

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: 48463 \_400MP

Luminaire Tested: **HMX40PXXCM**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-31-95  
Report Number: 48463 \_400MP  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: HMX40PXXCM  
Description: 400W MH TYPE V HIGH MAST  
Light Source: 400 WATT PULSE-START CLEAR VBU BURN  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 44000 (1 lamp)  
Luminaire Lumens: 25784.9 lumens  
Efficiency: 58.6%  
Efficacy: 57.0 lumens/watt  
Luminous Opening: (L: -2.33 ' x W: 0 ' x H: 2 '  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

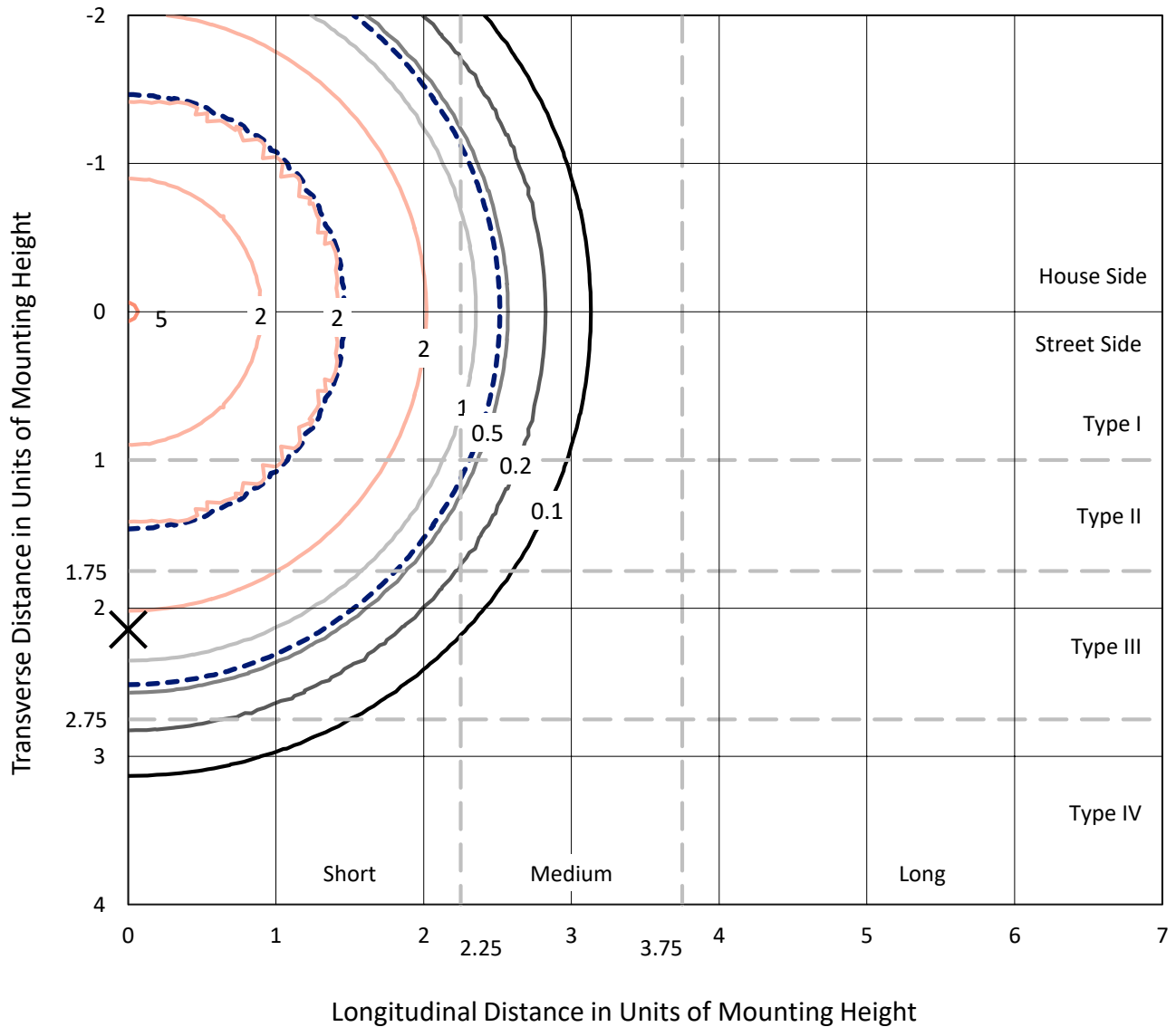
Input Watts (W): 452  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

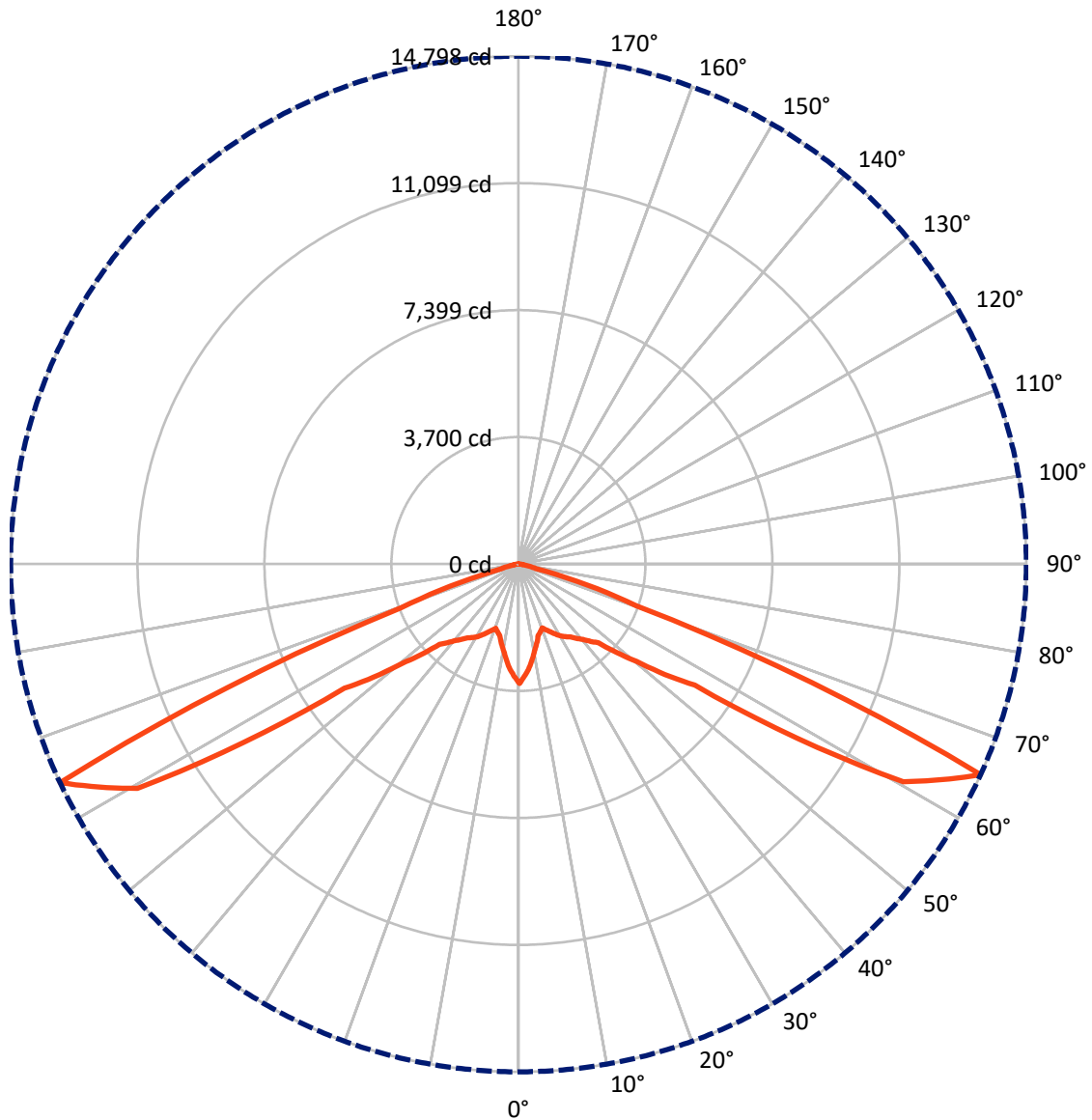
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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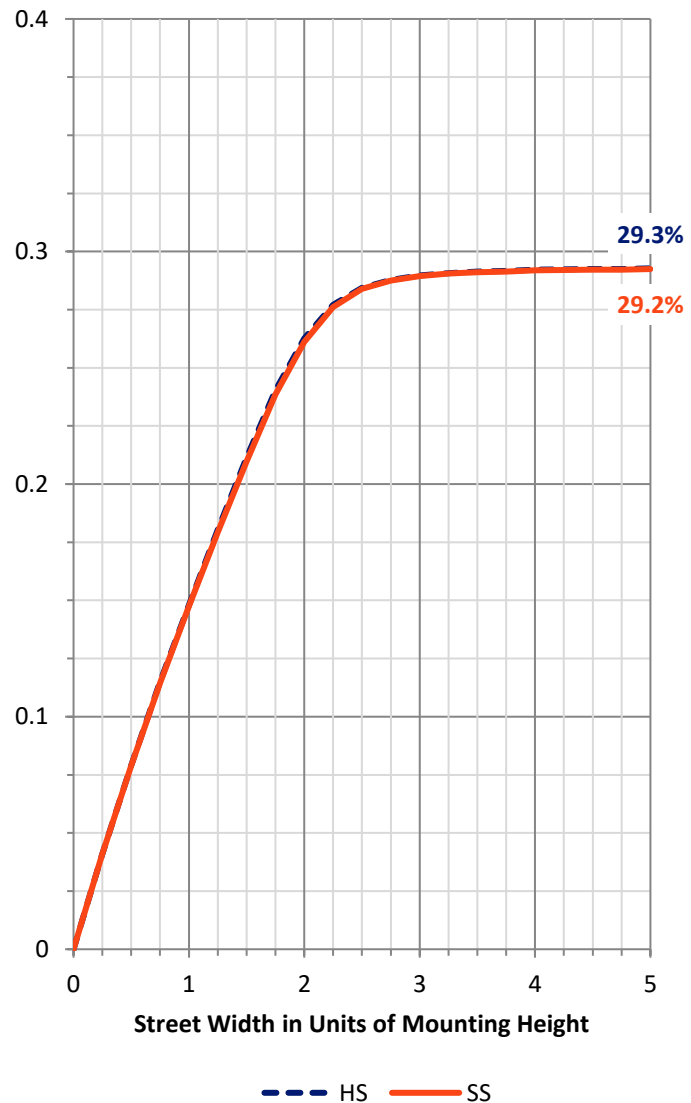
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12892.4	0.0	12892.4
	% Lamp	29.3	0.0	29.3
<b>Street Side</b>	Lumens	12892.4	0.0	12892.4
	% Lamp	29.3	0.0	29.3
<b>Total</b>	Lumens	25784.9	0.0	25784.9
	% Lamp	58.6	0.0	58.6

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	280.9	1.1	0.6
10°-20°	622.6	2.4	1.4
20°-30°	1024.2	4.0	2.3
30°-40°	1661.2	6.4	3.8
40°-50°	2703.0	10.5	6.1
50°-60°	6742.7	26.1	15.3
60°-70°	11402.0	44.2	25.9
70°-80°	1276.4	5.0	2.9
80°-90°	71.8	0.3	0.2
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°	25784.9	100.0	58.6
0°-180°	25784.9	100.0	58.6

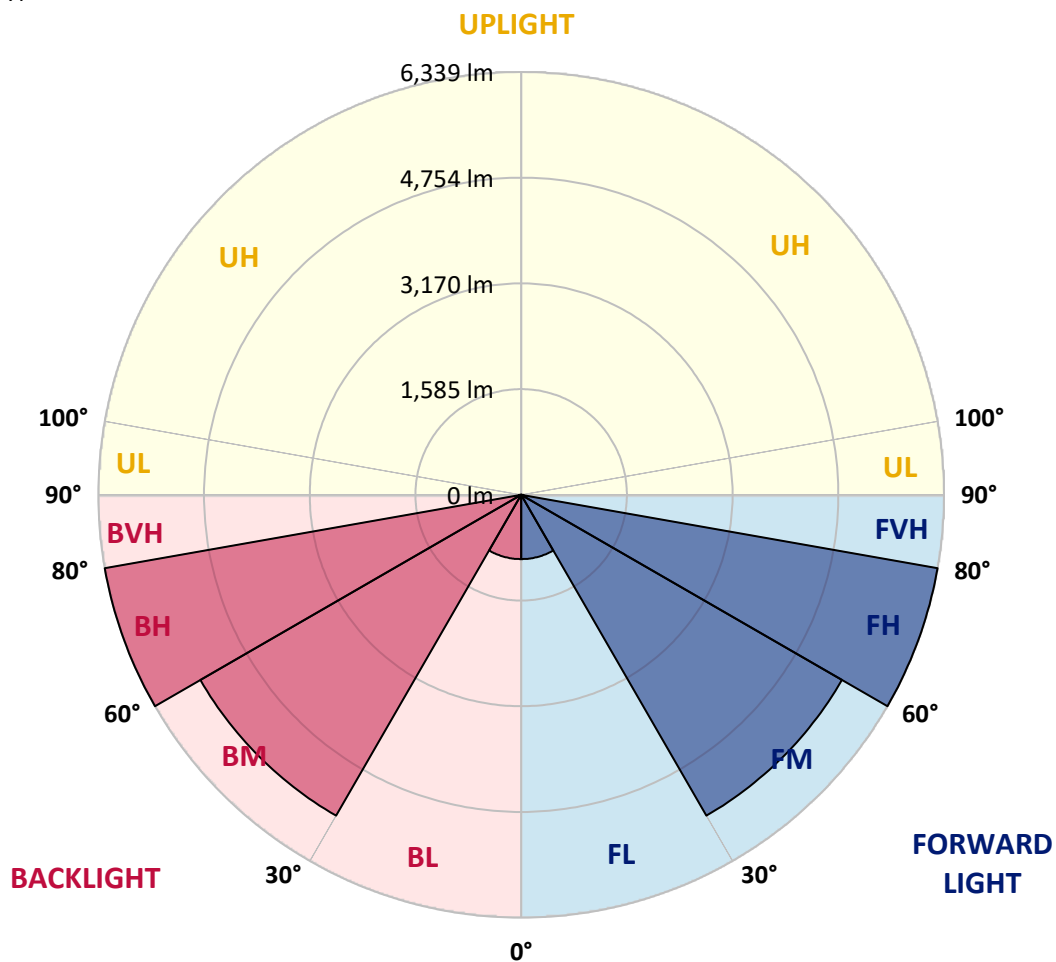


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	963.8	2.2			
FM	(30°-60°)	5553.5	12.6			
FH	(60°-80°)	6339.2	14.4			G3/7500
FVH	(80°-90°)	35.9	0.1			G1/100
BL	(0°-30°)	963.8	2.2	B2/1000		
BM	(30°-60°)	5553.5	12.6	B4/8500		
BH	(60°-80°)	6339.2	14.4	B5		G3/7500
BVH	(80°-90°)	35.9	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		18215.1	41.4			

**BUG Rating: B5-U0-G3**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5
5°	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3
10°	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6
15°	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9
20°	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2
25°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
30°	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8
35°	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5
40°	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8
45°	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8
50°	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9
55°	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5
60°	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9
65°	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2
70°	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9
75°	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8
80°	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6
85°	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5	3482.5
5°	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3	3081.3
10°	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6	2576.6
15°	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9	2159.9
20°	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2	1985.2
25°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
30°	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8	2436.8
35°	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5	2611.5
40°	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8	2889.8
45°	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8	3272.8
50°	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9	4456.9
55°	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5	6232.5
60°	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9	12882.9
65°	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2	14798.2
70°	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9	3655.9
75°	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8	522.8
80°	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6	165.6
85°	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)