

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: SHAPER

Report Number: 18508

Luminaire Tested: **902-MH1/50-120-NCP**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 18508
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 902-MH1/50-120-NCP
Description: WHITE INTERIOR, FROSTED GLASS JAR LENS AND DOME WITH WHITE INTERIOR

Light Source: ONE VENTURE 50 WATT MH LAMP

MH50W/U. LUMEN RATING = 3400 LMS.

Ballast/Driver: -

Summary

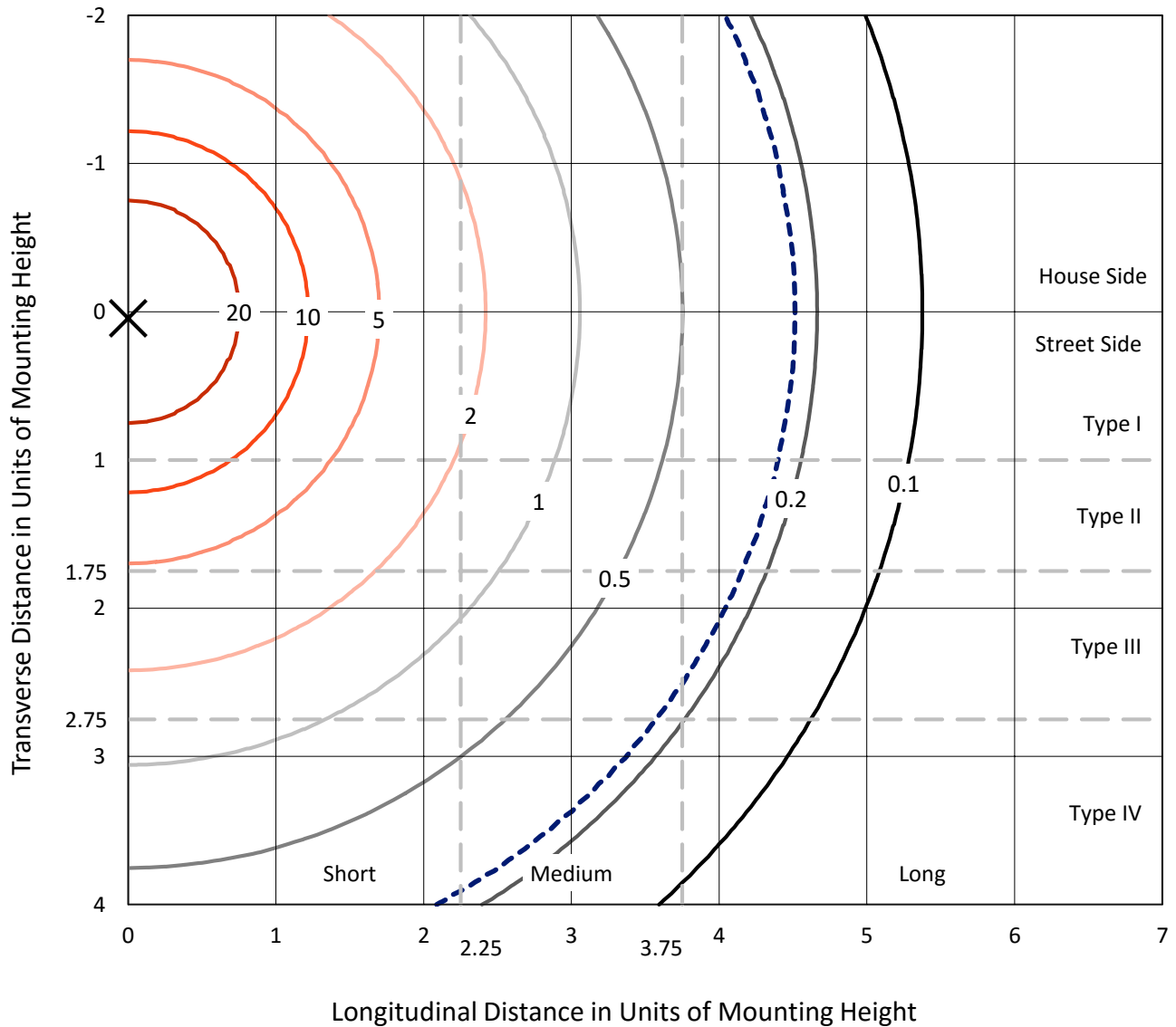
Lumens per Lamp: 3400 (1 lamp)
Luminaire Lumens: 1795.7 lumens
Efficiency: 52.8%
Efficacy: -
Luminous Opening: (L: 0' x W: -1' x H: 0'
IES Classification: Type V - Short - Cutoff
BUG Rating: B1 - U2 - G1

Input Watts (W): 0
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

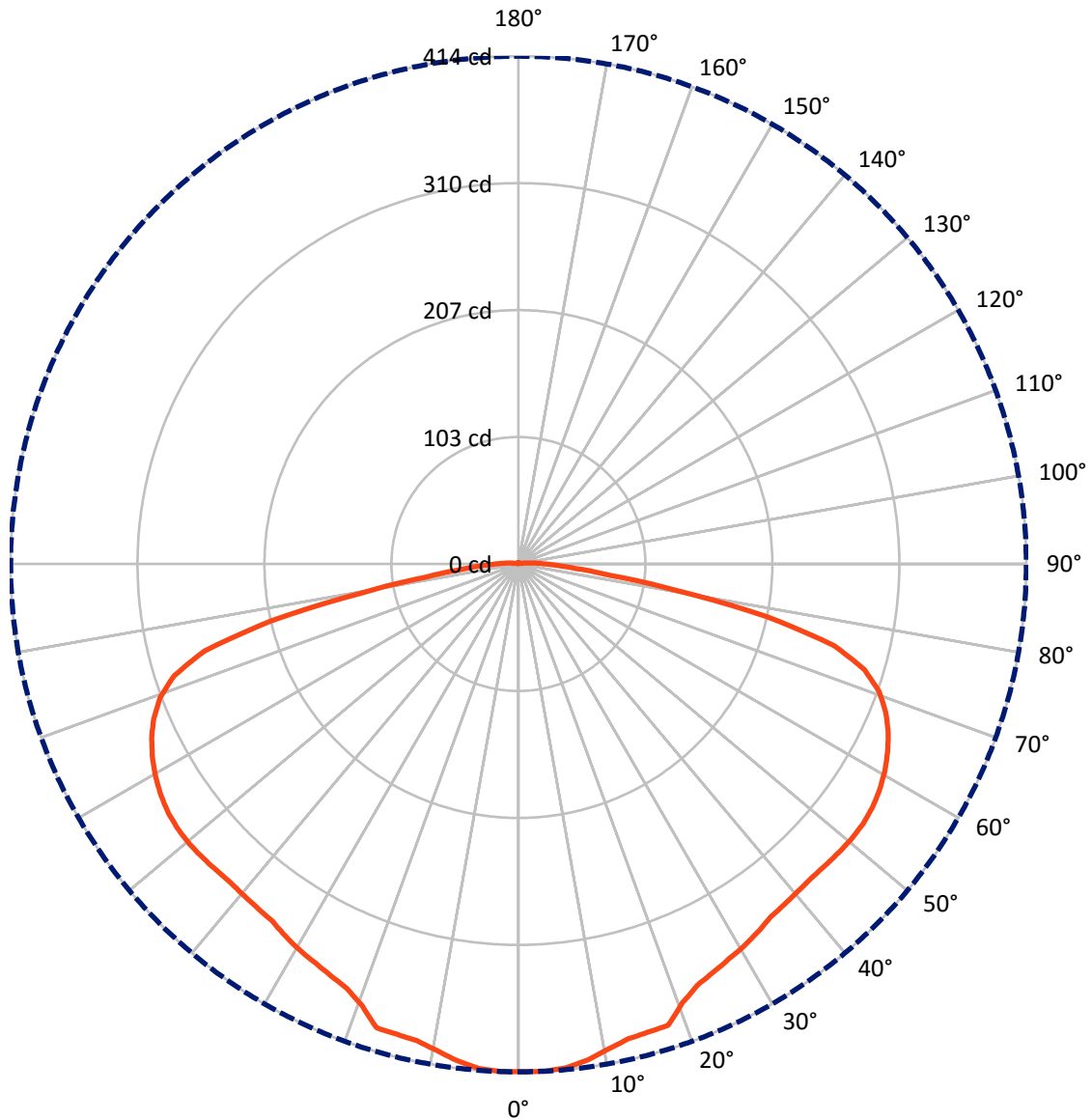
× Max cd
 - - - 1/2 Max cd



Based on 3 foot mounting height. Maximum calculated value = 45.9 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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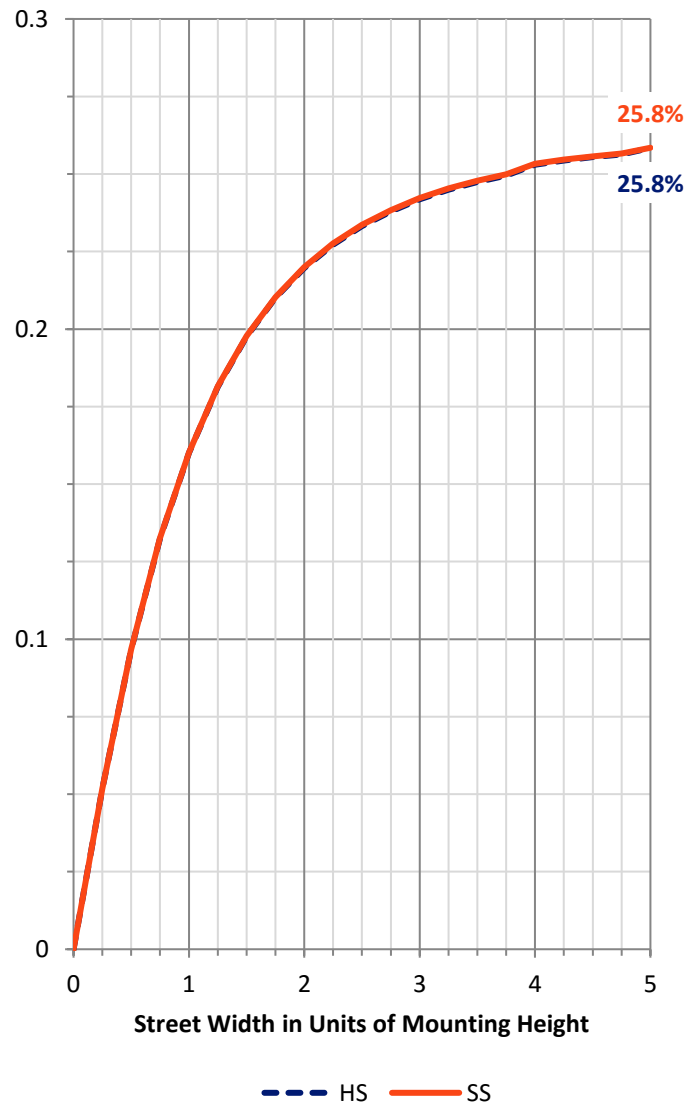
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	889.2	8.6	897.9
	% Lamp	26.2	0.3	26.4
Street Side	Lumens	889.2	8.6	897.9
	% Lamp	26.2	0.3	26.4
Total	Lumens	1778.5	17.3	1795.7
	% Lamp	52.3	0.5	52.8

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	39.0	2.2	1.1
10°-20°	111.7	6.2	3.3
20°-30°	170.7	9.5	5.0
30°-40°	222.7	12.4	6.6
40°-50°	271.6	15.1	8.0
50°-60°	313.0	17.4	9.2
60°-70°	327.0	18.2	9.6
70°-80°	260.8	14.5	7.7
80°-90°	62.0	3.5	1.8
90°-100°	11.3	0.6	0.3
100°-110°	2.3	0.1	0.1
110°-120°	1.2	0.1	0.0
120°-130°	0.7	0.0	0.0
130°-140°	0.6	0.0	0.0
140°-150°	0.5	0.0	0.0
150°-160°	0.4	0.0	0.0
160°-170°	0.3	0.0	0.0
170°-180°	0.1	0.0	0.0
0°-90°	1778.5	99.0	52.3
0°-180°	1795.7	100.0	52.8



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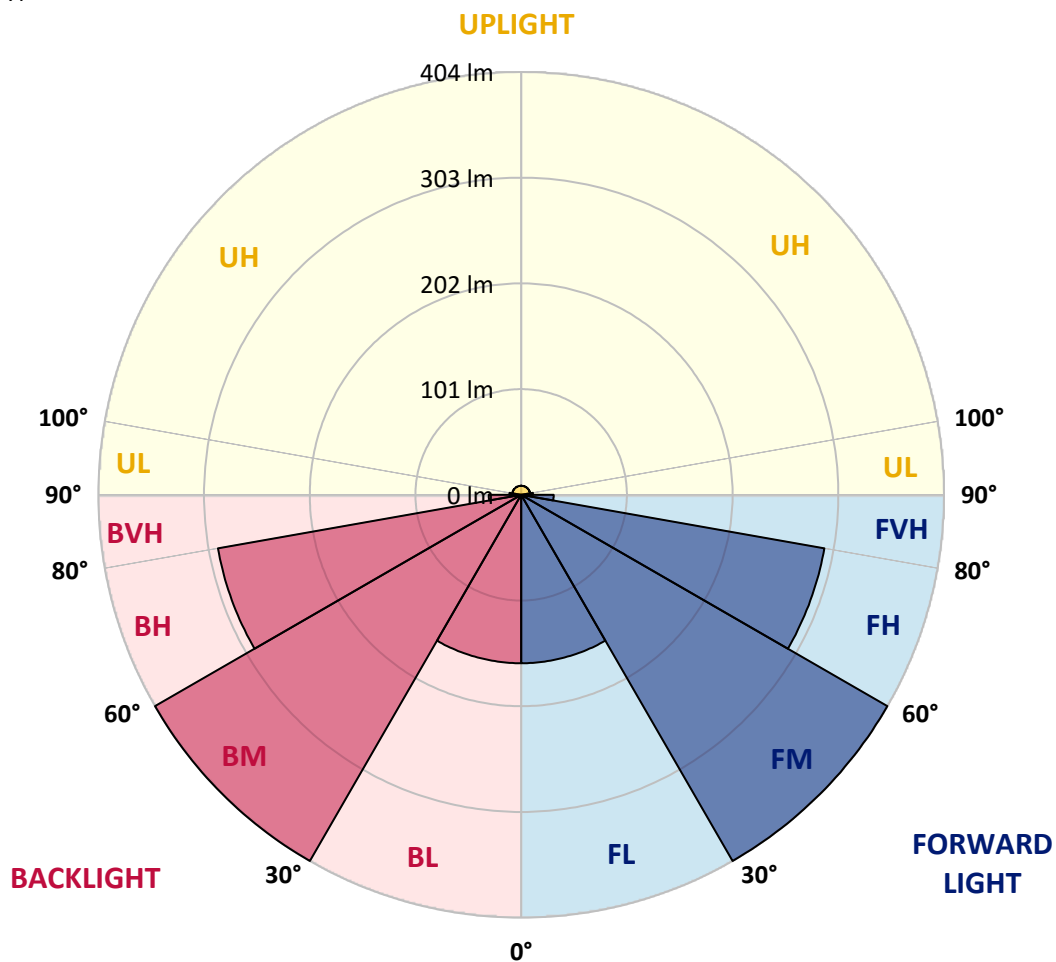
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	160.7	4.7			
FM (30°-60°)	403.6	11.9			
FH (60°-80°)	293.9	8.6			G0/660
FVH (80°-90°)	31.0	0.9			G1/100
BL (0°-30°)	160.7	4.7	B1/500		
BM (30°-60°)	403.6	11.9	B1/1000		
BH (60°-80°)	293.9	8.6	B1/500		G0/660
BVH (80°-90°)	31.0	0.9			G1/100
UL (90°-100°)	11.3	0.3		U2/50	
UH (100°-180°)	8.6	0.3		U1/10	
Trapped Light	1604.3	47.2			

BUG Rating: B1-U2-G1

Type V Short



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CANDELA DISTRIBUTION (FULL):

0°	
0°	413.5
2.5°	413.7
5°	412.1
7.5°	407.8
10°	401.9
12.5°	397.0
15°	395.7
17.5°	395.0
20°	381.6
22.5°	372.8
25°	368.5
27.5°	364.6
30°	361.5
32.5°	357.7
35°	353.4
37.5°	351.8
40°	350.6
42.5°	349.8
45°	350.3
47.5°	351.2
50°	351.8
52.5°	351.5
55°	349.9
57.5°	347.0
60°	342.8
62.5°	337.5
65°	331.0
67.5°	322.7
70°	311.7
72.5°	294.9
75°	265.5
77.5°	207.1
80°	130.7
82.5°	75.2
85°	46.7
87.5°	30.4
90°	20.3
92.5°	14.1
95°	9.3
97.5°	6.0
100°	3.3
102.5°	2.3
105°	2.0
107.5°	1.8
110°	1.6

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CANDELA DISTRIBUTION (continued):

	0°
112.5°	1.4
115°	1.3
117.5°	1.1
120°	0.8
122.5°	0.8
125°	0.7
127.5°	0.7
130°	0.7
132.5°	0.7
135°	0.7
137.5°	0.7
140°	0.8
142.5°	0.8
145°	0.8
147.5°	0.8
150°	0.8
152.5°	0.9
155°	0.9
157.5°	0.9
160°	0.9
162.5°	1.0
165°	1.0
167.5°	1.0
170°	1.1
172.5°	1.1
175°	1.1
177.5°	1.0
180°	1.0

(END OF REPORT)