4 | 3997.7 | 3884.8 |
| 54° | 5490.7 | 5632.7 | 5912.6 | 6222.5 | 6254.5 | 5854.8 | 5119.2 | 4585.4 | 4236.2 | 4047.2 | 3932.2 |
| 55° | 5362.2 | 5509.2 | 5817.3 | 6166.1 | 6251.9 | 5879.0 | 5148.4 | 4628.6 | 4289.4 | 4099.4 | 3980.7 |
| 56° | 5225.3 | 5383.5 | 5713.5 | 6102.1 | 6243.7 | 5897.2 | 5174.8 | 4670.3 | 4342.9 | 4153.0 | 4030.4 |
| 57° | 5092.4 | 5251.8 | 5608.0 | 6032.8 | 6224.7 | 5908.9 | 5198.4 | 4708.5 | 4396.7 | 4209.4 | 4081.6 |
| 58° | 4951.7 | 5117.9 | 5494.8 | 5956.0 | 6196.0 | 5910.9 | 5214.2 | 4743.1 | 4450.7 | 4268.2 | 4129.8 |
| 59° | 4812.7 | 4981.6 | 5381.4 | 5870.5 | 6157.8 | 5902.6 | 5223.6 | 4774.2 | 4504.8 | 4330.1 | 4177.3 |
| 60° | 4663.3 | 4844.3 | 5261.9 | 5778.5 | 6109.3 | 5884.3 | 5228.1 | 4800.6 | 4559.0 | 4392.7 | 4224.3 |
| 61° | 4508.4 | 4699.9 | 5142.5 | 5683.2 | 6049.5 | 5857.3 | 5222.9 | 4821.9 | 4613.3 | 4456.2 | 4271.6 |
| 62° | 4346.3 | 4552.7 | 5024.1 | 5580.5 | 5982.0 | 5815.8 | 5208.2 | 4837.0 | 4665.6 | 4519.2 | 4318.0 |
| 63° | 4186.6 | 4404.5 | 4907.1 | 5473.2 | 5906.8 | 5759.0 | 5181.0 | 4845.4 | 4717.0 | 4581.1 | 4363.0 |
| 64° | 4036.4 | 4260.7 | 4790.9 | 5364.3 | 5818.1 | 5687.1 | 5140.9 | 4847.3 | 4767.3 | 4643.0 | 4405.9 |
| 65° | 3915.1 | 4129.4 | 4677.8 | 5252.8 | 5722.4 | 5601.8 | 5090.6 | 4839.3 | 4815.6 | 4705.7 | 4446.6 |
| 66° | 3825.9 | 4021.2 | 4569.0 | 5141.8 | 5614.3 | 5499.3 | 5021.9 | 4819.2 | 4857.5 | 4774.9 | 4483.5 |
| 67° | 3775.3 | 3942.1 | 4470.7 | 5032.6 | 5491.3 | 5384.0 | 4933.7 | 4786.0 | 4892.7 | 4840.1 | 4517.7 |
| 68° | 3722.8 | 3888.0 | 4384.8 | 4924.5 | 5355.2 | 5248.7 | 4779.0 | 4728.1 | 4918.9 | 4901.5 | 4516.4 |
| 69° | 3602.8 | 3835.5 | 4315.1 | 4816.9 | 5203.4 | 5070.6 | 4531.0 | 4613.2 | 4928.7 | 4956.7 | 4497.9 |
| 70° | 3365.9 | 3738.9 | 4260.0 | 4708.3 | 5044.3 | 4821.8 | 4187.5 | 4422.2 | 4922.3 | 5001.6 | 4501.0 |
| 71° | 3007.0 | 3547.8 | 4210.2 | 4605.3 | 4854.5 | 4498.5 | 3768.9 | 4146.1 | 4875.8 | 5030.1 | 4475.0 |
| 72° | 2619.4 | 3236.4 | 4150.9 | 4498.6 | 4622.2 | 4115.2 | 3373.1 | 3826.3 | 4762.4 | 5018.7 | 4422.1 |
| 73° | 2219.2 | 2833.5 | 4056.7 | 4384.3 | 4352.2 | 3723.7 | 3040.3 | 3509.1 | 4583.5 | 4957.6 | 4349.9 |
| 74° | 1757.6 | 2399.5 | 3873.5 | 4246.8 | 4049.1 | 3342.5 | 2643.5 | 3208.2 | 4353.4 | 4844.1 | 4207.5 |
| 75° | 1178.8 | 1931.3 | 3550.6 | 4047.6 | 3705.1 | 2922.9 | 2010.3 | 2855.5 | 4095.0 | 4667.2 | 3994.3 |
| 76° | 641.6 | 1370.5 | 3115.3 | 3757.2 | 3346.2 | 2349.8 | 1377.2 | 2210.6 | 3839.7 | 4380.4 | 3705.2 |
| 77° | 419.6 | 765.0 | 2648.1 | 3342.1 | 2954.6 | 1592.6 | 749.2 | 1565.7 | 3551.0 | 3960.0 | 3363.0 |
| 78° | 199.5 | 563.4 | 2086.7 | 2769.1 | 2458.4 | 873.0 | 363.6 | 924.5 | 3122.7 | 3388.0 | 2942.8 |
| 79° | 158.9 | 365.5 | 1376.1 | 2098.1 | 1819.8 | 647.9 | 226.6 | 450.5 | 2366.9 | 2763.6 | 2470.2 |
| 80° | 137.0 | 167.5 | 727.7 | 1384.1 | 1114.7 | 436.8 | 196.0 | 250.8 | 1611.1 | 2205.9 | 2030.7 |
| 81° | 117.8 | 141.5 | 464.8 | 724.5 | 795.8 | 225.7 | 165.4 | 209.9 | 858.1 | 1744.1 | 1842.2 |
| 82° | 100.6 | 120.4 | 207.2 | 466.6 | 490.0 | 190.5 | 134.9 | 169.1 | 412.0 | 1285.4 | 1557.7 |
| 83° | 84.7 | 100.8 | 166.4 | 211.7 | 184.2 | 156.8 | 113.6 | 128.3 | 271.0 | 962.7 | 1273.1 |
| 84° | 70.3 | 82.9 | 134.7 | 165.8 | 147.8 | 121.4 | 93.5 | 103.7 | 217.5 | 677.6 | 985.6 |
| 85° | 55.9 | 68.0 | 103.0 | 136.8 | 113.8 | 93.2 | 74.1 | 82.6 | 178.1 | 437.0 | 609.4 |
| 86° | 41.5 | 53.1 | 77.2 | 109.7 | 83.7 | 73.3 | 55.9 | 64.2 | 138.8 | 314.0 | 430.6 |
| 87° | 28.3 | 38.2 | 55.9 | 80.0 | 61.8 | 53.6 | 39.0 | 47.6 | 101.4 | 190.9 | 251.7 |
| 88° | 16.4 | 24.9 | 34.6 | 64.2 | 39.9 | 33.9 | 27.1 | 36.3 | 67.0 | 70.5 | 74.9 |
| 89° | 7.0 | 10.8 | 14.5 | 48.8 | 18.0 | 17.0 | 15.1 | 25.0 | 45.5 | 47.8 | 50.7 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 | 3028.3 |
| 1° | 2984.3 | 2983.9 | 2986.4 | 2994.3 | 3002.2 | 3013.3 | 3025.2 | 3027.8 | 3039.5 | 3052.2 | 3062.3 |
| 2° | 2946.4 | 2945.0 | 2950.7 | 2961.9 | 2977.4 | 2996.1 | 3019.7 | 3033.9 | 3059.8 | 3084.8 | 3106.3 |
| 3° | 2913.5 | 2911.4 | 2918.6 | 2933.7 | 2955.7 | 2983.9 | 3017.4 | 3044.1 | 3082.1 | 3121.3 | 3156.1 |
| 4° | 2885.9 | 2883.4 | 2892.1 | 2910.6 | 2938.7 | 2974.6 | 3017.9 | 3056.5 | 3108.2 | 3161.7 | 3210.8 |
| 5° | 2862.6 | 2859.0 | 2869.4 | 2891.8 | 2924.5 | 2968.6 | 3020.9 | 3071.5 | 3138.6 | 3207.0 | 3269.2 |
| 6° | 2843.0 | 2838.9 | 2850.9 | 2875.8 | 2914.6 | 2965.3 | 3026.6 | 3089.9 | 3170.9 | 3255.9 | 3336.4 |
| 7° | 2826.2 | 2822.5 | 2834.8 | 2863.1 | 2906.6 | 2965.0 | 3036.4 | 3111.9 | 3207.7 | 3310.7 | 3409.2 |
| 8° | 2814.0 | 2809.4 | 2823.3 | 2854.3 | 2902.0 | 2967.2 | 3048.2 | 3135.1 | 3246.8 | 3370.3 | 3487.8 |
| 9° | 2803.6 | 2799.1 | 2814.1 | 2848.5 | 2900.2 | 2971.8 | 3061.7 | 3161.0 | 3289.8 | 3433.9 | 3571.6 |
| 10° | 2797.0 | 2792.0 | 2808.6 | 2845.4 | 2900.9 | 2977.9 | 3077.1 | 3189.6 | 3335.4 | 3501.3 | 3662.5 |
| 11° | 2793.9 | 2788.2 | 2806.3 | 2846.1 | 2905.6 | 2986.9 | 3095.9 | 3221.6 | 3386.7 | 3573.8 | 3761.2 |
| 12° | 2792.8 | 2787.5 | 2806.5 | 2849.4 | 2912.4 | 2998.9 | 3116.8 | 3255.1 | 3439.0 | 3651.2 | 3863.5 |
| 13° | 2795.2 | 2788.6 | 2808.5 | 2854.5 | 2921.0 | 3012.4 | 3139.5 | 3291.0 | 3494.4 | 3732.9 | 3975.3 |
| 14° | 2797.9 | 2792.3 | 2813.7 | 2862.0 | 2932.6 | 3027.7 | 3162.9 | 3327.8 | 3552.1 | 3818.7 | 4092.9 |
| 15° | 2803.1 | 2796.8 | 2820.2 | 2870.9 | 2946.1 | 3045.6 | 3187.7 | 3366.1 | 3611.9 | 3909.5 | 4219.6 |
| 16° | 2809.2 | 2802.9 | 2827.1 | 2880.1 | 2959.6 | 3064.7 | 3214.1 | 3407.2 | 3674.8 | 4006.0 | 4351.9 |
| 17° | 2816.3 | 2809.9 | 2835.8 | 2891.4 | 2975.2 | 3085.4 | 3242.4 | 3449.7 | 3741.0 | 4106.2 | 4487.1 |
| 18° | 2824.9 | 2818.3 | 2846.2 | 2903.0 | 2991.7 | 3105.8 | 3270.9 | 3493.1 | 3807.5 | 4211.0 | 4624.9 |
| 19° | 2834.4 | 2828.6 | 2856.8 | 2916.5 | 3008.2 | 3128.8 | 3301.4 | 3537.7 | 3876.9 | 4317.9 | 4761.0 |
| 20° | 2846.8 | 2840.4 | 2869.9 | 2931.4 | 3025.8 | 3151.6 | 3333.1 | 3584.2 | 3951.2 | 4425.5 | 4891.1 |
| 21° | 2860.2 | 2854.6 | 2884.2 | 2947.8 | 3043.5 | 3175.9 | 3366.9 | 3632.7 | 4024.7 | 4537.7 | 5017.9 |
| 22° | 2875.0 | 2869.1 | 2900.5 | 2965.6 | 3063.3 | 3201.5 | 3401.3 | 3682.7 | 4104.4 | 4645.6 | 5139.4 |
| 23° | 2891.4 | 2886.5 | 2918.3 | 2984.6 | 3084.6 | 3228.4 | 3435.6 | 3734.2 | 4186.8 | 4752.6 | 5255.0 |
| 24° | 2909.0 | 2905.9 | 2937.8 | 3005.3 | 3106.7 | 3255.0 | 3471.0 | 3787.1 | 4268.1 | 4854.4 | 5362.7 |
| 25° | 2928.3 | 2925.7 | 2958.7 | 3027.1 | 3131.0 | 3283.3 | 3508.2 | 3839.5 | 4350.9 | 4954.2 | 5465.4 |
| 26° | 2949.4 | 2948.1 | 2981.1 | 3049.4 | 3156.0 | 3311.6 | 3545.0 | 3894.4 | 4434.6 | 5046.9 | 5564.7 |
| 27° | 2970.6 | 2972.1 | 3004.5 | 3072.7 | 3181.9 | 3339.5 | 3582.6 | 3950.0 | 4518.7 | 5136.5 | 5656.6 |
| 28° | 2993.3 | 2999.2 | 3028.9 | 3097.9 | 3208.8 | 3369.9 | 3620.4 | 4008.3 | 4601.7 | 5222.7 | 5745.8 |
| 29° | 3017.8 | 3027.2 | 3054.7 | 3123.4 | 3236.8 | 3400.2 | 3659.1 | 4064.8 | 4682.0 | 5304.2 | 5831.0 |
| 30° | 3044.2 | 3057.7 | 3082.6 | 3149.6 | 3263.7 | 3431.5 | 3697.2 | 4122.6 | 4762.2 | 5381.3 | 5910.3 |
| 31° | 3071.9 | 3088.5 | 3111.6 | 3176.5 | 3292.8 | 3463.0 | 3735.2 | 4180.5 | 4838.6 | 5453.8 | 5984.8 |
| 32° | 3100.8 | 3121.8 | 3140.9 | 3206.0 | 3323.1 | 3495.8 | 3774.2 | 4239.1 | 4911.8 | 5522.9 | 6055.0 |
| 33° | 3130.9 | 3155.3 | 3170.9 | 3234.9 | 3353.2 | 3528.5 | 3812.7 | 4298.2 | 4983.7 | 5591.4 | 6122.1 |
| 34° | 3160.8 | 3189.1 | 3200.9 | 3265.4 | 3384.9 | 3561.7 | 3851.6 | 4357.1 | 5049.9 | 5655.4 | 6184.4 |
| 35° | 3190.8 | 3223.8 | 3230.9 | 3297.0 | 3416.3 | 3596.3 | 3890.7 | 4416.6 | 5116.3 | 5718.9 | 6240.0 |
| 36° | 3221.9 | 3259.1 | 3261.0 | 3329.4 | 3448.2 | 3630.8 | 3932.3 | 4477.2 | 5180.5 | 5776.1 | 6291.6 |
| 37° | 3250.5 | 3293.6 | 3291.9 | 3361.5 | 3481.1 | 3666.7 | 3974.1 | 4535.4 | 5241.3 | 5832.7 | 6338.0 |
| 38° | 3282.1 | 3329.9 | 3324.2 | 3396.2 | 3514.7 | 3701.5 | 4017.1 | 4594.8 | 5301.8 | 5886.1 | 6381.3 |
| 39° | 3313.7 | 3365.1 | 3356.5 | 3430.2 | 3549.0 | 3739.3 | 4060.4 | 4651.6 | 5357.9 | 5936.9 | 6417.9 |
| 40° | 3346.2 | 3399.1 | 3390.3 | 3465.0 | 3584.7 | 3775.6 | 4104.3 | 4707.2 | 5412.1 | 5985.2 | 6449.8 |
| 41° | 3380.1 | 3431.6 | 3424.1 | 3500.6 | 3621.2 | 3813.1 | 4148.7 | 4762.4 | 5464.0 | 6030.5 | 6473.8 |
| 42° | 3413.8 | 3464.2 | 3459.2 | 3535.4 | 3659.5 | 3852.7 | 4194.0 | 4814.6 | 5516.8 | 6075.7 | 6492.5 |
| 43° | 3447.8 | 3495.8 | 3495.4 | 3573.8 | 3697.0 | 3893.4 | 4242.1 | 4866.0 | 5568.2 | 6115.8 | 6508.4 |
| 44° | 3483.9 | 3528.8 | 3532.7 | 3611.5 | 3736.1 | 3936.5 | 4290.3 | 4916.6 | 5618.9 | 6152.4 | 6516.4 |

REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 3520.9 | 3561.7 | 3570.0 | 3650.8 | 3776.8 | 3977.6 | 4339.3 | 4966.1 | 5666.9 | 6187.9 | 6520.3 |
| 46° | 3558.6 | 3592.4 | 3608.4 | 3689.2 | 3817.3 | 4021.9 | 4387.7 | 5011.7 | 5713.3 | 6219.6 | 6517.0 |
| 47° | 3598.2 | 3622.6 | 3648.9 | 3728.5 | 3859.8 | 4064.8 | 4437.1 | 5053.6 | 5757.9 | 6249.1 | 6508.5 |
| 48° | 3638.6 | 3654.8 | 3690.5 | 3768.9 | 3902.5 | 4110.0 | 4486.3 | 5095.3 | 5798.7 | 6273.5 | 6495.1 |
| 49° | 3680.5 | 3688.2 | 3731.9 | 3808.8 | 3945.8 | 4156.0 | 4533.7 | 5134.6 | 5837.4 | 6295.2 | 6475.5 |
| 50° | 3723.1 | 3720.3 | 3775.3 | 3850.5 | 3991.2 | 4204.3 | 4581.4 | 5171.8 | 5871.0 | 6314.6 | 6451.3 |
| 51° | 3768.8 | 3753.9 | 3819.0 | 3893.0 | 4035.6 | 4251.5 | 4628.0 | 5205.4 | 5902.3 | 6327.4 | 6419.5 |
| 52° | 3813.1 | 3786.3 | 3862.8 | 3937.5 | 4084.5 | 4298.9 | 4673.6 | 5236.5 | 5927.8 | 6335.6 | 6379.7 |
| 53° | 3854.1 | 3812.0 | 3902.5 | 3981.8 | 4132.9 | 4347.6 | 4715.0 | 5264.3 | 5947.1 | 6337.0 | 6334.1 |
| 54° | 3889.6 | 3830.2 | 3939.5 | 4028.3 | 4184.3 | 4395.5 | 4754.5 | 5285.7 | 5962.1 | 6335.5 | 6283.0 |
| 55° | 3921.7 | 3849.6 | 3971.7 | 4075.7 | 4235.3 | 4444.1 | 4790.7 | 5303.6 | 5969.9 | 6323.8 | 6227.0 |
| 56° | 3955.0 | 3873.3 | 4003.2 | 4124.5 | 4290.6 | 4493.5 | 4821.5 | 5317.4 | 5969.2 | 6305.5 | 6162.3 |
| 57° | 3986.6 | 3898.4 | 4035.4 | 4172.4 | 4344.5 | 4543.4 | 4850.6 | 5324.7 | 5958.9 | 6276.6 | 6090.5 |
| 58° | 4017.6 | 3916.5 | 4066.1 | 4224.3 | 4401.4 | 4591.1 | 4873.9 | 5327.9 | 5939.9 | 6239.9 | 6010.4 |
| 59° | 4042.9 | 3929.9 | 4091.1 | 4272.5 | 4461.0 | 4636.7 | 4892.4 | 5325.3 | 5911.5 | 6193.5 | 5923.9 |
| 60° | 4064.6 | 3946.1 | 4112.9 | 4321.3 | 4521.8 | 4681.9 | 4908.3 | 5315.0 | 5874.2 | 6137.4 | 5829.4 |
| 61° | 4086.9 | 3961.4 | 4135.5 | 4367.1 | 4583.8 | 4727.5 | 4918.5 | 5292.8 | 5828.3 | 6070.2 | 5729.1 |
| 62° | 4108.8 | 3971.4 | 4157.1 | 4415.4 | 4642.9 | 4773.9 | 4921.9 | 5259.7 | 5770.4 | 5992.8 | 5623.6 |
| 63° | 4125.7 | 3979.1 | 4176.2 | 4461.2 | 4699.8 | 4816.3 | 4919.2 | 5217.4 | 5697.9 | 5904.5 | 5514.1 |
| 64° | 4140.3 | 3982.5 | 4193.1 | 4504.6 | 4756.9 | 4855.8 | 4910.6 | 5162.8 | 5614.7 | 5809.4 | 5403.4 |
| 65° | 4141.6 | 3952.3 | 4194.4 | 4545.1 | 4814.3 | 4891.0 | 4889.2 | 5091.6 | 5515.6 | 5701.1 | 5287.5 |
| 66° | 4102.4 | 3926.5 | 4151.8 | 4578.7 | 4870.8 | 4918.3 | 4857.5 | 5002.3 | 5401.7 | 5580.6 | 5170.1 |
| 67° | 4080.2 | 3913.4 | 4128.8 | 4604.6 | 4921.1 | 4940.2 | 4806.6 | 4871.3 | 5273.4 | 5449.1 | 5055.6 |
| 68° | 4071.1 | 3864.4 | 4112.7 | 4594.3 | 4968.7 | 4952.0 | 4711.4 | 4648.8 | 5107.6 | 5306.6 | 4939.4 |
| 69° | 4012.6 | 3725.1 | 4049.0 | 4568.4 | 5008.1 | 4943.6 | 4539.8 | 4322.3 | 4870.4 | 5144.4 | 4824.0 |
| 70° | 3897.5 | 3472.2 | 3935.2 | 4565.4 | 5038.3 | 4908.5 | 4270.1 | 3901.4 | 4554.5 | 4958.1 | 4708.1 |
| 71° | 3714.5 | 3099.0 | 3753.2 | 4533.0 | 5043.5 | 4820.0 | 3930.9 | 3468.3 | 4160.0 | 4732.7 | 4584.1 |
| 72° | 3421.2 | 2751.6 | 3462.2 | 4479.4 | 5008.3 | 4662.0 | 3573.6 | 3086.2 | 3740.5 | 4459.0 | 4454.8 |
| 73° | 3059.0 | 2422.0 | 3088.8 | 4396.2 | 4915.9 | 4433.8 | 3234.5 | 2710.0 | 3335.3 | 4142.3 | 4306.4 |
| 74° | 2703.8 | 2053.9 | 2745.9 | 4247.0 | 4765.3 | 4176.6 | 2887.2 | 2233.1 | 2923.6 | 3782.2 | 4132.5 |
| 75° | 2330.2 | 1564.1 | 2381.5 | 4017.5 | 4538.3 | 3892.6 | 2419.3 | 1552.6 | 2427.4 | 3386.6 | 3886.5 |
| 76° | 1880.9 | 1129.8 | 1929.1 | 3714.6 | 4188.0 | 3589.8 | 1739.8 | 879.1 | 1749.3 | 2972.7 | 3548.3 |
| 77° | 1447.6 | 1029.2 | 1529.0 | 3366.3 | 3712.7 | 3224.6 | 1065.0 | 644.1 | 1023.2 | 2517.7 | 3082.0 |
| 78° | 1362.0 | 1342.2 | 1484.6 | 2935.2 | 3129.7 | 2652.5 | 525.6 | 421.7 | 757.0 | 1954.6 | 2464.2 |
| 79° | 1678.3 | 1276.7 | 1787.3 | 2436.2 | 2556.8 | 1844.2 | 279.8 | 199.3 | 502.8 | 1294.4 | 1779.7 |
| 80° | 1961.4 | 1211.1 | 1527.5 | 1944.3 | 2075.3 | 1041.8 | 232.5 | 169.8 | 248.5 | 731.1 | 1095.1 |
| 81° | 1530.8 | 1139.4 | 1267.8 | 1764.5 | 1593.9 | 500.3 | 185.2 | 145.5 | 206.1 | 475.1 | 790.9 |
| 82° | 1100.2 | 654.0 | 1004.0 | 1458.8 | 1112.5 | 296.0 | 138.0 | 123.2 | 175.3 | 220.6 | 495.1 |
| 83° | 626.9 | 465.0 | 568.7 | 1153.0 | 769.7 | 228.8 | 114.8 | 102.8 | 143.2 | 167.9 | 199.3 |
| 84° | 353.6 | 276.0 | 343.5 | 846.0 | 466.4 | 187.7 | 93.6 | 83.2 | 111.7 | 134.4 | 157.8 |
| 85° | 234.6 | 89.4 | 276.0 | 474.4 | 340.2 | 146.7 | 74.5 | 66.1 | 85.3 | 101.7 | 130.1 |
| 86° | 116.5 | 60.5 | 208.5 | 379.8 | 213.9 | 105.9 | 57.2 | 49.0 | 66.2 | 73.9 | 103.9 |
| 87° | 80.9 | 31.7 | 141.0 | 285.2 | 89.2 | 74.7 | 41.9 | 31.9 | 47.2 | 53.0 | 72.8 |
| 88° | 45.3 | 2.9 | 73.5 | 190.6 | 60.5 | 50.9 | 28.8 | 18.0 | 28.3 | 32.3 | 42.6 |
| 89° | 10.0 | 1.9 | 6.6 | 96.0 | 31.9 | 27.0 | 15.8 | 6.7 | 12.2 | 12.9 | 12.4 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757
 CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 0° | 3028.3 | 3028.3 | 3028.3 |
| 1° | 3071.1 | 3077.1 | 3079.7 |
| 2° | 3124.8 | 3136.9 | 3139.2 |
| 3° | 3183.2 | 3200.9 | 3206.3 |
| 4° | 3248.6 | 3274.8 | 3280.9 |
| 5° | 3322.0 | 3355.9 | 3364.8 |
| 6° | 3403.2 | 3445.2 | 3457.4 |
| 7° | 3490.0 | 3543.8 | 3558.2 |
| 8° | 3583.9 | 3649.4 | 3668.5 |
| 9° | 3687.7 | 3762.7 | 3787.5 |
| 10° | 3797.8 | 3888.0 | 3916.2 |
| 11° | 3917.8 | 4026.0 | 4056.2 |
| 12° | 4048.0 | 4170.0 | 4207.1 |
| 13° | 4187.5 | 4326.6 | 4367.0 |
| 14° | 4335.3 | 4495.4 | 4543.8 |
| 15° | 4489.7 | 4670.3 | 4732.2 |
| 16° | 4648.1 | 4852.7 | 4926.3 |
| 17° | 4812.1 | 5038.9 | 5120.0 |
| 18° | 4973.0 | 5223.6 | 5310.8 |
| 19° | 5129.5 | 5398.4 | 5490.2 |
| 20° | 5280.6 | 5564.6 | 5655.4 |
| 21° | 5421.9 | 5715.1 | 5804.2 |
| 22° | 5554.4 | 5849.6 | 5932.5 |
| 23° | 5680.8 | 5969.4 | 6048.8 |
| 24° | 5797.9 | 6077.0 | 6151.0 |
| 25° | 5908.0 | 6169.7 | 6238.8 |
| 26° | 6006.7 | 6252.2 | 6314.6 |
| 27° | 6098.7 | 6322.2 | 6382.7 |
| 28° | 6179.9 | 6383.1 | 6440.1 |
| 29° | 6253.6 | 6434.4 | 6487.8 |
| 30° | 6316.2 | 6478.4 | 6525.3 |
| 31° | 6373.7 | 6511.6 | 6556.1 |
| 32° | 6422.2 | 6540.1 | 6578.5 |
| 33° | 6463.8 | 6559.7 | 6595.5 |
| 34° | 6497.5 | 6572.7 | 6603.2 |
| 35° | 6526.0 | 6577.8 | 6606.7 |
| 36° | 6547.7 | 6577.5 | 6604.8 |
| 37° | 6561.5 | 6573.1 | 6595.7 |
| 38° | 6570.5 | 6563.0 | 6582.0 |
| 39° | 6573.4 | 6549.6 | 6565.2 |
| 40° | 6571.4 | 6531.3 | 6543.0 |
| 41° | 6563.2 | 6509.2 | 6512.5 |
| 42° | 6550.0 | 6482.8 | 6478.9 |
| 43° | 6531.7 | 6453.3 | 6437.8 |
| 44° | 6507.1 | 6416.7 | 6389.8 |



REPORT NUMBER: P1436757
 CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 45° | 6479.5 | 6375.9 | 6334.1 |
| 46° | 6445.6 | 6327.6 | 6268.7 |
| 47° | 6407.6 | 6272.5 | 6198.4 |
| 48° | 6364.1 | 6211.9 | 6123.1 |
| 49° | 6315.3 | 6141.5 | 6037.5 |
| 50° | 6259.6 | 6066.4 | 5945.1 |
| 51° | 6195.8 | 5982.2 | 5840.9 |
| 52° | 6124.0 | 5885.8 | 5730.4 |
| 53° | 6043.9 | 5783.0 | 5612.6 |
| 54° | 5959.8 | 5672.8 | 5490.7 |
| 55° | 5868.5 | 5552.1 | 5362.2 |
| 56° | 5767.8 | 5427.2 | 5225.3 |
| 57° | 5661.2 | 5297.7 | 5092.4 |
| 58° | 5547.7 | 5161.5 | 4951.7 |
| 59° | 5433.0 | 5025.5 | 4812.7 |
| 60° | 5317.1 | 4885.9 | 4663.3 |
| 61° | 5196.9 | 4742.1 | 4508.4 |
| 62° | 5079.8 | 4596.4 | 4346.3 |
| 63° | 4963.9 | 4449.5 | 4186.6 |
| 64° | 4851.9 | 4313.6 | 4036.4 |
| 65° | 4744.3 | 4184.3 | 3915.1 |
| 66° | 4642.6 | 4078.8 | 3825.9 |
| 67° | 4545.7 | 4001.1 | 3775.3 |
| 68° | 4458.7 | 3947.7 | 3722.8 |
| 69° | 4383.0 | 3892.4 | 3602.8 |
| 70° | 4325.2 | 3800.0 | 3365.9 |
| 71° | 4265.8 | 3622.4 | 3007.0 |
| 72° | 4190.0 | 3309.6 | 2619.4 |
| 73° | 4073.5 | 2900.1 | 2219.2 |
| 74° | 3861.4 | 2446.0 | 1757.6 |
| 75° | 3527.0 | 1968.7 | 1178.8 |
| 76° | 3090.2 | 1424.4 | 641.6 |
| 77° | 2601.6 | 818.4 | 419.6 |
| 78° | 1990.3 | 604.2 | 199.5 |
| 79° | 1276.3 | 390.2 | 158.9 |
| 80° | 680.8 | 176.2 | 137.0 |
| 81° | 446.4 | 145.9 | 117.8 |
| 82° | 214.9 | 123.9 | 100.6 |
| 83° | 166.0 | 104.1 | 84.7 |
| 84° | 133.3 | 85.9 | 70.3 |
| 85° | 101.2 | 70.3 | 55.9 |
| 86° | 75.3 | 54.7 | 41.5 |
| 87° | 53.8 | 39.1 | 28.3 |
| 88° | 32.4 | 24.8 | 16.4 |
| 89° | 12.7 | 10.5 | 7.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1436757

CATALOG NUMBER: XAS180-SFPM (5000K-144W-T5)

CANDELA DISTRIBUTION (continued):

| | | | |
|------|------|------|------|
| | 330° | 345° | 360° |
| 180° | 0.0 | 0.0 | 0.0 |

(END OF REPORT)