

Scaled data based on original data using  
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires  
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: P10821\_400MP

Luminaire Tested: **OVX40PXX3EF**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-31-95  
Report Number: P10821\_400MP  
Test Lab: PEACHTREE CITY  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: OVX40PXX3EF  
Description: 400 WATT MH TYPE III ROADWAY  
Light Source: 400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 40000 (1 lamp)  
Luminaire Lumens: 30987.8 lumens  
Efficiency: 77.5%  
Efficacy: 68.6 lumens/watt  
Luminous Opening: Rectangular (W 0.92' x L: 1.12' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U2 - G4

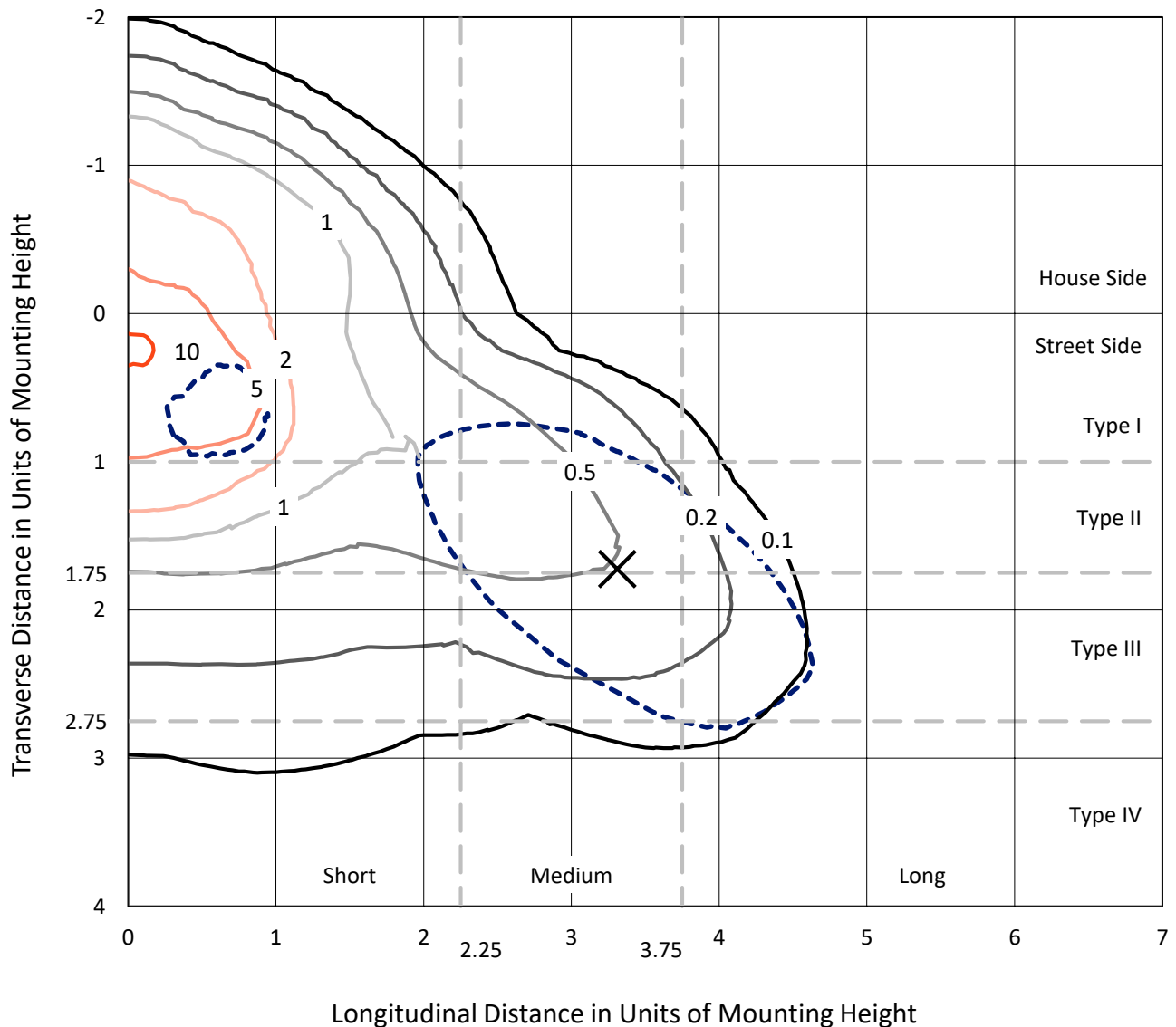
Input Watts (W): 452  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

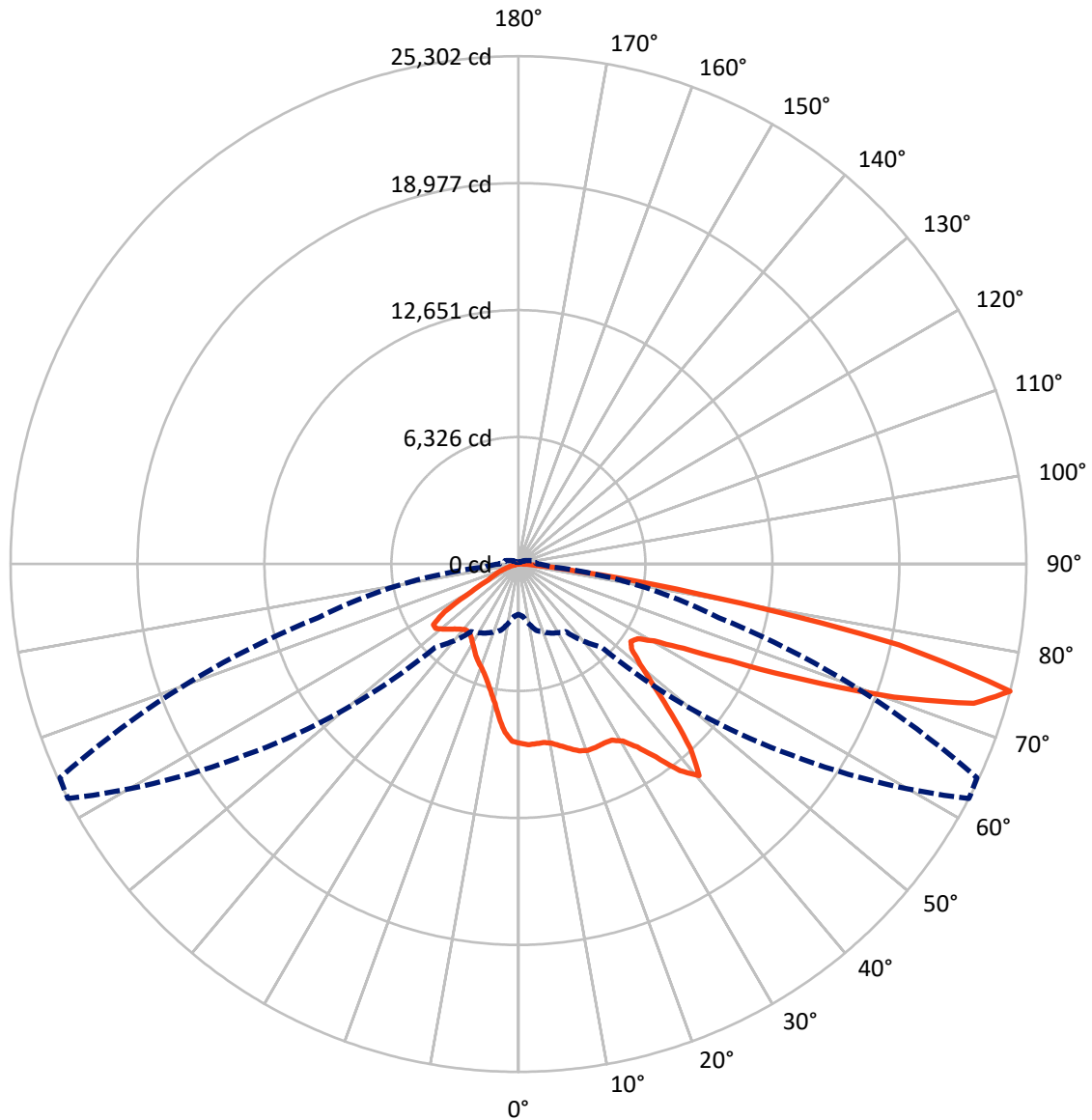
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical



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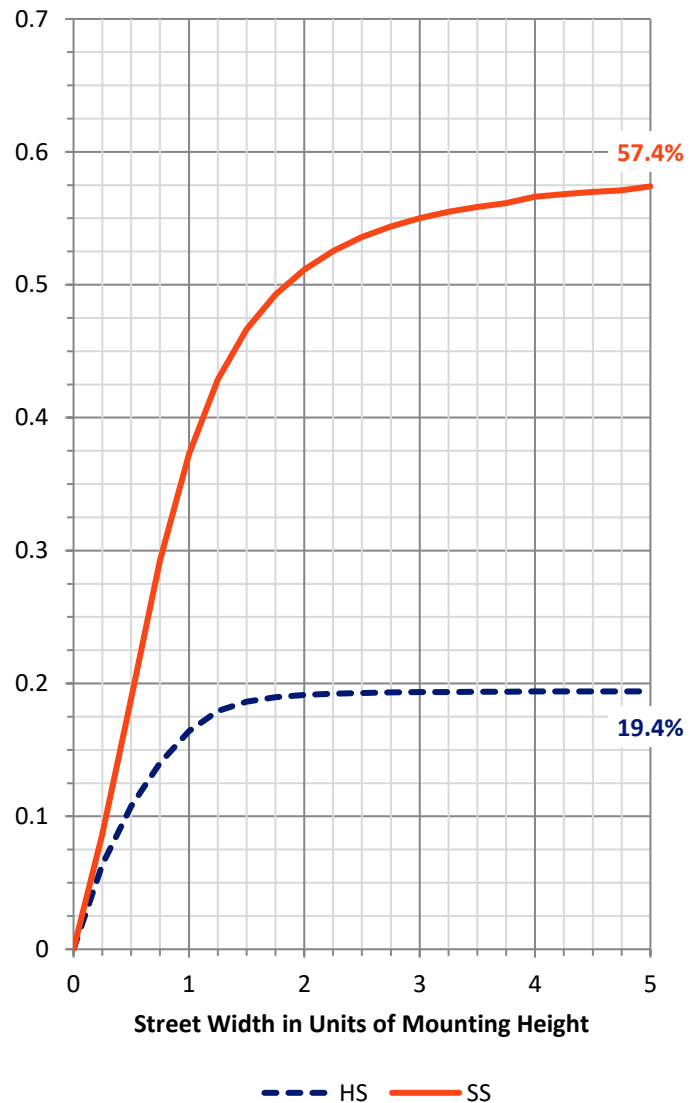
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7806.6	7.0	7813.5
	% Lamp	19.5	0.0	19.5
<b>Street Side</b>	Lumens	23152.4	21.8	23174.3
	% Lamp	57.9	0.1	57.9
<b>Total</b>	Lumens	30959.0	28.8	30987.8
	% Lamp	77.4	0.1	77.5

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	802.3	2.6	2.0
10°-20°	2213.9	7.1	5.5
20°-30°	3496.1	11.3	8.7
30°-40°	4848.2	15.6	12.1
40°-50°	6178.6	19.9	15.4
50°-60°	4927.1	15.9	12.3
60°-70°	3899.5	12.6	9.7
70°-80°	3976.5	12.8	9.9
80°-90°	616.7	2.0	1.5
90°-100°	27.0	0.1	0.1
100°-110°	1.8	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°	30959.0	99.9	77.4
0°-180°	30987.8	100.0	77.5

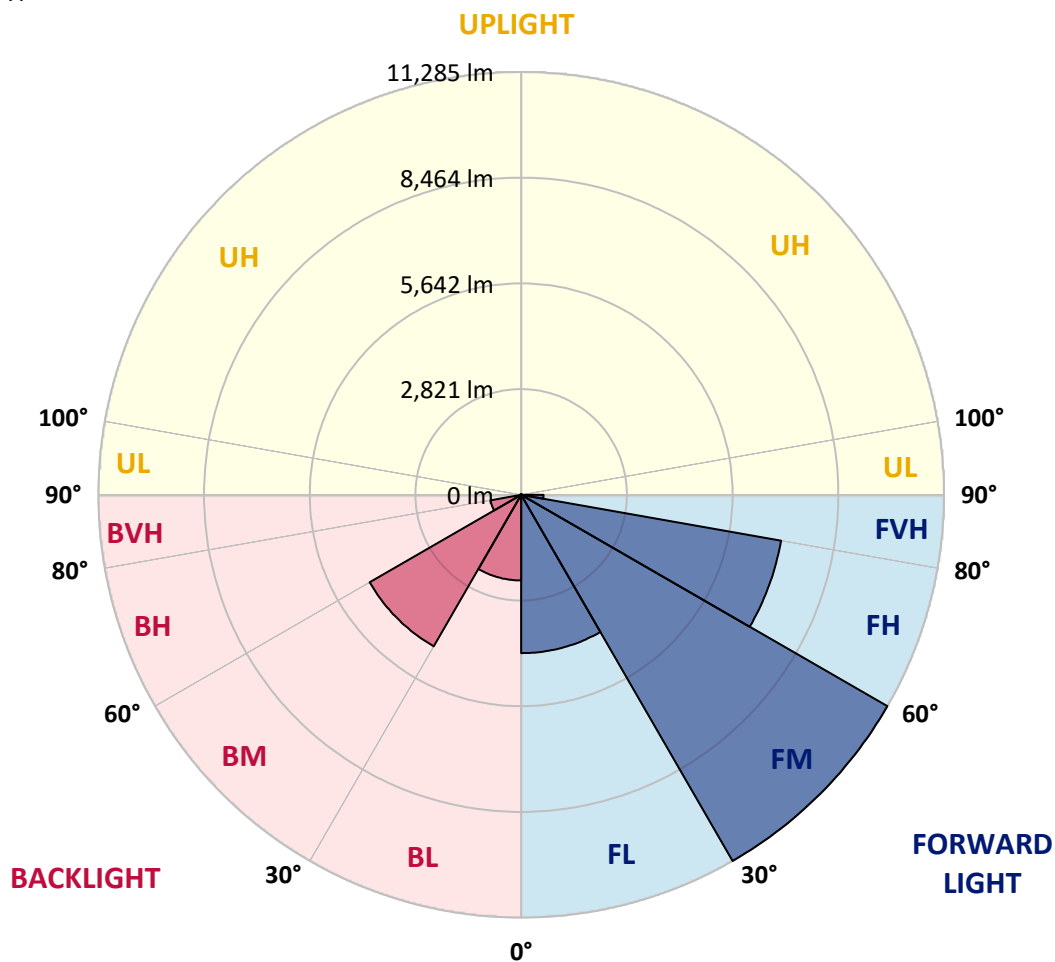


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4226.3	10.6			
FM (30°-60°)	11284.8	28.2			
FH (60°-80°)	7043.3	17.6			G3/7500
FVH (80°-90°)	598.0	1.5			G4/750
BL (0°-30°)	2286.1	5.7	B3/2500		
BM (30°-60°)	4669.0	11.7	B3/5000		
BH (60°-80°)	832.7	2.1	B2/1000		G2/1000
BVH (80°-90°)	18.7	0.0			G1/100
UL (90°-100°)	27.0	0.1		U2/50	
UH (100°-180°)	7.0	0.0		U1/10	
Trapped Light	9012.2	22.5			

**BUG Rating: B3-U2-G4**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4
2.5°	8991.1	9020.0	9023.3	9012.2	9012.2	9023.3	9023.3	9013.3	9010.0	8993.3	8976.7
5°	8991.1	9010.0	9010.0	8996.7	8995.6	8991.1	8998.9	9001.1	8982.2	8961.1	8905.6
7.5°	9214.4	9250.0	9238.9	9208.9	9178.9	9113.3	9033.3	8976.7	8936.7	8851.1	8737.8
10°	9635.6	9655.6	9648.9	9595.6	9491.1	9342.2	9190.0	9081.1	9022.2	8837.8	8645.6
12.5°	10057.8	10078.9	10037.8	9957.8	9806.7	9623.3	9441.1	9294.4	9234.4	8960.0	8676.7
15°	10387.8	10407.8	10356.7	10283.3	10116.7	9893.3	9718.9	9537.8	9487.8	9164.4	8787.8
17.5°	10633.3	10658.9	10635.6	10558.9	10377.8	10164.4	9958.9	9785.6	9726.7	9355.6	8835.6
20°	10804.4	10840.0	10878.9	10861.1	10670.0	10345.6	10078.9	9907.8	9844.4	9417.8	8742.2
22.5°	11028.9	11082.2	11161.1	11228.9	10937.8	10474.4	10138.9	9908.9	9847.8	9260.0	8421.1
25°	11324.4	11367.8	11537.8	11624.4	11182.2	10581.1	10206.7	9891.1	9764.4	8962.2	7950.0
27.5°	11637.8	11691.1	11896.7	11985.6	11446.7	10797.8	10354.4	9935.6	9781.1	8716.7	7511.1
30°	11926.7	11973.3	12261.1	12243.3	11791.1	11287.8	10784.4	10238.9	9995.6	8551.1	7103.3
32.5°	12071.1	12092.2	12375.6	12457.8	12260.0	12161.1	11756.7	10864.4	10437.8	8404.4	6427.8
35°	12107.8	12147.8	12367.8	12598.9	12880.0	13356.7	13314.4	11798.9	11083.3	8158.9	5456.7
37.5°	12065.6	12086.7	12267.8	12730.0	13672.2	15024.4	15630.0	13060.0	11856.7	7052.2	5142.2
40°	12120.0	12150.0	12133.3	12768.9	14535.6	16865.6	17971.1	13866.7	11867.8	6430.0	5000.0
42.5°	12292.2	12295.6	12082.2	12693.3	15188.9	18531.1	19080.0	12563.3	10324.4	6133.3	4874.4
45°	12244.4	12342.2	12036.7	12454.4	15131.1	19240.0	17840.0	10715.6	9074.4	5736.7	4702.2
47.5°	11657.8	11792.2	11625.6	11871.1	13880.0	17570.0	14503.3	9060.0	7842.2	5350.0	4680.0
50°	10440.0	10461.1	10641.1	10816.7	11677.8	13762.2	11343.3	7860.0	7054.4	5263.3	4788.9
52.5°	8774.4	8818.9	9144.4	9384.4	9467.8	10462.2	9155.6	7062.2	6583.3	5391.1	4961.1
55°	6873.3	6857.8	7337.8	7626.7	7522.2	8581.1	8000.0	6803.3	6573.3	5635.6	5075.6
57.5°	4622.2	4773.3	5638.9	6070.0	6572.2	7635.6	7567.8	7012.2	6930.0	6086.7	5198.9
60°	3608.9	3687.8	4363.3	5225.6	5942.2	6981.1	7771.1	7778.9	7767.8	6775.6	5351.1
62.5°	3306.7	3327.8	3598.9	4534.4	5404.4	6601.1	8396.7	9242.2	9352.2	7917.8	5264.4
65°	3136.7	3144.4	3346.7	4014.4	4964.4	6330.0	9494.4	11640.0	11988.9	9395.6	4163.3
67.5°	3008.9	3033.3	3317.8	3810.0	4682.2	6234.4	11173.3	15394.4	15837.8	10388.9	3275.6
70°	2864.4	2915.6	3385.6	3833.3	4471.1	6304.4	13638.9	19847.8	20312.2	11972.2	2923.3
72.5°	2715.6	2791.1	3406.7	3868.9	4348.9	6408.9	15936.7	23727.8	24501.1	12832.2	2358.9
75°	2502.2	2626.7	3420.0	3794.4	4114.4	5864.4	16590.0	25302.2	25205.6	10325.6	1655.6
77.5°	2182.2	2336.7	3214.4	3506.7	3577.8	3734.4	14771.1	19393.3	17788.9	5604.4	997.8
80°	1920.0	2041.1	2901.1	2993.3	2252.2	2082.2	8885.6	9215.6	7823.3	2393.3	570.0
82.5°	1575.6	1693.3	2278.9	1543.3	747.8	1160.0	3101.1	2951.1	2582.2	945.6	303.3
85°	1058.9	1114.4	1167.8	570.0	371.1	501.1	977.8	938.9	818.9	365.6	131.1
87.5°	506.7	521.1	476.7	290.0	196.7	216.7	293.3	293.3	257.8	114.4	52.2
90°	201.1	211.1	208.9	148.9	105.6	105.6	102.2	80.0	68.9	42.2	32.2
92.5°	100.0	103.3	100.0	75.6	51.1	45.6	36.7	31.1	31.1	18.9	6.7
95°	53.3	54.4	48.9	36.7	24.4	20.0	18.9	8.9	6.7	6.7	6.7
97.5°	31.1	31.1	26.7	18.9	12.2	5.6	5.6	6.7	6.7	6.7	7.8
100°	26.7	26.7	22.2	15.6	10.0	7.8	7.8	7.8	7.8	7.8	8.9
102.5°	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
107.5°	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



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
112.5°	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
117.5°	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
122.5°	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
127.5°	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
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	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
142.5°	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
147.5°	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
152.5°	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
157.5°	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
162.5°	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
167.5°	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
172.5°	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
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4	8924.4
2.5°	8945.6	8947.8	8895.6	8850.0	8793.3	8756.7	8721.1	8663.3	8635.6	8617.8	8606.7
5°	8840.0	8798.9	8618.9	8458.9	8292.2	8163.3	8038.9	7950.0	7898.9	7875.6	7885.6
7.5°	8618.9	8478.9	8165.6	7824.4	7563.3	7325.6	7183.3	7097.8	7041.1	7060.0	7047.8
10°	8480.0	8258.9	7741.1	7188.9	6661.1	6318.9	6170.0	6130.0	6132.2	6170.0	6165.6
12.5°	8453.3	8161.1	7483.3	6716.7	5978.9	5474.4	5248.9	5254.4	5425.6	5564.4	5585.6
15°	8508.9	8157.8	7302.2	6305.6	5478.9	4951.1	4726.7	4763.3	5004.4	5261.1	5292.2
17.5°	8521.1	8127.8	7123.3	5958.9	5145.6	4642.2	4468.9	4502.2	4705.6	5070.0	5147.8
20°	8356.7	7953.3	6896.7	5680.0	4888.9	4448.9	4301.1	4252.2	4395.6	4750.0	4844.4
22.5°	8003.3	7587.8	6548.9	5463.3	4748.9	4345.6	4112.2	4006.7	4064.4	4343.3	4401.1
25°	7500.0	7072.2	6052.2	5195.6	4678.9	4265.6	3945.6	3758.9	3755.6	4004.4	4081.1
27.5°	6984.4	6544.4	5424.4	4866.7	4636.7	4163.3	3726.7	3528.9	3527.8	3762.2	3860.0
30°	6443.3	5686.7	4807.8	4607.8	4531.1	4061.1	3581.1	3388.9	3391.1	3623.3	3741.1
32.5°	5416.7	4923.3	4527.8	4401.1	4384.4	3996.7	3537.8	3367.8	3367.8	3644.4	3788.9
35°	4940.0	4651.1	4366.7	4250.0	4261.1	3988.9	3587.8	3468.9	3506.7	3808.9	3986.7
37.5°	4760.0	4538.9	4274.4	4185.6	4194.4	4023.3	3740.0	3762.2	3798.9	4044.4	4266.7
40°	4680.0	4465.6	4263.3	4227.8	4221.1	4140.0	3975.6	4030.0	4033.3	4135.6	4327.8
42.5°	4575.6	4438.9	4333.3	4358.9	4390.0	4325.6	4148.9	4100.0	4131.1	4205.6	4336.7
45°	4560.0	4536.7	4533.3	4546.7	4500.0	4512.2	4230.0	4070.0	4270.0	4440.0	4544.4
47.5°	4685.6	4733.3	4787.8	4807.8	4606.7	4602.2	4293.3	4063.3	4597.8	4981.1	4997.8
50°	4868.9	4920.0	5016.7	5057.8	4764.4	4551.1	4193.3	3806.7	4503.3	5254.4	5167.8
52.5°	5014.4	5067.8	5300.0	5372.2	4757.8	4234.4	3667.8	3102.2	3502.2	4370.0	4398.9
55°	5096.7	5224.4	5606.7	5486.7	4355.6	3586.7	2895.6	2287.8	2367.8	3031.1	3202.2
57.5°	5190.0	5406.7	5580.0	4723.3	3366.7	2662.2	2078.9	1603.3	1602.2	2006.7	2105.6
60°	5201.1	5198.9	4487.8	2968.9	2002.2	1625.6	1311.1	1090.0	1143.3	1423.3	1447.8
62.5°	4565.6	3994.4	2834.4	1866.7	1334.4	1077.8	927.8	857.8	883.3	1065.6	1086.7
65°	3052.2	2595.6	2005.6	1457.8	1078.9	856.7	720.0	640.0	646.7	786.7	794.4
67.5°	2270.0	1994.4	1650.0	1218.9	878.9	654.4	505.6	440.0	438.9	560.0	570.0
70°	1870.0	1588.9	1306.7	938.9	632.2	433.3	316.7	271.1	273.3	363.3	380.0
72.5°	1402.2	1190.0	954.4	644.4	397.8	261.1	193.3	165.6	160.0	204.4	234.4
75°	962.2	826.7	641.1	400.0	225.6	151.1	110.0	88.9	78.9	100.0	112.2
77.5°	626.7	542.2	391.1	224.4	130.0	85.6	60.0	46.7	36.7	33.3	34.4
80°	390.0	334.4	223.3	121.1	68.9	47.8	37.8	32.2	26.7	23.3	22.2
82.5°	206.7	164.4	100.0	55.6	44.4	35.6	13.3	2.2	1.1	0.0	0.0
85°	92.2	66.7	47.8	42.2	17.8	7.8	4.4	3.3	1.1	0.0	0.0
87.5°	42.2	38.9	27.8	13.3	13.3	8.9	4.4	3.3	1.1	0.0	0.0
90°	21.1	11.1	12.2	16.7	15.6	10.0	5.6	3.3	1.1	0.0	0.0
92.5°	7.8	8.9	14.4	21.1	18.9	11.1	5.6	3.3	2.2	0.0	0.0
95°	7.8	10.0	16.7	24.4	22.2	12.2	5.6	3.3	2.2	0.0	0.0
97.5°	7.8	11.1	20.0	27.8	24.4	13.3	6.7	4.4	2.2	0.0	0.0
100°	10.0	12.2	23.3	32.2	27.8	16.7	7.8	5.6	3.3	2.2	2.2
102.5°	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
107.5°	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



REPORT NUMBER: P10821\_400MP  
 CATALOG NUMBER: OVX40PXX3EF

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	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
117.5°	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
122.5°	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
127.5°	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
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	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
142.5°	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
147.5°	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
152.5°	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
157.5°	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
162.5°	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
167.5°	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
172.5°	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
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)