

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

Luminaire Tested: **MHQP-S3/9/GL-400VBU**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: E429-134  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: MHQP-S3/9/GL-400VBU  
Description: RECESSED COMMERCIAL W/SPECULAR LOUVERS  
Light Source: 400 WATT MH COATED BT-37  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 36000 (1 lamp)  
Luminaire Lumens: 20943.1 lumens  
Efficiency: 58.2%  
Efficacy: 46.0 lumens/watt  
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G1

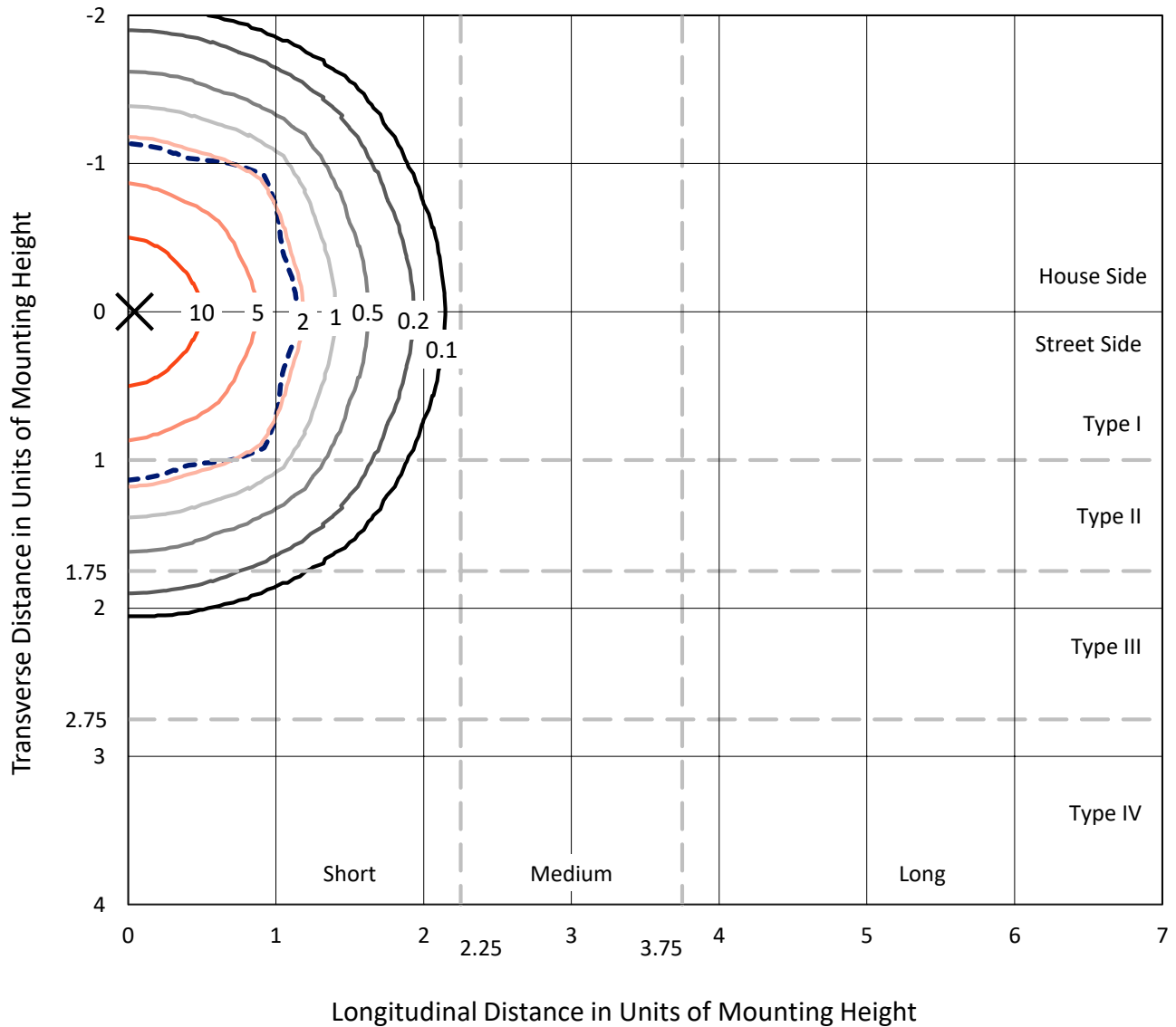
Input Watts (W): 455  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

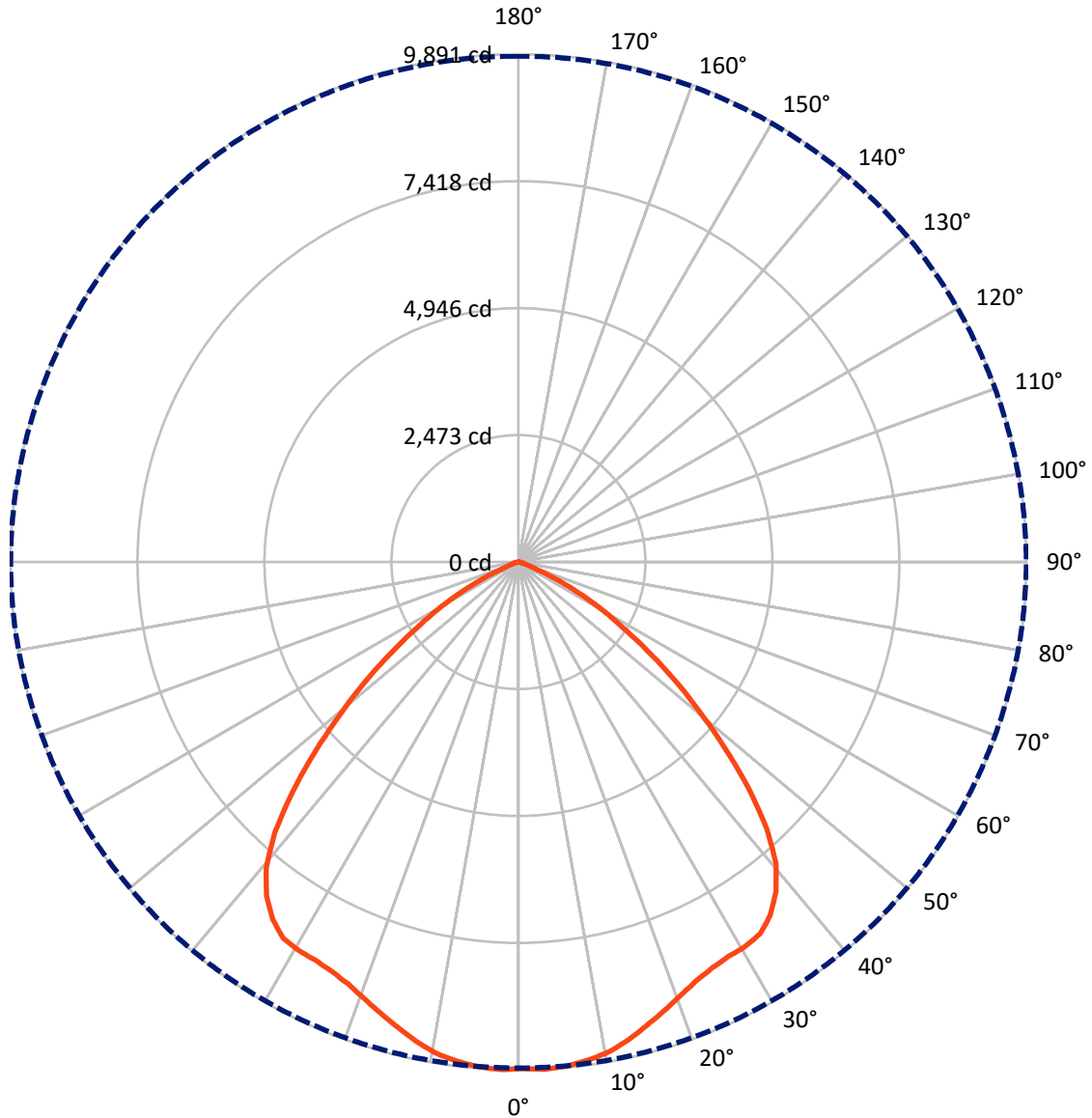
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.8 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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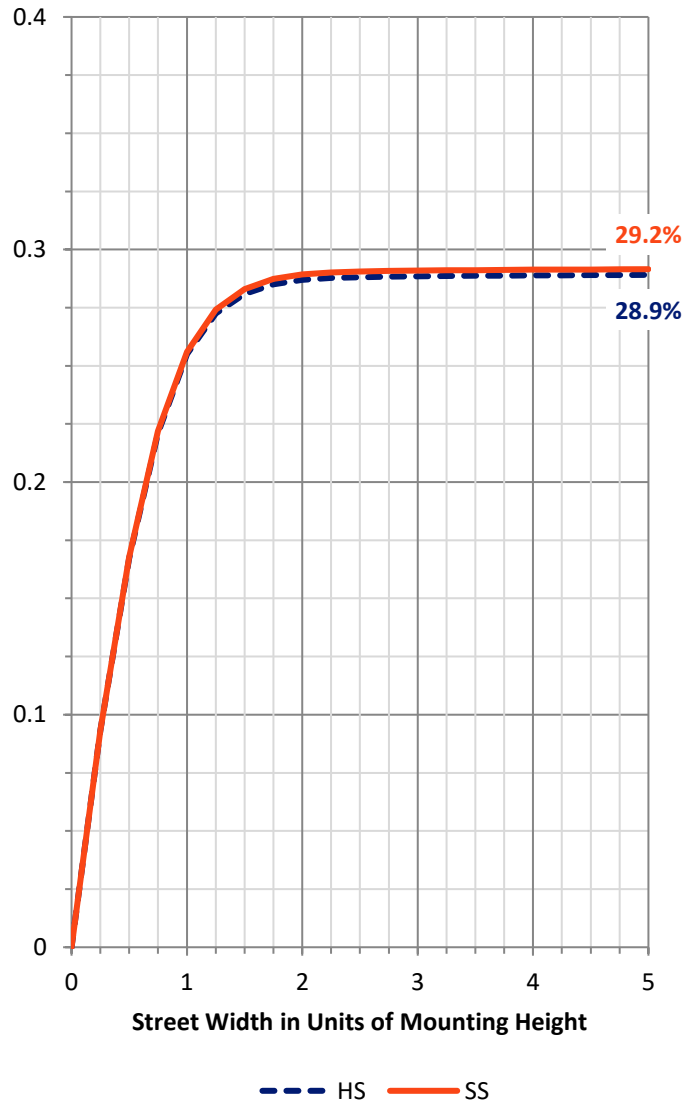
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10471.6	0.0	10471.6
	% Lamp	29.1	0.0	29.1
<b>Street Side</b>	Lumens	10471.6	0.0	10471.6
	% Lamp	29.1	0.0	29.1
<b>Total</b>	Lumens	20943.1	0.0	20943.1
	% Lamp	58.2	0.0	58.2

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	935.1	4.5	2.6
10°-20°	2641.4	12.6	7.3
20°-30°	3974.6	19.0	11.0
30°-40°	4869.5	23.3	13.5
40°-50°	4680.0	22.3	13.0
50°-60°	2872.0	13.7	8.0
60°-70°	830.1	4.0	2.3
70°-80°	116.3	0.6	0.3
80°-90°	24.2	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°	20943.1	100.0	58.2
0°-180°	20943.1	100.0	58.2



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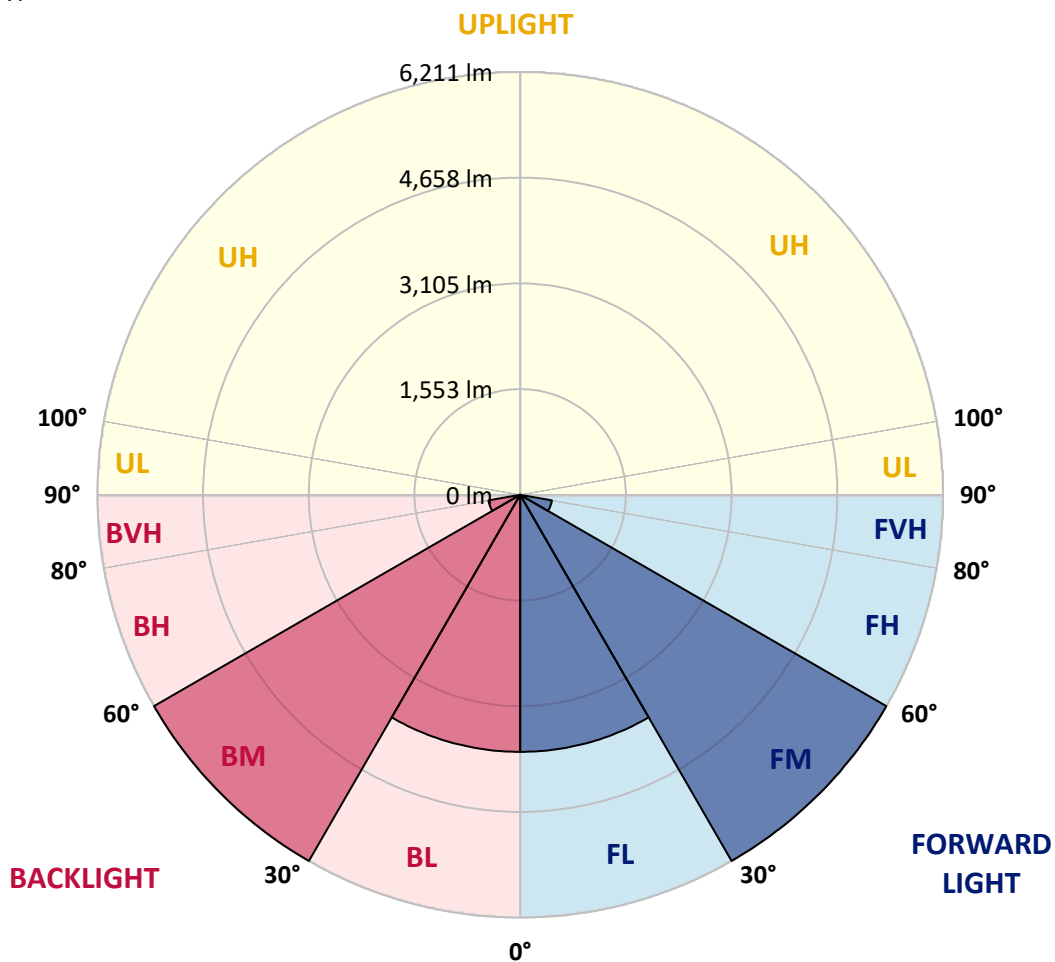
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3775.5	10.5			
FM (30°-60°)	6210.8	17.3			
FH (60°-80°)	473.2	1.3			G0/660
FVH (80°-90°)	12.1	0.0			G1/100
BL (0°-30°)	3775.5	10.5	B4/5000		
BM (30°-60°)	6210.8	17.3	B4/8500		
BH (60°-80°)	473.2	1.3	B1/500		G0/660
BVH (80°-90°)	12.1	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	
Trapped Light	15056.9	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°	9867	9867	9867	9867	9867	9867	9867	9867	9867
2.5°	9854	9863	9877	9876	9891	9876	9877	9863	9854
5°	9832	9848	9863	9852	9862	9852	9863	9848	9832
7.5°	9767	9789	9789	9792	9796	9792	9789	9789	9767
10°	9683	9703	9677	9701	9701	9701	9677	9703	9683
12.5°	9563	9563	9553	9552	9548	9552	9553	9563	9563
15°	9406	9388	9369	9344	9363	9344	9369	9388	9406
17.5°	9228	9190	9140	9132	9188	9132	9140	9190	9228
20°	9071	8991	8895	8938	9013	8938	8895	8991	9071
22.5°	8922	8801	8646	8742	8860	8742	8646	8801	8922
25°	8834	8638	8391	8571	8761	8571	8391	8638	8834
27.5°	8725	8507	8099	8450	8704	8450	8099	8507	8725
30°	8557	8320	7828	8287	8692	8287	7828	8320	8557
32.5°	8339	8011	7628	8112	8638	8112	7628	8011	8339
35°	8109	7631	7489	7837	8448	7837	7489	7631	8109
37.5°	7862	7242	7369	7440	8146	7440	7369	7242	7862
40°	7497	6815	7243	6950	7723	6950	7243	6815	7497
42.5°	6925	6344	7082	6435	7086	6435	7082	6344	6925
45°	6181	5725	6818	5796	6281	5796	6818	5725	6181
47.5°	5311	5038	6433	5113	5410	5113	6433	5038	5311
50°	4466	4339	5829	4375	4550	4375	5829	4339	4466
52.5°	3585	3617	4912	3675	3796	3675	4912	3617	3585
55°	2882	2917	3896	2988	3042	2988	3896	2917	2882
57.5°	2308	2256	2916	2311	2361	2311	2916	2256	2308
60°	1838	1711	2077	1725	1829	1725	2077	1711	1838
62.5°	1150	1191	1408	1216	1304	1216	1408	1191	1150
65°	460	637	863	780	823	780	863	637	460
67.5°	221	275	487	428	407	428	487	275	221
70°	173	174	243	216	208	216	243	174	173
72.5°	128	132	135	145	144	145	135	132	128
75°	98	101	97	103	103	103	97	101	98
77.5°	74	75	73	77	73	77	73	75	74
80°	55	56	54	53	50	53	54	56	55
82.5°	38	37	36	34	31	34	36	37	38
85°	21	20	19	19	17	19	19	20	21
87.5°	8	8	7	7	6	7	7	8	8
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)