

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: E429-92

Luminaire Tested: **MHQP-S4/9/GL-400**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: E429-92  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: MHQP-S4/9/GL-400  
Description: RECESSED COMMERCIAL W/SPECULAR LOUVERS  
Light Source: 400 WATT MH COATED ED-37  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 40000 (1 lamp)  
Luminaire Lumens: 23474.8 lumens  
Efficiency: 58.7%  
Efficacy: 51.6 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 - G0

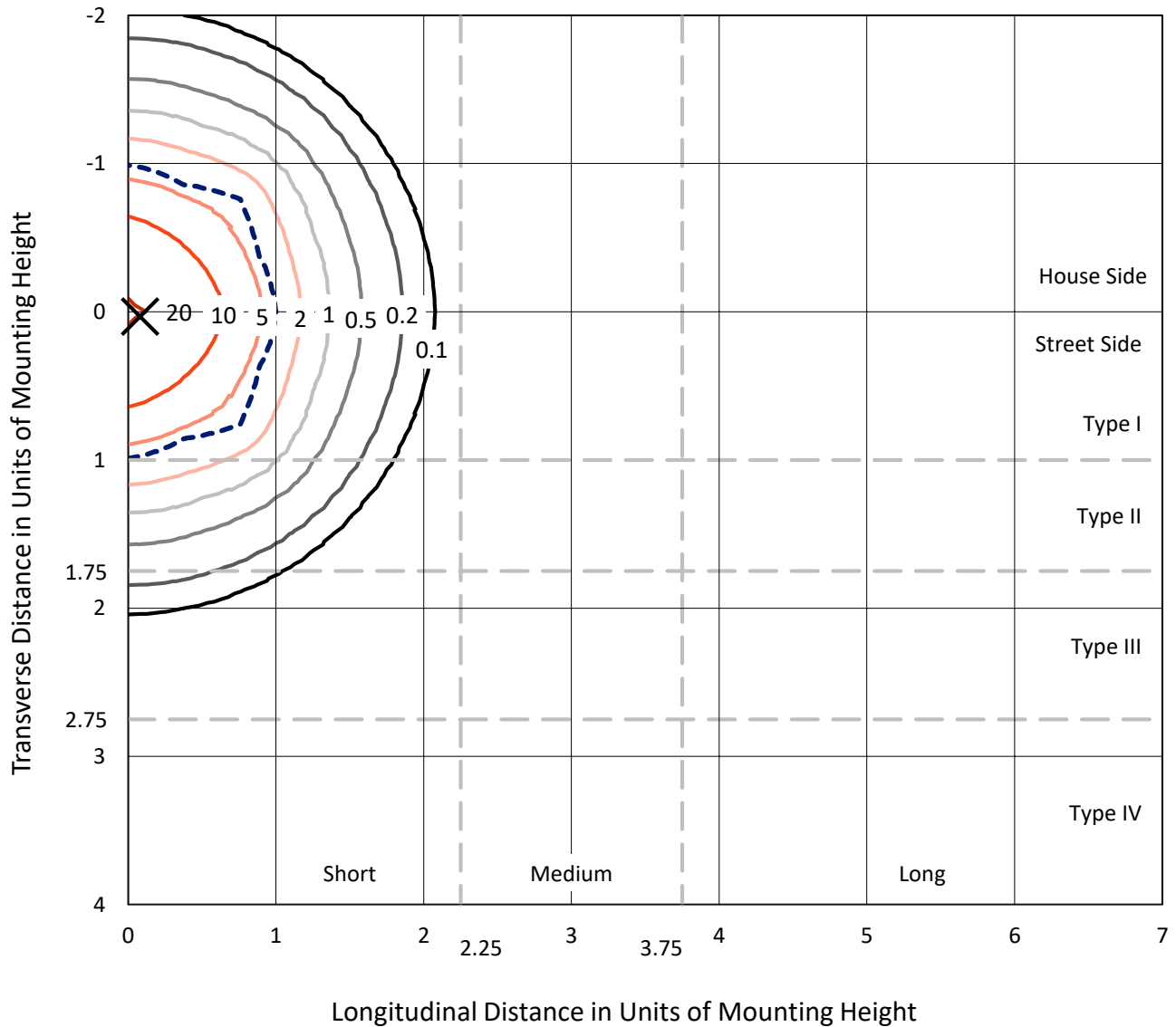
Input Watts (W): 455  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

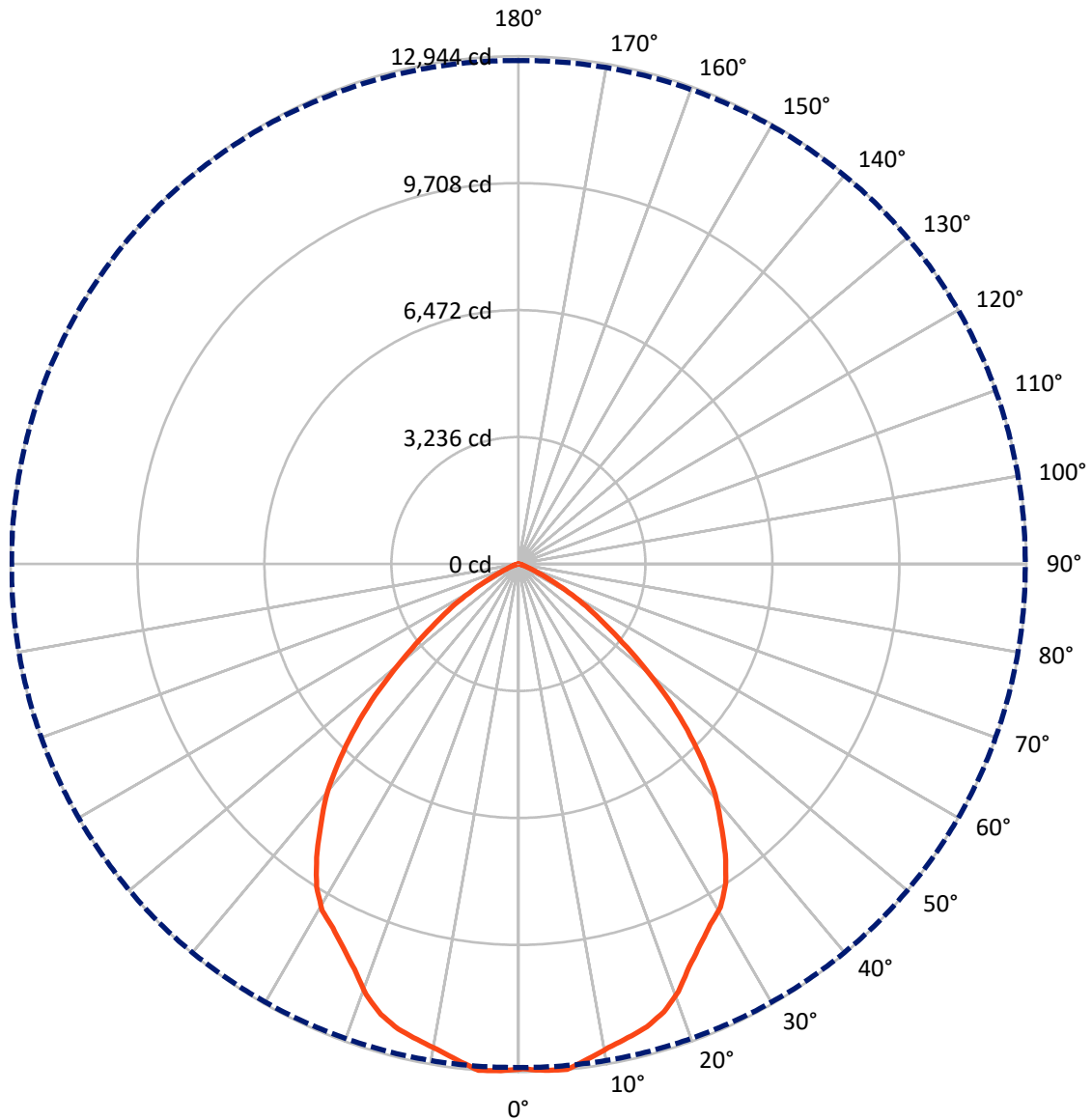
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 20.6 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral      - - - Horizontal Cone Through 5-Deg Vertical

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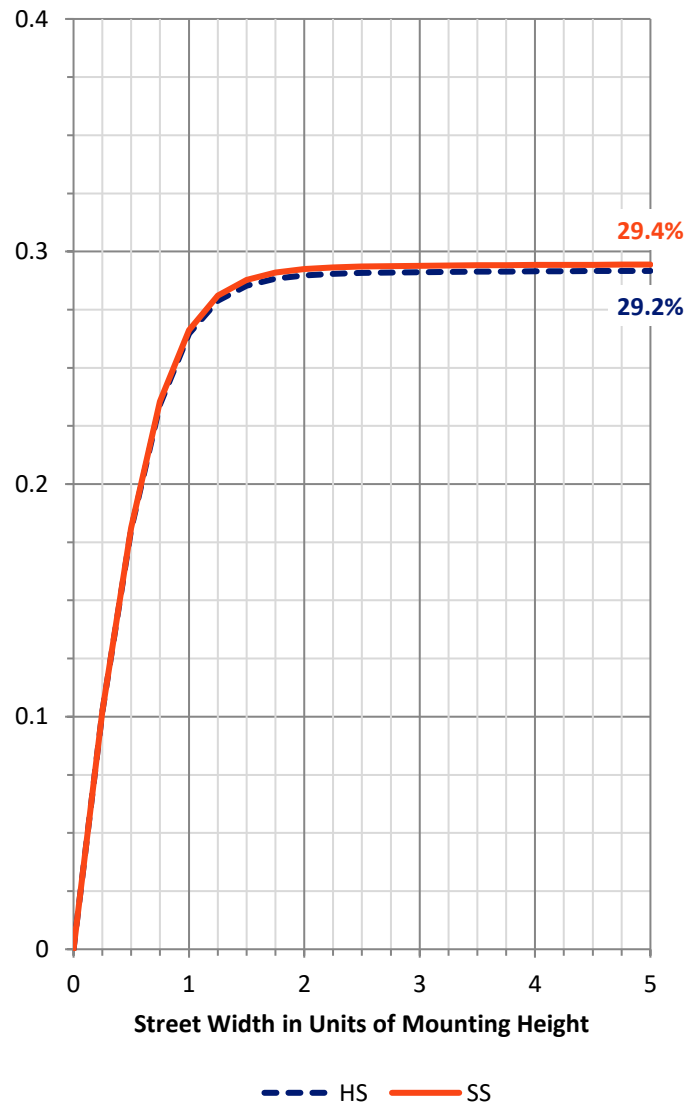
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11737.4	0.0	11737.4
	% Lamp	29.3	0.0	29.3
<b>Street Side</b>	Lumens	11737.4	0.0	11737.4
	% Lamp	29.3	0.0	29.3
<b>Total</b>	Lumens	23474.8	0.0	23474.8
	% Lamp	58.7	0.0	58.7

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	1216.1	5.2	3.0
10°-20°	3411.9	14.5	8.5
20°-30°	5010.1	21.3	12.5
30°-40°	5711.1	24.3	14.3
40°-50°	4804.2	20.5	12.0
50°-60°	2523.9	10.8	6.3
60°-70°	667.1	2.8	1.7
70°-80°	118.9	0.5	0.3
80°-90°	11.6	0.0	0.0
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°	23474.8	100.0	58.7
0°-180°	23474.8	100.0	58.7



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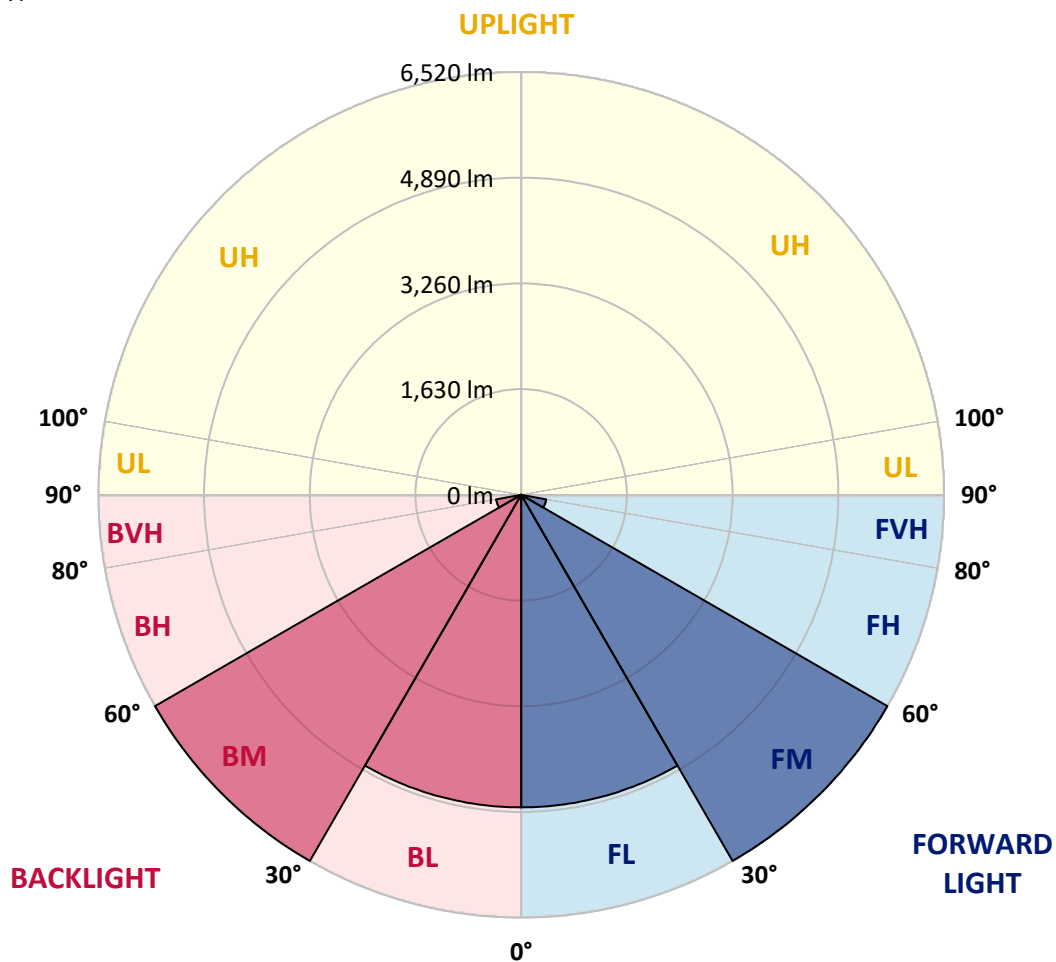
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4819.1	12.0			
FM	(30°-60°)	6519.6	16.3			
FH	(60°-80°)	393.0	1.0			G0/660
FVH	(80°-90°)	5.8	0.0			G0/10
BL	(0°-30°)	4819.1	12.0	B4/5000		
BM	(30°-60°)	6519.6	16.3	B4/8500		
BH	(60°-80°)	393.0	1.0	B1/500		G0/660
BVH	(80°-90°)	5.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		16525.2	41.3			

**BUG Rating: B4-U0-G0**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	12868	12868	12868	12868	12868	12868	12868	12868	12868
2.5°	12896	12911	12919	12924	12922	12924	12919	12911	12896
5°	12831	12874	12940	12944	12918	12944	12940	12874	12831
7.5°	12622	12705	12718	12740	12751	12740	12718	12705	12622
10°	12433	12448	12389	12541	12622	12541	12389	12448	12433
12.5°	12333	12268	12087	12391	12608	12391	12087	12268	12333
15°	12205	12060	11831	12242	12590	12242	11831	12060	12205
17.5°	12044	11791	11488	12001	12483	12001	11488	11791	12044
20°	11852	11434	11070	11634	12158	11634	11070	11434	11852
22.5°	11643	11044	10665	11142	11877	11142	10665	11044	11643
25°	11488	10625	10306	10754	11771	10754	10306	10625	11488
27.5°	11445	10263	9985	10409	11611	10409	9985	10263	11445
30°	11306	10028	9623	10151	11410	10151	9623	10028	11306
32.5°	10497	9509	9309	9702	10701	9702	9309	9509	10497
35°	9614	8779	9031	9079	9941	9079	9031	8779	9614
37.5°	8865	8007	8640	8381	9357	8381	8640	8007	8865
40°	8094	7327	8021	7720	8646	7720	8021	7327	8094
42.5°	7275	6595	7489	6902	7665	6902	7489	6595	7275
45°	6327	5787	6990	6033	6429	6033	6990	5787	6327
47.5°	5230	4965	6327	5135	5228	5135	6327	4965	5230
50°	4202	4104	5469	4173	4197	4173	5469	4104	4202
52.5°	3274	3251	4338	3316	3297	3316	4338	3251	3274
55°	2526	2532	3213	2593	2585	2593	3213	2532	2526
57.5°	2002	1970	2370	2037	2073	2037	2370	1970	2002
60°	1429	1464	1622	1464	1438	1464	1622	1464	1429
62.5°	958	944	990	972	1036	972	990	944	958
65°	545	531	541	600	642	600	541	531	545
67.5°	318	299	298	362	358	362	298	299	318
70°	212	206	201	226	234	226	201	206	212
72.5°	153	147	140	154	166	154	140	147	153
75°	107	103	97	105	112	105	97	103	107
77.5°	77	69	66	70	72	70	66	69	77
80°	46	44	41	42	44	42	41	44	46
82.5°	21	20	19	18	19	18	19	20	21
85°	3	2	1	2	2	2	1	2	3
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)