

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: P1436740

Luminaire Tested: XAS180-SFPM (4000K-180W-T5-HSS)

Issue Date: 3/25/2026

Test Information

Test Method: LM-79-2024
Report Number: P1436740
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 (4000K-180W-T5-HSS)
Description: XAS180 ALL-SELECTABLE AREA SITE LUMINAIRE.
LUMEN OUTPUT - 100% (180W)
OPTICS - TYPE 5 WITH HOUSE SIDE SHIELD
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: 23809 (1 lamp)
Luminaire Lumens: 23454.4 lumens
Efficiency: 98.5%
Efficacy: 134.9 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

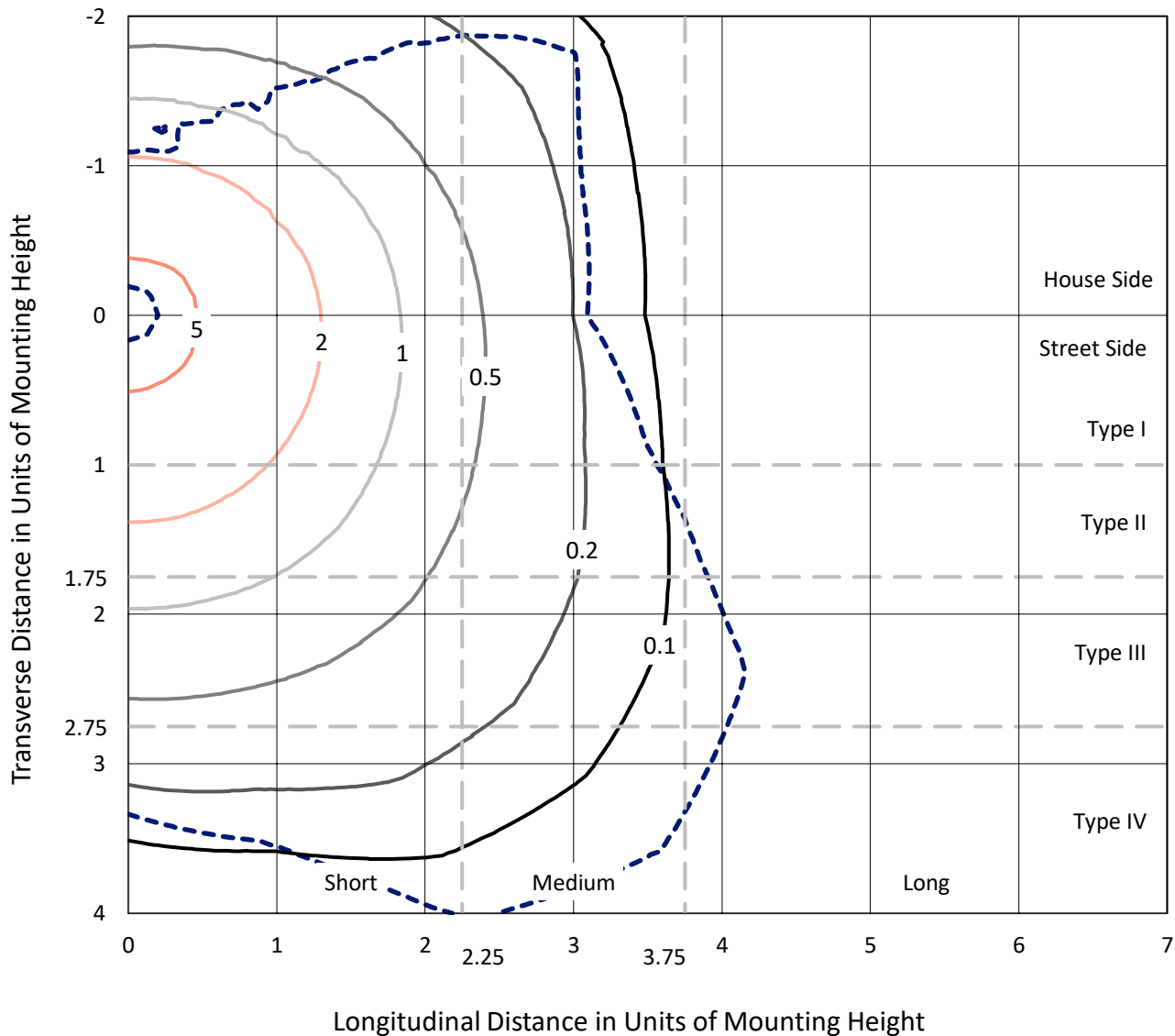
Input Watts (W): 173.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

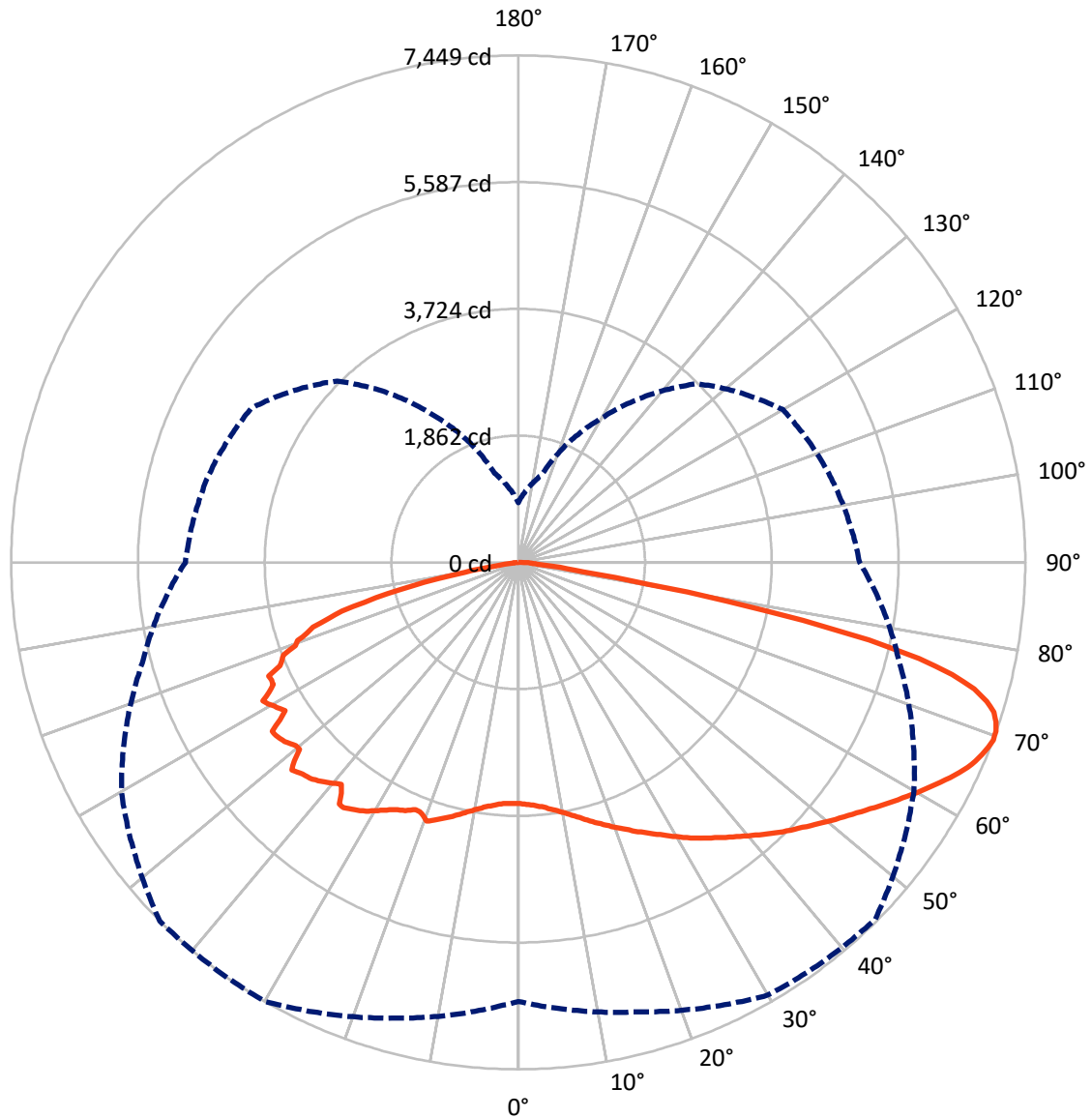
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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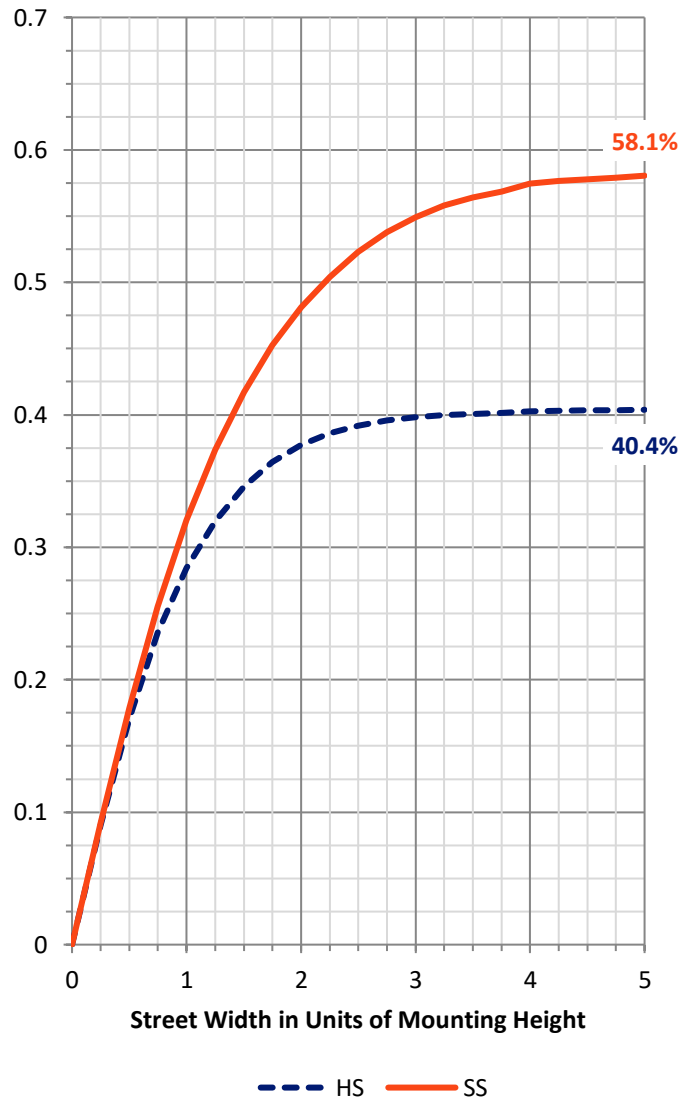
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|--------|----------|--------|---------|
| House Side | Lumens | 9632.5 | 0.0 | 9632.5 |
| | % Lamp | 40.5 | 0.0 | 40.5 |
| Street Side | Lumens | 13821.9 | 0.0 | 13821.9 |
| | % Lamp | 58.1 | 0.0 | 58.1 |
| Total | Lumens | 23454.4 | 0.0 | 23454.4 |
| | % Lamp | 98.5 | 0.0 | 98.5 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|---------|-----------|--------|
| 0°-10° | 346.4 | 1.5 | 1.5 |
| 10°-20° | 1102.3 | 4.7 | 4.6 |
| 20°-30° | 1964.8 | 8.4 | 8.3 |
| 30°-40° | 2909.0 | 12.4 | 12.2 |
| 40°-50° | 3881.3 | 16.5 | 16.3 |
| 50°-60° | 4760.0 | 20.3 | 20.0 |
| 60°-70° | 5185.1 | 22.1 | 21.8 |
| 70°-80° | 3127.9 | 13.3 | 13.1 |
| 80°-90° | 177.8 | 0.8 | 0.7 |
| 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° | 23454.4 | 100.0 | 98.5 |
| 0°-180° | 23454.4 | 100.0 | 98.5 |

Coefficient of Utilization



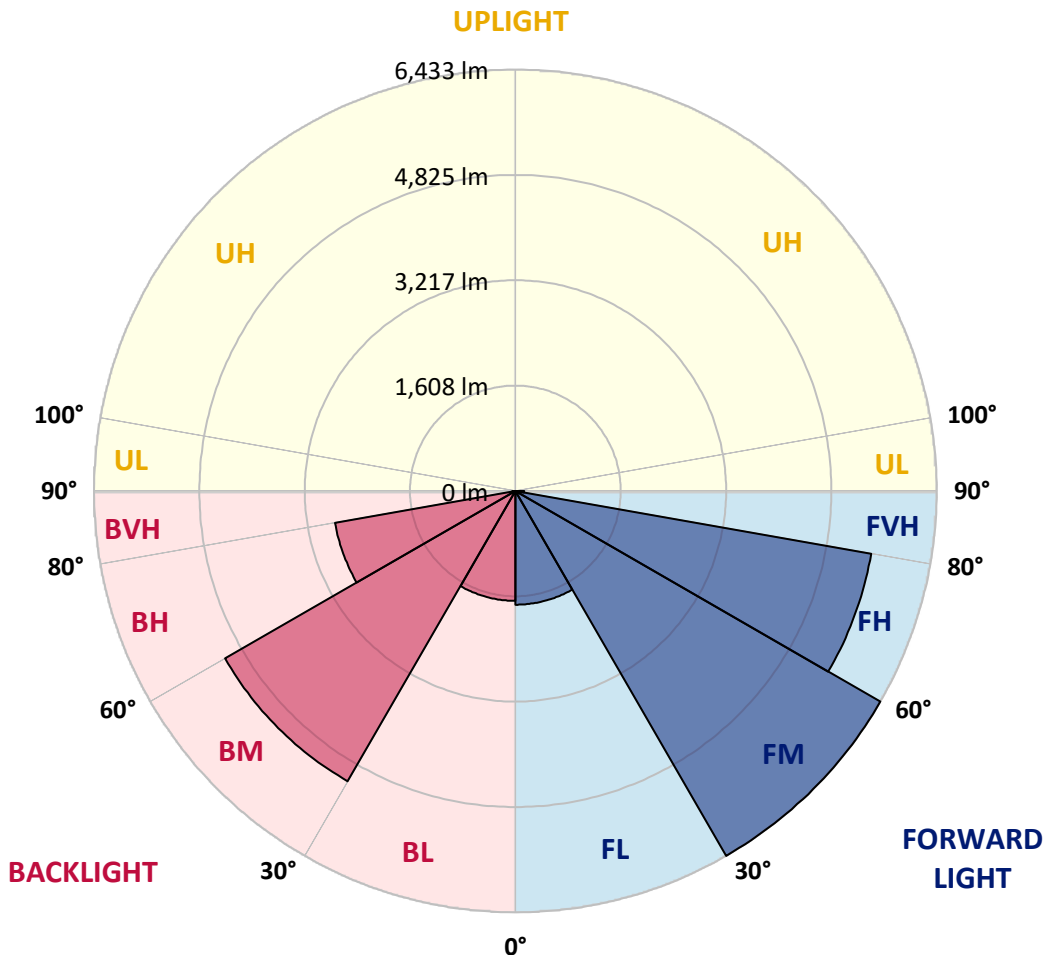
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Lamp | Zone Rating/Lumen Limit | | |
|----------------|--------|--------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1736.9 | 7.3 | | | |
| FM (30°-60°) | 6433.0 | 27.0 | | | |
| FH (60°-80°) | 5516.8 | 23.2 | | | G3/7500 |
| FVH (80°-90°) | 135.2 | 0.6 | | | G2/225 |
| BL (0°-30°) | 1676.5 | 7.0 | B3/2500 | | |
| BM (30°-60°) | 5117.2 | 21.5 | B4/8500 | | |
| BH (60°-80°) | 2796.2 | 11.7 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 42.6 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |
| Trapped Light | 354.6 | 1.5 | | | |

BUG Rating: B4-U0-G4
 Type IV Short





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CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (FULL):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 |
| 1° | 3551.6 | 3551.6 | 3551.3 | 3550.2 | 3549.3 | 3547.4 | 3545.1 | 3544.1 | 3543.1 | 3542.8 | 3542.8 |
| 2° | 3561.0 | 3559.8 | 3559.0 | 3556.5 | 3554.2 | 3550.3 | 3546.9 | 3544.8 | 3543.1 | 3542.2 | 3542.8 |
| 3° | 3573.2 | 3571.3 | 3569.0 | 3565.2 | 3562.4 | 3557.7 | 3553.1 | 3550.1 | 3546.9 | 3545.2 | 3545.5 |
| 4° | 3589.0 | 3586.3 | 3582.8 | 3578.1 | 3574.2 | 3568.4 | 3562.6 | 3558.7 | 3554.4 | 3552.4 | 3552.2 |
| 5° | 3607.3 | 3603.4 | 3599.9 | 3593.8 | 3588.1 | 3581.3 | 3574.5 | 3569.6 | 3565.7 | 3563.2 | 3565.5 |
| 6° | 3627.5 | 3622.6 | 3619.3 | 3613.1 | 3605.4 | 3596.1 | 3588.7 | 3582.6 | 3578.3 | 3580.6 | 3583.5 |
| 7° | 3648.1 | 3644.4 | 3641.2 | 3634.6 | 3626.2 | 3615.2 | 3606.3 | 3599.0 | 3593.9 | 3600.2 | 3604.7 |
| 8° | 3671.5 | 3667.6 | 3664.4 | 3658.3 | 3648.7 | 3637.1 | 3627.7 | 3619.8 | 3615.7 | 3622.4 | 3628.7 |
| 9° | 3698.0 | 3693.8 | 3689.5 | 3683.9 | 3674.5 | 3661.1 | 3650.2 | 3642.3 | 3642.2 | 3647.4 | 3654.3 |
| 10° | 3726.5 | 3722.2 | 3718.9 | 3712.6 | 3703.8 | 3687.6 | 3675.9 | 3666.8 | 3670.1 | 3676.9 | 3682.1 |
| 11° | 3757.0 | 3751.7 | 3750.0 | 3744.3 | 3734.4 | 3717.7 | 3703.9 | 3694.9 | 3700.4 | 3709.6 | 3713.4 |
| 12° | 3787.4 | 3781.5 | 3781.8 | 3777.5 | 3766.0 | 3749.1 | 3733.1 | 3724.9 | 3732.3 | 3742.6 | 3745.6 |
| 13° | 3818.5 | 3812.1 | 3815.2 | 3813.5 | 3800.2 | 3782.1 | 3763.8 | 3755.8 | 3767.1 | 3777.2 | 3779.8 |
| 14° | 3850.6 | 3843.5 | 3848.1 | 3849.1 | 3836.9 | 3815.9 | 3795.5 | 3787.2 | 3801.6 | 3814.6 | 3814.4 |
| 15° | 3884.3 | 3877.8 | 3883.7 | 3886.7 | 3873.3 | 3850.8 | 3829.7 | 3820.7 | 3837.6 | 3851.1 | 3848.7 |
| 16° | 3917.9 | 3913.7 | 3919.7 | 3924.4 | 3911.1 | 3887.7 | 3865.1 | 3855.9 | 3875.7 | 3887.8 | 3883.7 |
| 17° | 3954.8 | 3950.3 | 3957.0 | 3963.0 | 3950.9 | 3925.3 | 3901.1 | 3892.2 | 3914.9 | 3924.0 | 3873.8 |
| 18° | 3993.4 | 3987.6 | 3996.0 | 4001.6 | 3991.1 | 3963.4 | 3934.3 | 3921.2 | 3954.0 | 3961.6 | 3810.4 |
| 19° | 4033.0 | 4026.9 | 4036.1 | 4041.7 | 4032.3 | 4004.5 | 3957.5 | 3949.2 | 3981.9 | 3999.2 | 3778.5 |
| 20° | 4074.8 | 4068.3 | 4076.7 | 4082.1 | 4074.1 | 4039.2 | 3989.4 | 3979.6 | 4010.3 | 4031.7 | 3810.3 |
| 21° | 4119.9 | 4111.8 | 4118.6 | 4123.8 | 4118.0 | 4069.3 | 4027.5 | 4024.1 | 4041.4 | 3975.3 | 3844.6 |
| 22° | 4166.4 | 4157.6 | 4163.0 | 4168.1 | 4163.7 | 4107.4 | 4071.5 | 4067.9 | 4083.5 | 3938.3 | 3880.6 |
| 23° | 4215.5 | 4206.0 | 4207.8 | 4212.5 | 4211.5 | 4147.1 | 4117.6 | 4104.8 | 4122.7 | 3931.9 | 3918.5 |
| 24° | 4266.8 | 4256.0 | 4254.5 | 4258.4 | 4249.4 | 4194.6 | 4157.7 | 4140.9 | 4152.0 | 3969.4 | 3957.8 |
| 25° | 4319.0 | 4307.0 | 4302.4 | 4307.4 | 4287.7 | 4243.9 | 4195.4 | 4181.5 | 4187.3 | 4005.8 | 3996.7 |
| 26° | 4374.2 | 4359.7 | 4351.5 | 4357.5 | 4333.9 | 4293.6 | 4240.8 | 4227.0 | 4225.7 | 4031.8 | 4038.2 |
| 27° | 4431.2 | 4413.0 | 4403.0 | 4407.5 | 4374.3 | 4336.7 | 4284.0 | 4277.4 | 4270.1 | 4061.9 | 4078.9 |
| 28° | 4489.8 | 4468.6 | 4455.3 | 4460.5 | 4420.8 | 4376.8 | 4336.8 | 4327.2 | 4293.5 | 4097.4 | 4119.3 |
| 29° | 4550.7 | 4523.5 | 4509.1 | 4515.4 | 4471.1 | 4421.9 | 4391.5 | 4378.7 | 4266.4 | 4143.3 | 4160.2 |
| 30° | 4613.1 | 4580.3 | 4565.7 | 4571.6 | 4523.1 | 4467.7 | 4449.4 | 4430.5 | 4268.9 | 4190.4 | 4194.5 |
| 31° | 4675.7 | 4636.5 | 4622.2 | 4626.7 | 4576.4 | 4511.4 | 4508.4 | 4480.5 | 4256.5 | 4238.5 | 4213.0 |
| 32° | 4737.8 | 4693.0 | 4679.8 | 4675.3 | 4629.5 | 4565.2 | 4566.4 | 4514.6 | 4291.7 | 4284.6 | 4062.5 |
| 33° | 4800.8 | 4751.1 | 4738.1 | 4724.4 | 4677.0 | 4618.8 | 4625.2 | 4540.6 | 4326.6 | 4322.8 | 3950.8 |
| 34° | 4864.4 | 4809.0 | 4798.2 | 4774.9 | 4722.3 | 4671.4 | 4674.4 | 4568.8 | 4363.6 | 4355.7 | 3967.4 |
| 35° | 4930.2 | 4868.5 | 4859.4 | 4831.1 | 4770.6 | 4724.1 | 4709.0 | 4611.1 | 4404.3 | 4388.5 | 4008.9 |
| 36° | 4996.2 | 4928.7 | 4920.9 | 4884.8 | 4823.8 | 4778.1 | 4747.8 | 4654.4 | 4449.5 | 4424.9 | 4043.9 |
| 37° | 5061.9 | 4988.1 | 4984.0 | 4940.2 | 4876.1 | 4830.7 | 4790.0 | 4698.6 | 4490.9 | 4418.0 | 4072.8 |
| 38° | 5128.1 | 5049.7 | 5047.4 | 4999.0 | 4928.0 | 4886.9 | 4840.7 | 4744.5 | 4518.8 | 4274.6 | 4098.0 |
| 39° | 5193.1 | 5112.7 | 5108.8 | 5060.7 | 4981.8 | 4940.7 | 4895.7 | 4782.7 | 4552.2 | 4171.2 | 4134.5 |
| 40° | 5259.1 | 5177.4 | 5172.1 | 5123.2 | 5040.6 | 4980.4 | 4951.2 | 4818.3 | 4601.8 | 4211.7 | 4176.6 |
| 41° | 5322.4 | 5245.5 | 5237.5 | 5185.5 | 5102.1 | 5025.1 | 5003.5 | 4855.6 | 4652.4 | 4256.2 | 4218.2 |
| 42° | 5388.9 | 5311.9 | 5302.9 | 5251.6 | 5163.6 | 5068.3 | 5054.5 | 4883.2 | 4704.0 | 4302.6 | 4255.2 |
| 43° | 5451.9 | 5381.4 | 5370.2 | 5316.9 | 5228.5 | 5117.0 | 5096.1 | 4919.8 | 4755.0 | 4350.5 | 4133.1 |
| 44° | 5514.3 | 5454.0 | 5437.1 | 5382.1 | 5291.1 | 5173.0 | 5130.2 | 4978.1 | 4806.7 | 4391.3 | 3976.3 |



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CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 5579.1 | 5527.0 | 5508.5 | 5443.1 | 5357.5 | 5235.7 | 5170.6 | 5037.9 | 4843.8 | 4418.0 | 3973.8 |
| 46° | 5643.9 | 5603.8 | 5581.0 | 5506.2 | 5425.8 | 5301.7 | 5197.8 | 5100.0 | 4852.2 | 4442.3 | 4009.5 |
| 47° | 5708.3 | 5683.0 | 5655.9 | 5571.0 | 5496.1 | 5368.7 | 5226.9 | 5152.1 | 4859.9 | 4478.7 | 4037.7 |
| 48° | 5776.0 | 5763.6 | 5731.6 | 5637.1 | 5564.7 | 5433.9 | 5261.4 | 5172.3 | 4754.3 | 4511.6 | 4061.0 |
| 49° | 5844.4 | 5845.0 | 5808.8 | 5708.0 | 5628.3 | 5502.7 | 5307.8 | 5184.0 | 4672.3 | 4393.6 | 4092.0 |
| 50° | 5915.2 | 5928.6 | 5886.4 | 5782.0 | 5683.7 | 5570.8 | 5358.5 | 5188.9 | 4662.3 | 4227.5 | 4131.4 |
| 51° | 5986.3 | 6013.1 | 5966.4 | 5857.4 | 5745.2 | 5630.2 | 5408.8 | 5179.4 | 4708.1 | 4232.7 | 4020.1 |
| 52° | 6058.5 | 6098.4 | 6044.6 | 5933.9 | 5810.5 | 5685.6 | 5462.0 | 5217.4 | 4744.7 | 4278.2 | 3777.2 |
| 53° | 6132.5 | 6181.7 | 6123.9 | 6009.6 | 5868.5 | 5743.3 | 5513.1 | 5265.8 | 4763.5 | 4321.9 | 3776.5 |
| 54° | 6204.2 | 6263.2 | 6207.5 | 6091.5 | 5933.4 | 5791.4 | 5561.3 | 5313.3 | 4787.4 | 4351.1 | 3820.2 |
| 55° | 6275.6 | 6340.3 | 6291.7 | 6176.3 | 6002.1 | 5823.1 | 5597.0 | 5343.5 | 4837.2 | 4378.0 | 3865.7 |
| 56° | 6340.7 | 6415.6 | 6381.5 | 6264.9 | 6074.6 | 5864.0 | 5617.3 | 5354.5 | 4878.9 | 4382.9 | 3911.2 |
| 57° | 6403.0 | 6487.0 | 6472.2 | 6360.5 | 6148.2 | 5904.9 | 5633.4 | 5373.9 | 4896.7 | 4199.5 | 3949.9 |
| 58° | 6462.5 | 6553.4 | 6563.0 | 6455.4 | 6220.5 | 5947.7 | 5644.6 | 5392.1 | 4923.7 | 4059.6 | 3712.3 |
| 59° | 6515.3 | 6615.9 | 6651.3 | 6549.9 | 6293.1 | 5985.1 | 5662.9 | 5385.1 | 4801.8 | 4108.8 | 3584.1 |
| 60° | 6561.6 | 6671.4 | 6738.0 | 6650.1 | 6361.3 | 6017.1 | 5676.7 | 5350.2 | 4682.0 | 4162.7 | 3601.3 |
| 61° | 6599.6 | 6721.2 | 6824.4 | 6749.4 | 6426.2 | 6045.9 | 5682.6 | 5344.8 | 4701.0 | 4219.7 | 3619.3 |
| 62° | 6629.2 | 6763.1 | 6908.4 | 6851.6 | 6487.7 | 6064.1 | 5681.1 | 5338.9 | 4713.2 | 4270.0 | 3441.9 |
| 63° | 6654.9 | 6800.2 | 6993.9 | 6954.1 | 6547.0 | 6070.9 | 5661.9 | 5293.8 | 4722.4 | 4126.3 | 3242.5 |
| 64° | 6677.7 | 6830.5 | 7073.2 | 7056.2 | 6598.2 | 6068.8 | 5620.5 | 5257.4 | 4711.6 | 4020.3 | 3218.8 |
| 65° | 6699.0 | 6856.2 | 7146.2 | 7151.4 | 6647.8 | 6057.0 | 5575.7 | 5189.2 | 4645.4 | 4014.7 | 3158.1 |
| 66° | 6711.4 | 6880.0 | 7211.4 | 7235.5 | 6690.9 | 6024.4 | 5530.6 | 5114.0 | 4458.5 | 4028.2 | 2861.2 |
| 67° | 6709.6 | 6894.6 | 7267.2 | 7310.2 | 6718.2 | 5980.3 | 5471.4 | 4988.1 | 4448.5 | 3815.2 | 2850.1 |
| 68° | 6647.0 | 6888.1 | 7314.7 | 7371.6 | 6717.9 | 5925.1 | 5311.9 | 4879.7 | 4474.5 | 3753.9 | 2680.7 |
| 69° | 6449.1 | 6835.0 | 7340.7 | 7416.7 | 6711.8 | 5803.7 | 5014.5 | 4761.6 | 4487.4 | 3709.2 | 2445.6 |
| 70° | 6038.6 | 6678.2 | 7346.5 | 7441.8 | 6704.8 | 5583.3 | 4585.6 | 4566.8 | 4471.5 | 3498.6 | 2207.8 |
| 71° | 5393.9 | 6340.9 | 7319.1 | 7436.9 | 6644.1 | 5254.7 | 4145.9 | 4271.1 | 4309.7 | 3438.7 | 1969.9 |
| 72° | 4710.8 | 5791.1 | 7251.3 | 7392.1 | 6525.8 | 4834.9 | 3739.7 | 3901.2 | 4145.0 | 3267.6 | 1733.2 |
| 73° | 3989.9 | 5073.9 | 7099.4 | 7299.5 | 6327.4 | 4408.1 | 3380.8 | 3519.6 | 3961.5 | 3162.7 | 1545.7 |
| 74° | 3153.4 | 4292.3 | 6773.5 | 7125.4 | 6041.5 | 4014.1 | 2966.2 | 3174.0 | 3733.2 | 2901.9 | 1286.7 |
| 75° | 2104.8 | 3443.3 | 6190.2 | 6827.1 | 5670.7 | 3573.2 | 2256.2 | 2817.1 | 3415.5 | 2688.6 | 1108.4 |
| 76° | 1147.5 | 2431.8 | 5426.1 | 6356.8 | 5234.5 | 2908.1 | 1546.3 | 2212.9 | 3115.2 | 2331.2 | 951.6 |
| 77° | 855.3 | 1352.2 | 4609.5 | 5673.9 | 4698.6 | 1916.6 | 846.6 | 1608.8 | 2769.1 | 1973.8 | 777.4 |
| 78° | 572.8 | 992.0 | 3607.4 | 4685.7 | 3961.1 | 999.3 | 615.8 | 1014.7 | 2208.7 | 1616.0 | 568.0 |
| 79° | 290.2 | 646.3 | 2345.7 | 3533.8 | 2928.1 | 721.4 | 385.1 | 719.9 | 1648.2 | 1200.9 | 402.1 |
| 80° | 257.5 | 300.6 | 1213.5 | 2295.9 | 1785.5 | 463.4 | 159.0 | 425.1 | 1094.9 | 802.3 | 236.2 |
| 81° | 229.2 | 262.1 | 901.9 | 1166.8 | 895.7 | 205.5 | 135.8 | 134.9 | 768.8 | 559.2 | 72.9 |
| 82° | 203.7 | 230.7 | 596.8 | 863.3 | 587.6 | 174.7 | 115.2 | 113.2 | 442.6 | 316.1 | 37.4 |
| 83° | 180.5 | 202.0 | 291.8 | 573.0 | 285.6 | 147.7 | 96.7 | 94.0 | 120.9 | 80.6 | 30.3 |
| 84° | 158.3 | 175.7 | 239.8 | 282.7 | 230.6 | 124.0 | 79.4 | 76.8 | 93.6 | 61.4 | 25.2 |
| 85° | 136.9 | 151.5 | 194.3 | 234.6 | 182.3 | 103.1 | 63.6 | 62.3 | 72.9 | 51.1 | 20.1 |
| 86° | 116.7 | 129.8 | 158.7 | 196.0 | 139.1 | 85.2 | 49.0 | 49.0 | 53.8 | 41.8 | 15.0 |
| 87° | 97.5 | 109.5 | 127.2 | 153.0 | 107.8 | 67.4 | 36.2 | 36.6 | 39.8 | 32.6 | 11.7 |
| 88° | 84.1 | 91.7 | 98.1 | 105.1 | 81.4 | 49.5 | 23.4 | 26.0 | 28.4 | 23.3 | 9.0 |
| 89° | 70.8 | 74.0 | 80.7 | 82.3 | 55.0 | 32.1 | 10.8 | 15.3 | 17.0 | 14.1 | 6.5 |



REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 | 3546.5 |
| 1° | 3543.4 | 3543.1 | 3544.8 | 3545.5 | 3547.1 | 3548.5 | 3549.4 | 3549.1 | 3550.3 | 3550.9 | 3551.5 |
| 2° | 3543.8 | 3542.8 | 3545.8 | 3547.8 | 3550.4 | 3552.8 | 3555.2 | 3556.1 | 3558.7 | 3560.1 | 3561.5 |
| 3° | 3546.9 | 3546.5 | 3549.9 | 3553.1 | 3556.8 | 3560.1 | 3564.2 | 3566.1 | 3569.7 | 3572.1 | 3574.0 |
| 4° | 3554.3 | 3556.0 | 3559.5 | 3562.3 | 3567.0 | 3571.8 | 3577.5 | 3580.6 | 3584.9 | 3587.3 | 3589.1 |
| 5° | 3569.6 | 3571.5 | 3575.3 | 3577.9 | 3581.4 | 3587.1 | 3593.0 | 3597.1 | 3602.1 | 3605.8 | 3608.1 |
| 6° | 3588.0 | 3590.2 | 3595.6 | 3598.5 | 3601.8 | 3604.7 | 3612.1 | 3616.8 | 3623.2 | 3627.6 | 3630.0 |
| 7° | 3610.4 | 3612.4 | 3618.2 | 3621.8 | 3625.4 | 3627.3 | 3635.4 | 3641.2 | 3647.5 | 3652.7 | 3655.3 |
| 8° | 3634.0 | 3636.2 | 3643.2 | 3649.2 | 3652.8 | 3654.3 | 3661.7 | 3667.0 | 3674.7 | 3680.6 | 3682.3 |
| 9° | 3659.8 | 3662.5 | 3669.7 | 3677.9 | 3683.4 | 3685.4 | 3688.7 | 3694.3 | 3703.8 | 3711.4 | 3713.2 |
| 10° | 3686.7 | 3690.8 | 3700.1 | 3710.3 | 3717.3 | 3718.2 | 3719.8 | 3725.2 | 3735.2 | 3744.3 | 3745.4 |
| 11° | 3717.0 | 3720.4 | 3731.9 | 3746.2 | 3753.0 | 3754.1 | 3753.3 | 3760.2 | 3771.9 | 3781.2 | 3780.1 |
| 12° | 3746.6 | 3751.0 | 3763.4 | 3782.7 | 3792.0 | 3792.2 | 3789.6 | 3796.8 | 3809.2 | 3819.1 | 3817.7 |
| 13° | 3779.0 | 3782.3 | 3796.7 | 3819.8 | 3833.4 | 3833.2 | 3827.3 | 3835.4 | 3849.6 | 3858.9 | 3857.4 |
| 14° | 3810.2 | 3811.8 | 3831.1 | 3856.9 | 3877.2 | 3875.2 | 3866.4 | 3875.1 | 3891.5 | 3902.6 | 3899.8 |
| 15° | 3830.7 | 3772.2 | 3852.6 | 3896.3 | 3919.5 | 3919.8 | 3909.5 | 3915.6 | 3934.5 | 3948.3 | 3940.8 |
| 16° | 3753.3 | 3701.2 | 3778.8 | 3933.9 | 3961.2 | 3966.0 | 3952.7 | 3958.8 | 3977.8 | 3993.4 | 3984.5 |
| 17° | 3704.9 | 3706.0 | 3733.9 | 3931.2 | 4004.8 | 4012.8 | 3998.1 | 4003.6 | 4022.7 | 4039.0 | 4028.0 |
| 18° | 3735.9 | 3738.5 | 3763.9 | 3869.0 | 4048.8 | 4058.4 | 4039.1 | 4048.7 | 4069.6 | 4084.4 | 4072.3 |
| 19° | 3767.4 | 3771.9 | 3797.7 | 3842.7 | 4091.8 | 4093.4 | 4070.2 | 4082.5 | 4117.9 | 4132.7 | 4116.6 |
| 20° | 3801.8 | 3807.6 | 3833.1 | 3877.2 | 4129.3 | 4128.7 | 4106.6 | 4119.0 | 4167.0 | 4181.6 | 4162.7 |
| 21° | 3837.5 | 3843.5 | 3870.4 | 3916.2 | 4095.8 | 4166.6 | 4156.3 | 4160.0 | 4205.3 | 4232.4 | 4208.8 |
| 22° | 3875.8 | 3882.1 | 3910.2 | 3956.0 | 4051.3 | 4215.7 | 4207.7 | 4210.0 | 4249.6 | 4282.0 | 4256.4 |
| 23° | 3913.7 | 3922.0 | 3952.4 | 3997.4 | 4047.5 | 4266.5 | 4258.1 | 4264.0 | 4293.9 | 4333.1 | 4306.0 |
| 24° | 3954.3 | 3963.4 | 3995.2 | 4040.4 | 4090.5 | 4307.7 | 4299.0 | 4316.9 | 4345.9 | 4383.9 | 4354.8 |
| 25° | 3993.4 | 4002.1 | 4037.0 | 4084.1 | 4135.6 | 4344.7 | 4343.2 | 4362.8 | 4400.9 | 4427.4 | 4405.4 |
| 26° | 4032.8 | 4043.3 | 4078.3 | 4130.9 | 4170.3 | 4383.4 | 4387.1 | 4408.6 | 4456.0 | 4470.4 | 4457.5 |
| 27° | 4072.2 | 4083.3 | 4120.2 | 4176.5 | 4203.8 | 4428.8 | 4438.5 | 4459.2 | 4510.4 | 4519.2 | 4510.4 |
| 28° | 4107.5 | 4053.8 | 4158.3 | 4222.5 | 4240.2 | 4460.1 | 4493.0 | 4511.9 | 4558.1 | 4566.6 | 4566.9 |
| 29° | 4021.2 | 3893.7 | 4089.4 | 4267.6 | 4289.1 | 4453.3 | 4547.8 | 4571.3 | 4603.5 | 4620.6 | 4625.0 |
| 30° | 3874.0 | 3844.8 | 3938.3 | 4303.7 | 4338.7 | 4445.9 | 4604.2 | 4631.9 | 4654.9 | 4675.6 | 4684.8 |
| 31° | 3850.8 | 3887.3 | 3909.6 | 4328.7 | 4388.7 | 4449.4 | 4657.6 | 4692.3 | 4701.0 | 4730.8 | 4743.9 |
| 32° | 3889.8 | 3932.3 | 3949.2 | 4203.7 | 4438.0 | 4472.5 | 4699.6 | 4754.5 | 4751.4 | 4786.9 | 4802.8 |
| 33° | 3929.2 | 3978.8 | 3990.0 | 4094.8 | 4484.2 | 4511.2 | 4728.5 | 4815.2 | 4807.5 | 4841.3 | 4858.3 |
| 34° | 3969.3 | 4023.8 | 4030.1 | 4093.5 | 4521.0 | 4552.8 | 4760.7 | 4876.0 | 4862.4 | 4892.9 | 4912.3 |
| 35° | 4008.6 | 4073.0 | 4071.0 | 4137.1 | 4558.1 | 4593.9 | 4806.3 | 4918.5 | 4919.5 | 4944.8 | 4969.4 |
| 36° | 4050.3 | 4119.1 | 4115.2 | 4179.6 | 4592.8 | 4637.0 | 4852.7 | 4962.1 | 4978.3 | 4999.7 | 5030.8 |
| 37° | 4087.8 | 4164.9 | 4157.5 | 4210.6 | 4606.0 | 4683.1 | 4901.6 | 5005.0 | 5036.6 | 5057.8 | 5088.8 |
| 38° | 4128.3 | 4203.8 | 4199.3 | 4238.3 | 4467.8 | 4714.0 | 4953.4 | 5060.2 | 5096.4 | 5112.4 | 5147.7 |
| 39° | 4162.0 | 4011.2 | 4236.9 | 4271.8 | 4364.0 | 4747.3 | 5004.5 | 5113.3 | 5156.3 | 5171.7 | 5210.8 |
| 40° | 3963.2 | 3854.5 | 4059.2 | 4316.1 | 4393.3 | 4796.2 | 5043.4 | 5166.2 | 5204.2 | 5236.1 | 5276.8 |
| 41° | 3816.2 | 3879.8 | 3904.9 | 4360.4 | 4440.1 | 4849.1 | 5081.5 | 5218.3 | 5248.4 | 5302.6 | 5343.5 |
| 42° | 3842.2 | 3914.2 | 3920.0 | 4400.8 | 4488.4 | 4905.6 | 5107.9 | 5271.2 | 5297.2 | 5367.6 | 5411.4 |
| 43° | 3882.8 | 3949.6 | 3961.8 | 4310.1 | 4537.5 | 4962.3 | 5148.9 | 5321.9 | 5348.0 | 5433.9 | 5478.2 |
| 44° | 3926.1 | 3983.5 | 4006.4 | 4141.6 | 4582.5 | 5018.6 | 5208.8 | 5363.4 | 5409.0 | 5499.8 | 5547.2 |



REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 3969.3 | 4015.9 | 4048.5 | 4116.6 | 4614.0 | 5061.9 | 5273.7 | 5405.0 | 5474.3 | 5568.1 | 5611.3 |
| 46° | 4012.7 | 4040.1 | 4092.8 | 4154.6 | 4638.6 | 5074.6 | 5337.8 | 5437.5 | 5543.9 | 5639.5 | 5676.9 |
| 47° | 4049.5 | 3831.1 | 4131.4 | 4181.7 | 4674.8 | 5096.2 | 5402.9 | 5461.3 | 5611.7 | 5710.0 | 5743.1 |
| 48° | 3864.1 | 3605.1 | 3973.0 | 4204.9 | 4711.3 | 5032.4 | 5446.6 | 5496.5 | 5678.4 | 5780.4 | 5812.9 |
| 49° | 3630.7 | 3621.6 | 3731.8 | 4236.3 | 4630.4 | 4948.1 | 5445.9 | 5545.3 | 5745.8 | 5845.7 | 5884.9 |
| 50° | 3658.3 | 3652.9 | 3740.7 | 4274.4 | 4457.8 | 4890.7 | 5445.3 | 5597.8 | 5809.9 | 5904.2 | 5960.8 |
| 51° | 3702.4 | 3684.9 | 3782.1 | 4193.5 | 4431.0 | 4931.0 | 5434.3 | 5646.5 | 5865.6 | 5960.3 | 6035.6 |
| 52° | 3746.5 | 3716.4 | 3822.1 | 3946.5 | 4479.0 | 4962.4 | 5435.9 | 5696.0 | 5914.8 | 6021.7 | 6109.7 |
| 53° | 3785.8 | 3738.6 | 3859.6 | 3921.6 | 4522.8 | 4980.5 | 5469.2 | 5741.1 | 5965.6 | 6076.6 | 6187.3 |
| 54° | 3813.2 | 3428.8 | 3890.2 | 3963.0 | 4549.9 | 5000.6 | 5506.1 | 5782.9 | 6005.7 | 6139.3 | 6270.4 |
| 55° | 3528.7 | 3278.5 | 3601.2 | 4007.3 | 4573.5 | 5039.5 | 5532.7 | 5809.5 | 6027.7 | 6207.7 | 6357.5 |
| 56° | 3365.5 | 3300.6 | 3433.0 | 4050.7 | 4578.4 | 5077.7 | 5532.4 | 5814.8 | 6057.6 | 6276.1 | 6446.9 |
| 57° | 3374.0 | 3313.8 | 3438.5 | 4087.9 | 4433.4 | 5086.4 | 5533.4 | 5812.6 | 6082.0 | 6341.1 | 6535.6 |
| 58° | 3387.4 | 3267.8 | 3452.2 | 3859.6 | 4264.5 | 5099.1 | 5535.4 | 5811.3 | 6108.7 | 6401.9 | 6626.4 |
| 59° | 3283.8 | 2835.0 | 3366.7 | 3709.9 | 4303.0 | 5007.2 | 5522.3 | 5816.8 | 6133.2 | 6461.8 | 6716.6 |
| 60° | 2923.1 | 2790.2 | 2987.7 | 3724.1 | 4350.8 | 4856.0 | 5481.1 | 5819.2 | 6152.5 | 6520.3 | 6808.1 |
| 61° | 2913.9 | 2788.4 | 2973.2 | 3744.5 | 4401.4 | 4845.5 | 5459.6 | 5810.4 | 6169.9 | 6579.4 | 6900.7 |
| 62° | 2899.5 | 2482.5 | 2956.5 | 3582.4 | 4446.9 | 4849.4 | 5448.9 | 5801.1 | 6181.3 | 6632.1 | 6993.6 |
| 63° | 2598.4 | 2250.1 | 2636.9 | 3355.5 | 4309.4 | 4847.2 | 5399.4 | 5778.0 | 6180.0 | 6675.3 | 7087.6 |
| 64° | 2394.1 | 2057.8 | 2430.6 | 3331.4 | 4164.0 | 4829.8 | 5356.6 | 5729.1 | 6170.7 | 6710.8 | 7177.1 |
| 65° | 2374.2 | 1865.3 | 2411.5 | 3288.1 | 4139.6 | 4765.1 | 5273.9 | 5672.8 | 6137.1 | 6741.0 | 7256.5 |
| 66° | 2115.1 | 1674.7 | 2141.9 | 2957.8 | 4132.3 | 4575.4 | 5188.4 | 5611.2 | 6086.6 | 6766.6 | 7322.2 |
| 67° | 1856.0 | 1614.9 | 1874.2 | 2931.2 | 3908.5 | 4523.0 | 5063.3 | 5508.6 | 6026.6 | 6769.8 | 7375.9 |
| 68° | 1630.7 | 1071.8 | 1662.1 | 2766.8 | 3831.5 | 4535.3 | 4912.3 | 5278.5 | 5919.2 | 6755.8 | 7417.3 |
| 69° | 1327.2 | 875.0 | 1355.6 | 2500.0 | 3766.2 | 4528.7 | 4734.5 | 4890.9 | 5718.6 | 6733.0 | 7448.7 |
| 70° | 1017.4 | 596.4 | 1035.5 | 2276.2 | 3541.2 | 4487.5 | 4461.4 | 4375.4 | 5403.2 | 6675.9 | 7444.4 |
| 71° | 717.5 | 317.8 | 709.7 | 2033.2 | 3458.6 | 4279.7 | 4084.4 | 3920.2 | 4959.2 | 6560.7 | 7400.6 |
| 72° | 351.6 | 42.7 | 302.5 | 1790.1 | 3275.5 | 4052.8 | 3656.5 | 3513.8 | 4487.1 | 6373.4 | 7324.7 |
| 73° | 292.5 | 0.6 | 253.7 | 1545.0 | 3117.6 | 3810.1 | 3249.6 | 3109.8 | 4028.6 | 6087.9 | 7179.9 |
| 74° | 237.3 | 0.5 | 205.0 | 1231.2 | 2828.5 | 3531.7 | 2874.3 | 2599.9 | 3579.6 | 5710.7 | 6951.4 |
| 75° | 182.2 | 0.5 | 156.2 | 1027.2 | 2560.8 | 3170.0 | 2322.0 | 1876.8 | 3019.1 | 5245.4 | 6586.9 |
| 76° | 128.9 | 0.6 | 111.0 | 866.5 | 2172.3 | 2806.0 | 1769.7 | 1098.3 | 2205.7 | 4703.6 | 6057.2 |
| 77° | 72.4 | 0.7 | 64.9 | 695.3 | 1783.9 | 2317.9 | 1221.6 | 516.6 | 1276.7 | 4077.1 | 5282.4 |
| 78° | 51.6 | 0.8 | 46.4 | 506.4 | 1395.4 | 1829.8 | 864.5 | 395.8 | 932.4 | 3251.8 | 4266.6 |
| 79° | 30.7 | 0.9 | 27.9 | 360.3 | 1001.2 | 1341.0 | 507.4 | 277.7 | 590.0 | 2208.8 | 3122.0 |
| 80° | 9.9 | 1.0 | 9.6 | 214.2 | 606.4 | 732.0 | 155.9 | 159.6 | 247.6 | 1259.3 | 1932.4 |
| 81° | 8.4 | 1.2 | 8.1 | 71.3 | 357.4 | 523.7 | 127.7 | 133.7 | 198.2 | 920.2 | 966.6 |
| 82° | 7.3 | 1.4 | 7.1 | 40.4 | 114.8 | 315.5 | 107.6 | 112.6 | 168.0 | 594.6 | 727.9 |
| 83° | 6.4 | 1.6 | 6.2 | 31.3 | 76.3 | 111.0 | 89.3 | 94.1 | 142.2 | 269.0 | 502.8 |
| 84° | 5.7 | 1.8 | 5.5 | 25.9 | 62.5 | 89.3 | 73.2 | 77.6 | 119.5 | 220.3 | 277.7 |
| 85° | 5.1 | 2.0 | 5.0 | 20.4 | 52.2 | 68.6 | 59.2 | 61.2 | 98.9 | 172.9 | 233.1 |
| 86° | 4.6 | 2.2 | 4.5 | 15.0 | 42.9 | 50.5 | 46.5 | 46.3 | 81.7 | 132.8 | 194.5 |
| 87° | 4.2 | 2.4 | 4.2 | 11.4 | 32.2 | 38.0 | 34.6 | 32.1 | 64.6 | 103.1 | 150.3 |
| 88° | 3.9 | 2.6 | 3.9 | 8.5 | 21.5 | 27.0 | 24.4 | 19.4 | 47.5 | 78.4 | 104.8 |
| 89° | 3.7 | 2.9 | 3.6 | 5.9 | 10.8 | 16.0 | 14.2 | 8.8 | 30.8 | 53.8 | 82.0 |



REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

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

REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 0° | 3546.5 | 3546.5 | 3546.5 |
| 1° | 3552.6 | 3552.9 | 3551.6 |
| 2° | 3562.3 | 3563.0 | 3561.0 |
| 3° | 3575.4 | 3576.1 | 3573.2 |
| 4° | 3591.8 | 3592.1 | 3589.0 |
| 5° | 3609.7 | 3610.1 | 3607.3 |
| 6° | 3630.6 | 3630.9 | 3627.5 |
| 7° | 3654.3 | 3652.7 | 3648.1 |
| 8° | 3680.1 | 3677.1 | 3671.5 |
| 9° | 3709.2 | 3704.3 | 3698.0 |
| 10° | 3740.9 | 3734.2 | 3726.5 |
| 11° | 3774.1 | 3766.0 | 3757.0 |
| 12° | 3809.6 | 3798.8 | 3787.4 |
| 13° | 3846.7 | 3831.2 | 3818.5 |
| 14° | 3885.5 | 3865.2 | 3850.6 |
| 15° | 3923.1 | 3901.0 | 3884.3 |
| 16° | 3961.5 | 3937.7 | 3917.9 |
| 17° | 4001.6 | 3975.2 | 3954.8 |
| 18° | 4042.1 | 4014.8 | 3993.4 |
| 19° | 4084.6 | 4054.8 | 4033.0 |
| 20° | 4127.3 | 4096.4 | 4074.8 |
| 21° | 4171.6 | 4140.3 | 4119.9 |
| 22° | 4218.5 | 4186.1 | 4166.4 |
| 23° | 4266.4 | 4233.9 | 4215.5 |
| 24° | 4313.7 | 4282.1 | 4266.8 |
| 25° | 4364.2 | 4333.5 | 4319.0 |
| 26° | 4416.6 | 4386.5 | 4374.2 |
| 27° | 4471.1 | 4440.7 | 4431.2 |
| 28° | 4526.7 | 4494.8 | 4489.8 |
| 29° | 4584.9 | 4550.7 | 4550.7 |
| 30° | 4642.8 | 4608.3 | 4613.1 |
| 31° | 4702.9 | 4666.8 | 4675.7 |
| 32° | 4762.3 | 4725.2 | 4737.8 |
| 33° | 4823.1 | 4785.6 | 4800.8 |
| 34° | 4885.1 | 4844.8 | 4864.4 |
| 35° | 4948.0 | 4904.2 | 4930.2 |
| 36° | 5012.1 | 4963.8 | 4996.2 |
| 37° | 5076.3 | 5025.7 | 5061.9 |
| 38° | 5141.6 | 5088.7 | 5128.1 |
| 39° | 5207.2 | 5152.9 | 5193.1 |
| 40° | 5275.5 | 5219.6 | 5259.1 |
| 41° | 5342.2 | 5288.5 | 5322.4 |
| 42° | 5409.6 | 5358.7 | 5388.9 |
| 43° | 5479.2 | 5428.8 | 5451.9 |
| 44° | 5549.9 | 5502.0 | 5514.3 |



REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 45° | 5622.1 | 5579.7 | 5579.1 |
| 46° | 5694.6 | 5656.7 | 5643.9 |
| 47° | 5769.5 | 5736.7 | 5708.3 |
| 48° | 5846.9 | 5818.4 | 5776.0 |
| 49° | 5926.4 | 5905.0 | 5844.4 |
| 50° | 6006.8 | 5989.7 | 5915.2 |
| 51° | 6086.7 | 6076.9 | 5986.3 |
| 52° | 6166.9 | 6163.5 | 6058.5 |
| 53° | 6248.6 | 6251.0 | 6132.5 |
| 54° | 6330.1 | 6335.7 | 6204.2 |
| 55° | 6416.0 | 6418.7 | 6275.6 |
| 56° | 6505.4 | 6497.2 | 6340.7 |
| 57° | 6596.7 | 6569.9 | 6403.0 |
| 58° | 6683.7 | 6636.2 | 6462.5 |
| 59° | 6767.8 | 6697.7 | 6515.3 |
| 60° | 6854.9 | 6751.4 | 6561.6 |
| 61° | 6941.1 | 6798.1 | 6599.6 |
| 62° | 7025.3 | 6839.3 | 6629.2 |
| 63° | 7111.3 | 6876.1 | 6654.9 |
| 64° | 7196.0 | 6910.4 | 6677.7 |
| 65° | 7273.5 | 6940.3 | 6699.0 |
| 66° | 7342.0 | 6968.4 | 6711.4 |
| 67° | 7396.4 | 6986.0 | 6709.6 |
| 68° | 7433.9 | 6981.3 | 6647.0 |
| 69° | 7447.0 | 6933.1 | 6449.1 |
| 70° | 7439.2 | 6796.0 | 6038.6 |
| 71° | 7398.2 | 6490.2 | 5393.9 |
| 72° | 7309.1 | 5952.5 | 4710.8 |
| 73° | 7132.1 | 5233.6 | 3989.9 |
| 74° | 6780.4 | 4421.3 | 3153.4 |
| 75° | 6202.2 | 3560.7 | 2104.8 |
| 76° | 5437.1 | 2597.1 | 1147.5 |
| 77° | 4586.8 | 1503.0 | 855.3 |
| 78° | 3534.2 | 1106.1 | 572.8 |
| 79° | 2295.4 | 715.1 | 290.2 |
| 80° | 1239.5 | 324.2 | 257.5 |
| 81° | 906.1 | 273.0 | 229.2 |
| 82° | 599.1 | 239.7 | 203.7 |
| 83° | 292.2 | 209.4 | 180.5 |
| 84° | 243.6 | 181.7 | 158.3 |
| 85° | 198.2 | 156.6 | 136.9 |
| 86° | 161.5 | 133.7 | 116.7 |
| 87° | 129.7 | 112.5 | 97.5 |
| 88° | 99.8 | 93.9 | 84.1 |
| 89° | 82.0 | 75.3 | 70.8 |



REPORT NUMBER: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

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: P1436740

CATALOG NUMBER: XAS180-SFPM (4000K-180W-T5-HSS)

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)