

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: E429-134\_450MP

Luminaire Tested: **MPQP-S3/9/GL-450VBU**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: E429-134\_450MP  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: MPQP-S3/9/GL-450VBU  
Description: RECESSED COMMERCIAL W/SPECULAR LOUVERS  
Light Source: 450 WATT PULSE-START COATED ED-37 VBU BURN  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 45000 (1 lamp)  
Luminaire Lumens: 26178.9 lumens  
Efficiency: 58.2%  
Efficacy: 51.5 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.75' x L: 1.75' x H: 0.1')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G1

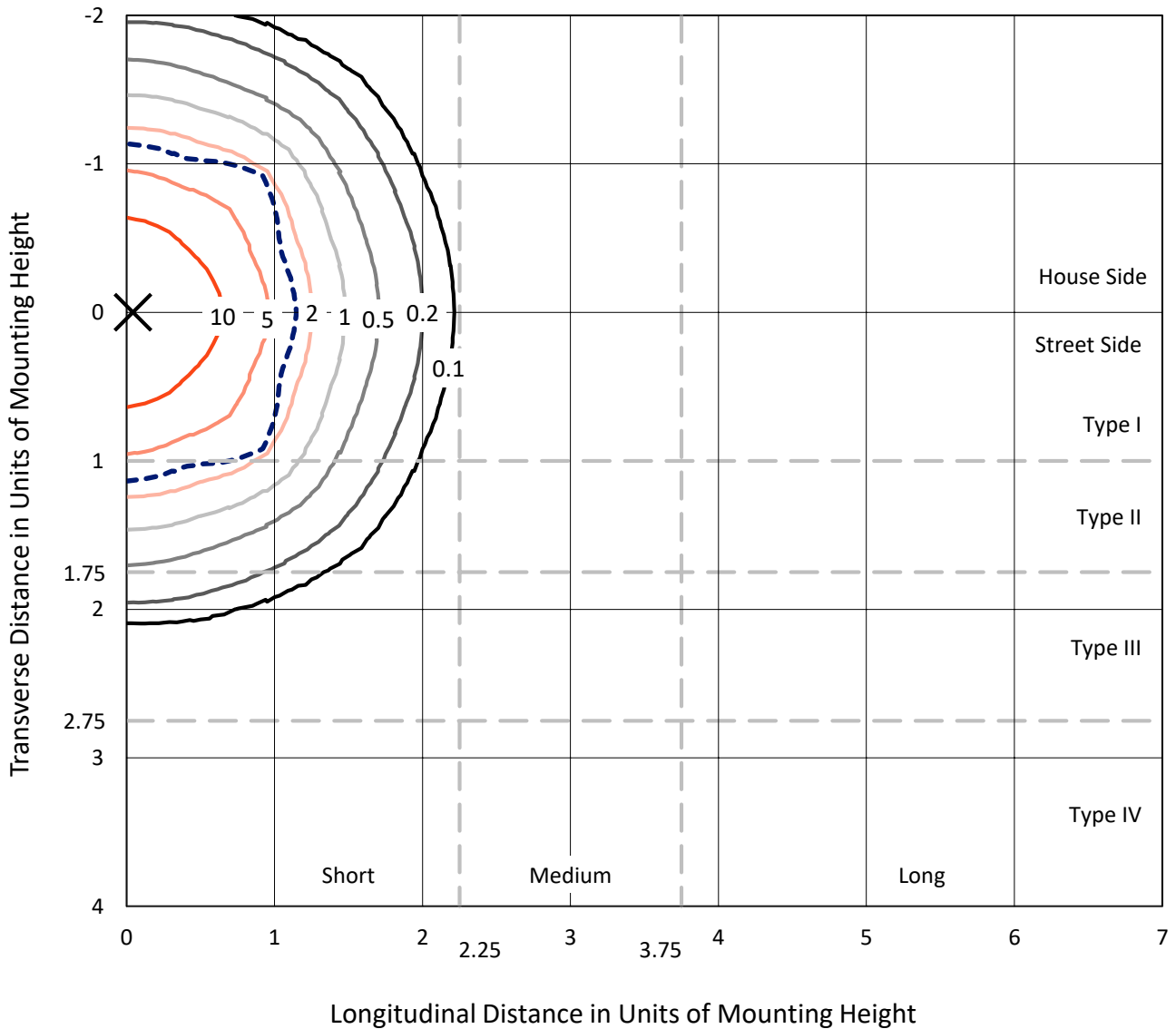
Input Watts (W): 508  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

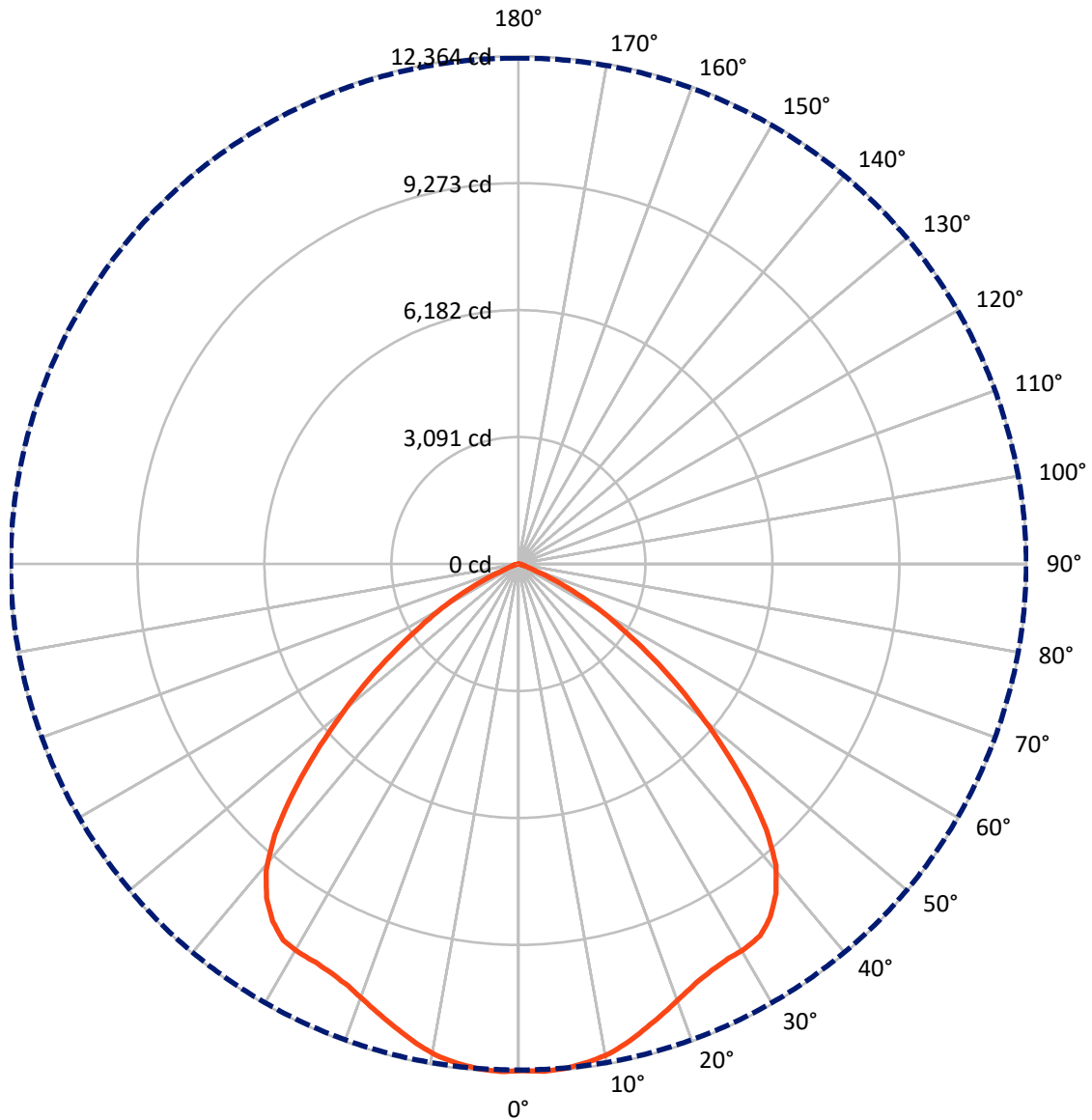
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 19.7 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral    - - - Horizontal Cone Through 2.5-Deg Vertical

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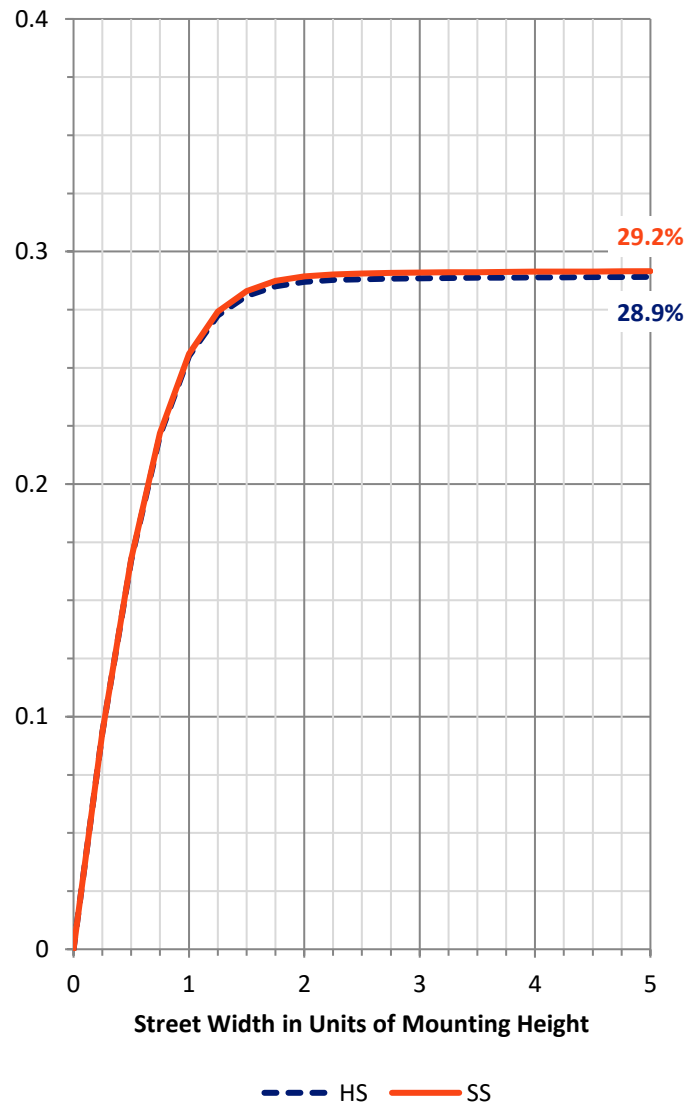
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13089.5	0.0	13089.5
	% Lamp	29.1	0.0	29.1
<b>Street Side</b>	Lumens	13089.5	0.0	13089.5
	% Lamp	29.1	0.0	29.1
<b>Total</b>	Lumens	26178.9	0.0	26178.9
	% Lamp	58.2	0.0	58.2

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	1168.9	4.5	2.6
10°-20°	3301.7	12.6	7.3
20°-30°	4968.2	19.0	11.0
30°-40°	6086.9	23.3	13.5
40°-50°	5850.0	22.3	13.0
50°-60°	3590.0	13.7	8.0
60°-70°	1037.6	4.0	2.3
70°-80°	145.4	0.6	0.3
80°-90°	30.2	0.1	0.1
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°	26178.9	100.0	58.2
0°-180°	26178.9	100.0	58.2

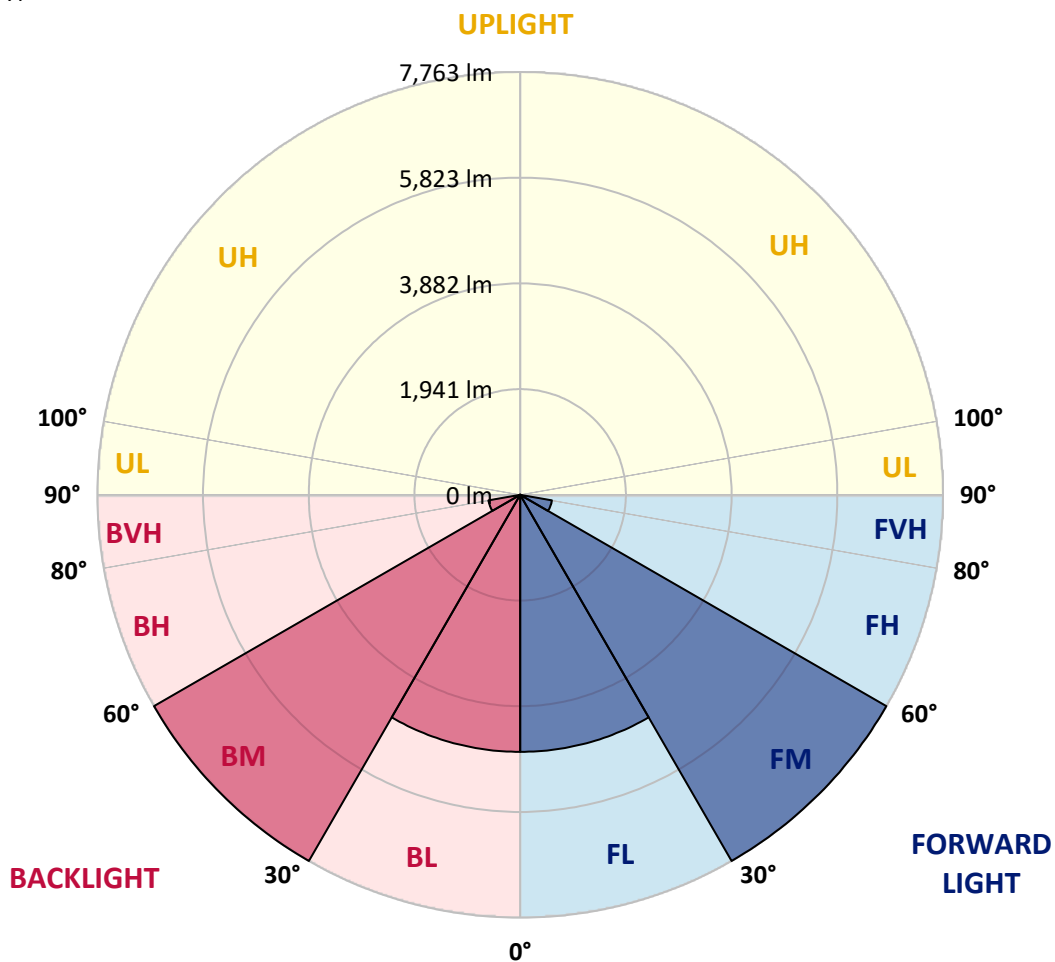


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4719.4	10.5			
FM	(30°-60°)	7763.4	17.3			
FH	(60°-80°)	591.5	1.3			G0/660
FVH	(80°-90°)	15.1	0.0			G1/100
BL	(0°-30°)	4719.4	10.5	B4/5000		
BM	(30°-60°)	7763.4	17.3	B4/8500		
BH	(60°-80°)	591.5	1.3	B2/1000		G0/660
BVH	(80°-90°)	15.1	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		18821.1	41.8			

**BUG Rating: B4-U0-G1**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	12333.8	12333.8	12333.8	12333.8	12333.8	12333.8	12333.8	12333.8	12333.8
2.5°	12317.5	12328.8	12346.2	12345.0	12363.8	12345.0	12346.2	12328.8	12317.5
5°	12290.0	12310.0	12328.8	12315.0	12327.5	12315.0	12328.8	12310.0	12290.0
7.5°	12208.8	12236.2	12236.2	12240.0	12245.0	12240.0	12236.2	12236.2	12208.8
10°	12103.8	12128.8	12096.2	12126.2	12126.2	12126.2	12096.2	12128.8	12103.8
12.5°	11953.8	11953.8	11941.2	11940.0	11935.0	11940.0	11941.2	11953.8	11953.8
15°	11757.5	11735.0	11711.2	11680.0	11703.8	11680.0	11711.2	11735.0	11757.5
17.5°	11535.0	11487.5	11425.0	11415.0	11485.0	11415.0	11425.0	11487.5	11535.0
20°	11338.8	11238.8	11118.8	11172.5	11266.2	11172.5	11118.8	11238.8	11338.8
22.5°	11152.5	11001.2	10807.5	10927.5	11075.0	10927.5	10807.5	11001.2	11152.5
25°	11042.5	10797.5	10488.8	10713.8	10951.2	10713.8	10488.8	10797.5	11042.5
27.5°	10906.2	10633.8	10123.8	10562.5	10880.0	10562.5	10123.8	10633.8	10906.2
30°	10696.2	10400.0	9785.0	10358.8	10865.0	10358.8	9785.0	10400.0	10696.2
32.5°	10423.8	10013.8	9535.0	10140.0	10797.5	10140.0	9535.0	10013.8	10423.8
35°	10136.2	9538.8	9361.2	9796.2	10560.0	9796.2	9361.2	9538.8	10136.2
37.5°	9827.5	9052.5	9211.2	9300.0	10182.5	9300.0	9211.2	9052.5	9827.5
40°	9371.2	8518.8	9053.8	8687.5	9653.8	8687.5	9053.8	8518.8	9371.2
42.5°	8656.2	7930.0	8852.5	8043.8	8857.5	8043.8	8852.5	7930.0	8656.2
45°	7726.2	7156.2	8522.5	7245.0	7851.2	7245.0	8522.5	7156.2	7726.2
47.5°	6638.8	6297.5	8041.2	6391.2	6762.5	6391.2	8041.2	6297.5	6638.8
50°	5582.5	5423.8	7286.2	5468.8	5687.5	5468.8	7286.2	5423.8	5582.5
52.5°	4481.2	4521.2	6140.0	4593.8	4745.0	4593.8	6140.0	4521.2	4481.2
55°	3602.5	3646.2	4870.0	3735.0	3802.5	3735.0	4870.0	3646.2	3602.5
57.5°	2885.0	2820.0	3645.0	2888.8	2951.2	2888.8	3645.0	2820.0	2885.0
60°	2297.5	2138.8	2596.2	2156.2	2286.2	2156.2	2596.2	2138.8	2297.5
62.5°	1437.5	1488.8	1760.0	1520.0	1630.0	1520.0	1760.0	1488.8	1437.5
65°	575.0	796.2	1078.8	975.0	1028.8	975.0	1078.8	796.2	575.0
67.5°	276.2	343.8	608.8	535.0	508.8	535.0	608.8	343.8	276.2
70°	216.2	217.5	303.8	270.0	260.0	270.0	303.8	217.5	216.2
72.5°	160.0	165.0	168.8	181.2	180.0	181.2	168.8	165.0	160.0
75°	122.5	126.2	121.2	128.8	128.8	128.8	121.2	126.2	122.5
77.5°	92.5	93.8	91.2	96.2	91.2	96.2	91.2	93.8	92.5
80°	68.8	70.0	67.5	66.2	62.5	66.2	67.5	70.0	68.8
82.5°	47.5	46.2	45.0	42.5	38.8	42.5	45.0	46.2	47.5
85°	26.2	25.0	23.8	23.8	21.2	23.8	23.8	25.0	26.2
87.5°	10.0	10.0	8.8	8.8	7.5	8.8	8.8	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)