

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: P884142

Luminaire Tested: **NAV-SB4D-827-U-5WQ**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884142
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-1)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-5WQ
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33893 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G4

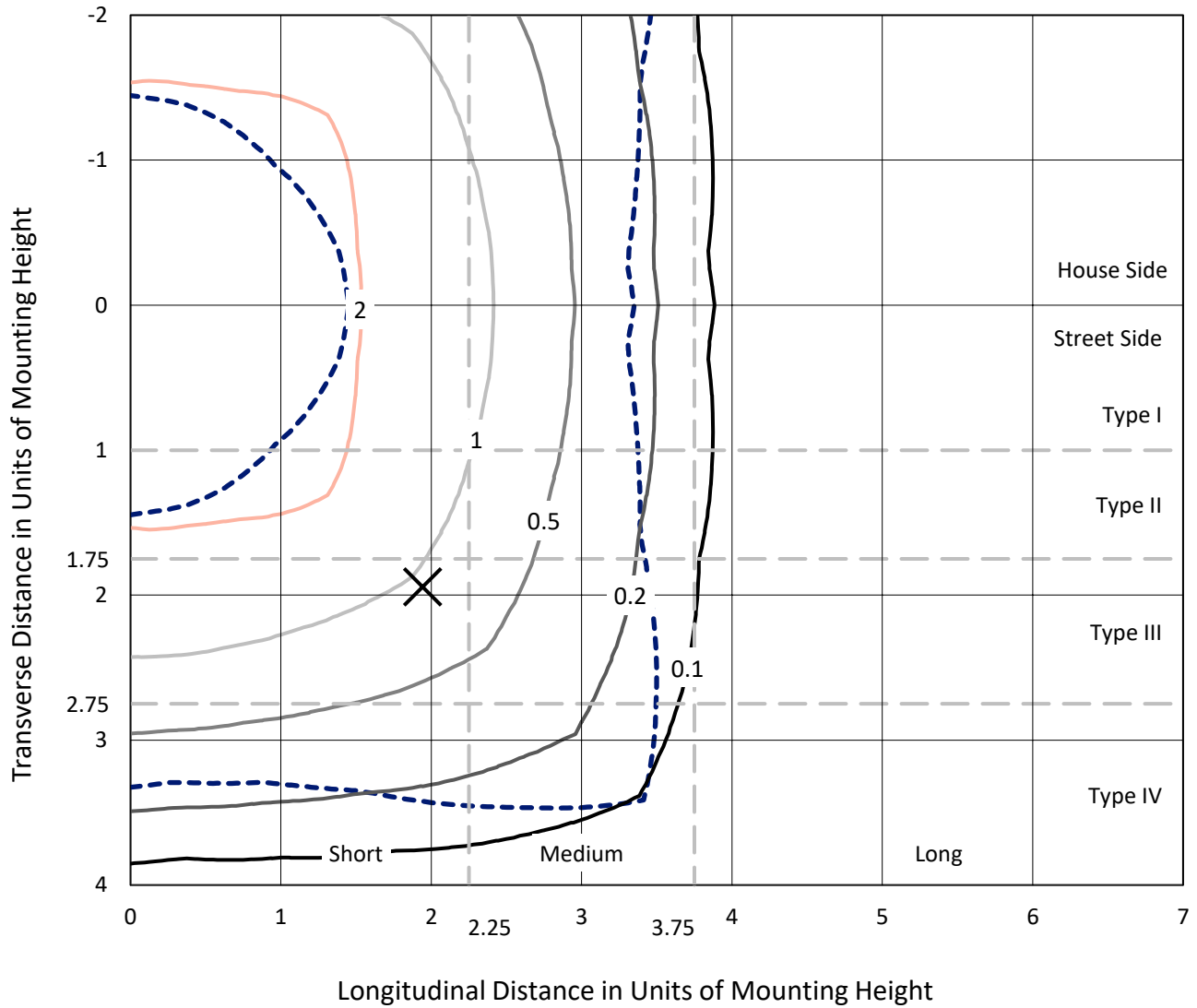
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

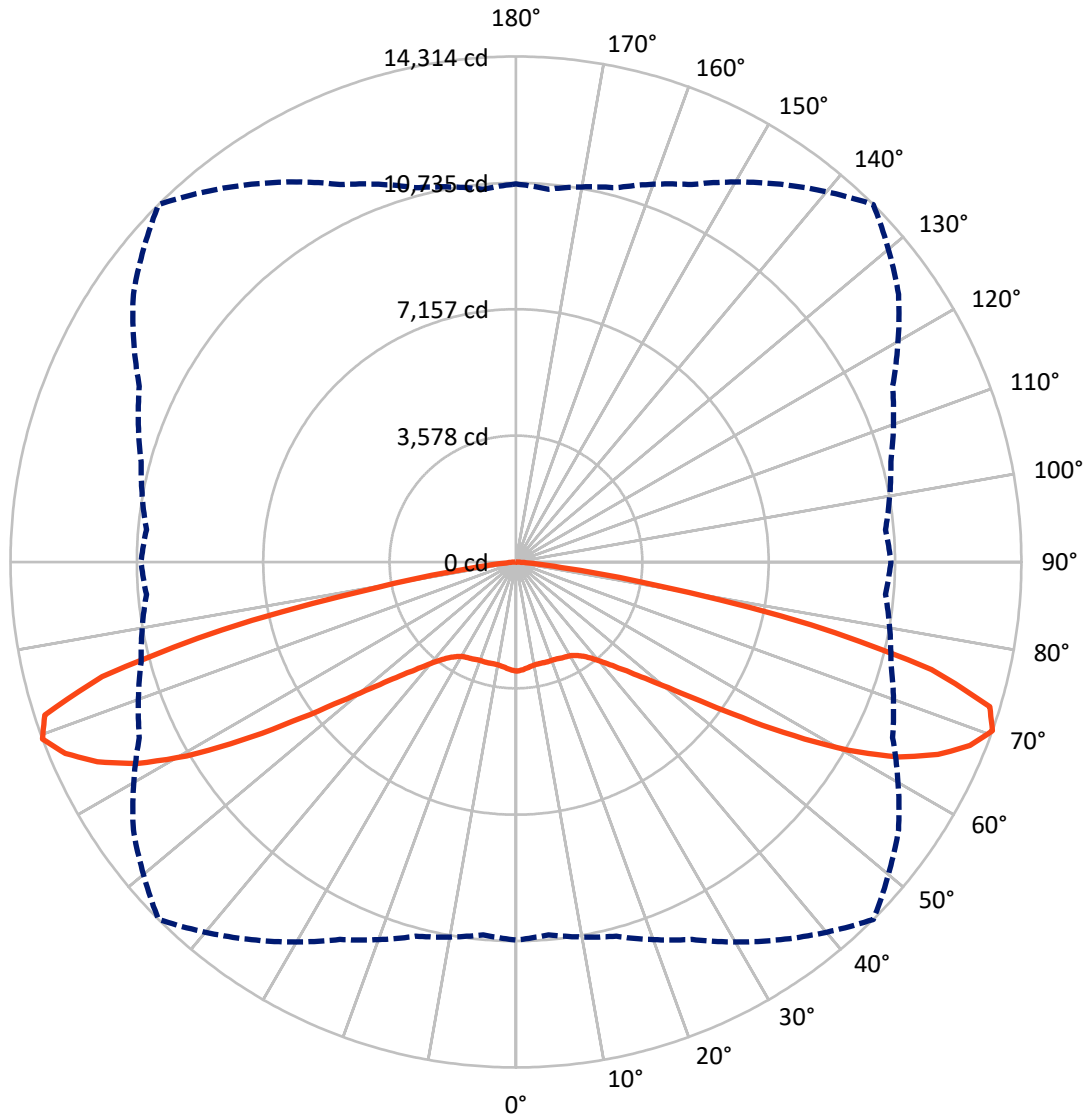
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 16946.5 | 0.0 | 16946.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 16946.5 | 0.0 | 16946.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 33893.0 | 0.0 | 33893.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 287.6 | 0.8 |
| 10°-20° | 844.5 | 2.5 |
| 20°-30° | 1405.3 | 4.1 |
| 30°-40° | 2125.3 | 6.3 |
| 40°-50° | 3531.7 | 10.4 |
| 50°-60° | 6664.2 | 19.7 |
| 60°-70° | 11252.8 | 33.2 |
| 70°-80° | 7394.2 | 21.8 |
| 80°-90° | 387.4 | 1.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 33893.0 | 100.0 |
| 0°-180° | 33893.0 | 100.0 |

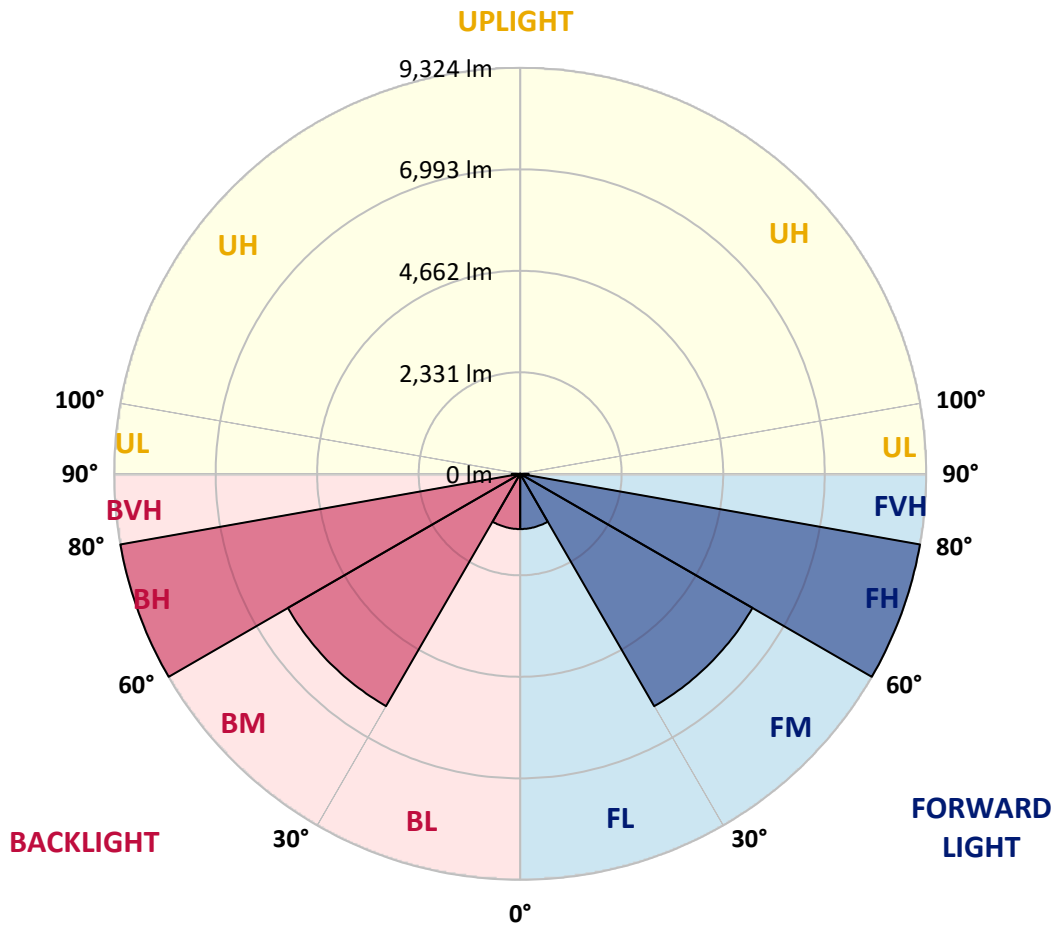


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1268.7 | 3.7 | | | |
| FM (30°-60°) | 6160.6 | 18.2 | | | |
| FH (60°-80°) | 9323.5 | 27.5 | | | G4/12000 |
| FVH (80°-90°) | 193.7 | 0.6 | | | G2/225 |
| BL (0°-30°) | 1268.7 | 3.7 | B3/2500 | | |
| BM (30°-60°) | 6160.6 | 18.2 | B4/8500 | | |
| BH (60°-80°) | 9323.5 | 27.5 | B5 | | G4/12000 |
| BVH (80°-90°) | 193.7 | 0.6 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G4
 Type V Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 | 3091.7 |
| 2.5° | 3072.3 | 3081.2 | 3077.6 | 3070.6 | 3070.6 | 3065.3 | 3070.6 | 3074.1 | 3079.4 | 3082.9 | 3081.2 |
| 5° | 3031.8 | 3038.9 | 3037.1 | 3031.8 | 3033.6 | 3028.3 | 3031.8 | 3037.1 | 3040.6 | 3042.4 | 3042.4 |
| 7.5° | 2996.6 | 3003.6 | 3000.1 | 2991.3 | 2991.3 | 2986.0 | 2987.8 | 2993.1 | 2998.4 | 3000.1 | 3000.1 |
| 10° | 2987.8 | 2994.8 | 2984.3 | 2970.2 | 2964.9 | 2957.8 | 2959.6 | 2964.9 | 2975.5 | 2980.7 | 2980.7 |
| 12.5° | 2991.3 | 2996.6 | 2986.0 | 2964.9 | 2959.6 | 2952.6 | 2952.6 | 2957.8 | 2971.9 | 2979.0 | 2980.7 |
| 15° | 3001.9 | 3007.2 | 2991.3 | 2968.4 | 2963.1 | 2957.8 | 2956.1 | 2963.1 | 2979.0 | 2991.3 | 2993.1 |
| 17.5° | 3021.3 | 3026.5 | 3001.9 | 2970.2 | 2963.1 | 2964.9 | 2963.1 | 2968.4 | 2993.1 | 3016.0 | 3016.0 |
| 20° | 3038.9 | 3042.4 | 3008.9 | 2970.2 | 2963.1 | 2964.9 | 2963.1 | 2973.7 | 3005.4 | 3037.1 | 3038.9 |
| 22.5° | 3044.2 | 3047.7 | 3016.0 | 2982.5 | 2977.2 | 2979.0 | 2977.2 | 2987.8 | 3017.7 | 3049.4 | 3049.4 |
| 25° | 3045.9 | 3051.2 | 3026.5 | 3000.1 | 3008.9 | 3012.4 | 3008.9 | 3010.7 | 3033.6 | 3061.8 | 3060.0 |
| 27.5° | 3072.3 | 3079.4 | 3056.5 | 3033.6 | 3038.9 | 3037.1 | 3042.4 | 3047.7 | 3065.3 | 3093.5 | 3086.4 |
| 30° | 3127.0 | 3132.2 | 3112.9 | 3090.0 | 3086.4 | 3074.1 | 3090.0 | 3107.6 | 3127.0 | 3151.6 | 3146.3 |
| 32.5° | 3216.8 | 3227.4 | 3202.7 | 3178.0 | 3162.2 | 3155.1 | 3167.5 | 3197.4 | 3223.8 | 3250.3 | 3239.7 |
| 35° | 3366.5 | 3373.6 | 3350.7 | 3304.9 | 3276.7 | 3276.7 | 3287.3 | 3326.0 | 3368.3 | 3401.8 | 3389.4 |
| 37.5° | 3577.9 | 3586.8 | 3546.2 | 3491.6 | 3449.3 | 3449.3 | 3463.4 | 3504.0 | 3567.4 | 3614.9 | 3597.3 |
| 40° | 3835.1 | 3847.5 | 3796.4 | 3740.0 | 3699.5 | 3692.5 | 3710.1 | 3755.9 | 3815.8 | 3875.7 | 3856.3 |
| 42.5° | 4145.2 | 4159.3 | 4092.4 | 4043.0 | 4011.3 | 4011.3 | 4020.1 | 4062.4 | 4117.0 | 4191.0 | 4185.7 |
| 45° | 4541.6 | 4566.2 | 4474.6 | 4425.3 | 4395.4 | 4402.4 | 4407.7 | 4444.7 | 4494.0 | 4578.6 | 4575.0 |
| 47.5° | 5013.7 | 5038.4 | 4941.5 | 4890.4 | 4885.1 | 4918.6 | 4897.4 | 4923.9 | 4950.3 | 5047.2 | 5019.0 |
| 50° | 5549.2 | 5591.5 | 5524.6 | 5521.1 | 5531.6 | 5593.3 | 5544.0 | 5558.1 | 5528.1 | 5589.8 | 5552.8 |
| 52.5° | 6204.6 | 6266.2 | 6253.9 | 6275.1 | 6393.1 | 6519.9 | 6407.2 | 6357.9 | 6245.1 | 6264.5 | 6199.3 |
| 55° | 6999.1 | 7092.5 | 7110.1 | 7236.9 | 7504.7 | 7763.7 | 7524.1 | 7325.0 | 7085.4 | 7041.4 | 6972.7 |
| 57.5° | 7902.8 | 7976.8 | 8061.4 | 8320.3 | 8820.7 | 9280.5 | 8820.7 | 8380.2 | 8003.2 | 7913.4 | 7850.0 |
| 60° | 8875.3 | 8966.9 | 9047.9 | 9430.2 | 10173.6 | 10820.2 | 10159.5 | 9460.1 | 8961.6 | 8840.0 | 8734.3 |
| 62.5° | 9919.9 | 10038.0 | 10094.3 | 10518.9 | 11385.6 | 12157.3 | 11398.0 | 10550.6 | 9997.5 | 9867.1 | 9761.4 |
| 65° | 10922.3 | 11019.2 | 11082.6 | 11535.4 | 12363.4 | 13136.7 | 12419.7 | 11584.7 | 11015.7 | 10844.8 | 10760.3 |
| 67.5° | 11389.2 | 11442.0 | 11597.0 | 12109.7 | 12983.5 | 13866.1 | 13131.5 | 12164.3 | 11528.3 | 11228.9 | 11232.4 |
| 70° | 10705.6 | 10598.2 | 10971.7 | 11792.6 | 13057.5 | 14313.5 | 13226.6 | 11767.9 | 10989.3 | 10503.1 | 10619.3 |
| 72.5° | 8272.8 | 8087.8 | 8736.1 | 10140.2 | 12211.9 | 14028.1 | 12296.4 | 10219.4 | 9139.5 | 8153.0 | 8397.9 |
| 75° | 4501.1 | 4291.4 | 5186.3 | 6962.1 | 9738.5 | 12159.0 | 9962.2 | 7161.2 | 5774.7 | 4467.6 | 4758.3 |
| 77.5° | 1270.2 | 1190.9 | 1913.2 | 3368.3 | 5857.5 | 8537.0 | 6083.0 | 3442.3 | 2269.0 | 1345.9 | 1495.7 |
| 80° | 389.3 | 377.0 | 510.9 | 1014.7 | 2487.5 | 4088.8 | 2390.6 | 1027.1 | 650.1 | 410.5 | 433.4 |
| 82.5° | 230.8 | 211.4 | 253.7 | 369.9 | 634.2 | 1284.3 | 616.6 | 385.8 | 310.1 | 207.9 | 225.5 |
| 85° | 132.1 | 123.3 | 149.7 | 179.7 | 213.2 | 273.1 | 177.9 | 183.2 | 165.6 | 111.0 | 116.3 |
| 87.5° | 54.6 | 49.3 | 58.1 | 56.4 | 49.3 | 63.4 | 47.6 | 56.4 | 66.9 | 44.0 | 40.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)