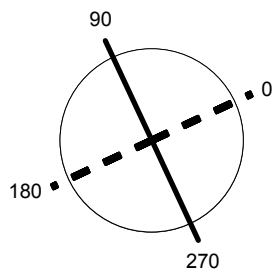


| Luminaire                  |                            | Measurem.           |                      | Lamp                        |                            |
|----------------------------|----------------------------|---------------------|----------------------|-----------------------------|----------------------------|
| Code                       | UMC-20011-T2-W40 (US-1804) | Code                | LIGMAN               | Code                        | UMC-20011-T2-W40 (US-1804) |
| Name                       | Macaron Post top LED       | Name                | Macaron Post top LED | Number                      | 1                          |
| Line                       | lesna 2002 Absolute        | Date                | 21-02-2018           | Position                    |                            |
| Luminaire Flux             | 10792.05 lm                | Luminaire Power     | 143.00 W             | Efficacy                    | 75.47 lm/W                 |
|                            |                            |                     |                      | Efficiency                  | 100.00%                    |
| Lamps Flux                 | 10792.05 lm                | Maximum value       | 994.46 cd/klm        | Position                    | C=160.00 G=60.00           |
|                            |                            |                     |                      | CG                          | Asymmetrical               |
| Round Luminaire            |                            | Diam.               | 520 mm               | Height                      | 1 mm                       |
| Round Luminous Area        |                            | Diam.               | 520 mm               | Height                      | 0 mm                       |
| Horizontal Luminous Area   | 0.212372 m2                |                     |                      | Emitting area on Plane 180° | 0.000000 m2                |
| Emitting area on Plane 0°  | 0.000000 m2                |                     |                      | Emitting area on Plane 270° | 0.000000 m2                |
| Emitting area on Plane 90° | 0.000000 m2                |                     |                      | Glare area at 76°           | 0.051377 m2                |
| Coordinate system          | CG                         | Symmetry Type       | Asymmetrical         |                             |                            |
| Date                       | 21-02-2018                 | Maximum Gamma Angle | 180                  |                             |                            |
| Measurement Distance       | 0.00                       | Measurement Flux    | 10792.05 lm          |                             |                            |
| Operator                   |                            | Source voltage      |                      |                             |                            |
| Temperature                | 25.00 °C                   | Source current      |                      |                             |                            |
| Humidity                   | 60.00 %                    | Photocell           |                      |                             |                            |
| Notes                      |                            |                     |                      |                             |                            |

| Luminaire Lamps |                            |                                 |           |          |      |  |
|-----------------|----------------------------|---------------------------------|-----------|----------|------|--|
| Line            | Code                       | Name                            | Flux [lm] | Pow. [W] | Q.ty |  |
|                 | UMC-20011-T2-W40 (US-1804) | UMC-20011-T2-W40 143 W 10792 lm | 10792.05  | 143.00   | 1    |  |
| C.I.E.          | 39 74 96 100 100           | D DIN 5040                      | A20       |          |      |  |
| F UTE           | 1.00 E                     | B NBN                           | BZ 5      |          |      |  |

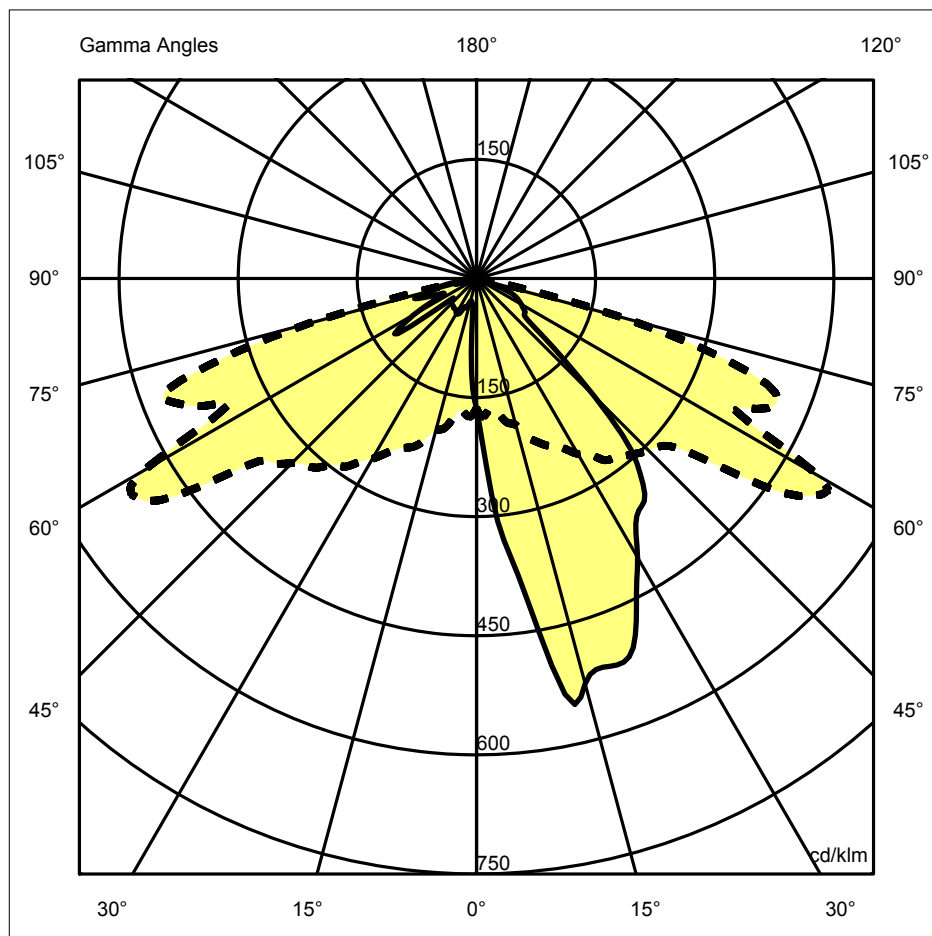
Diam=520mm



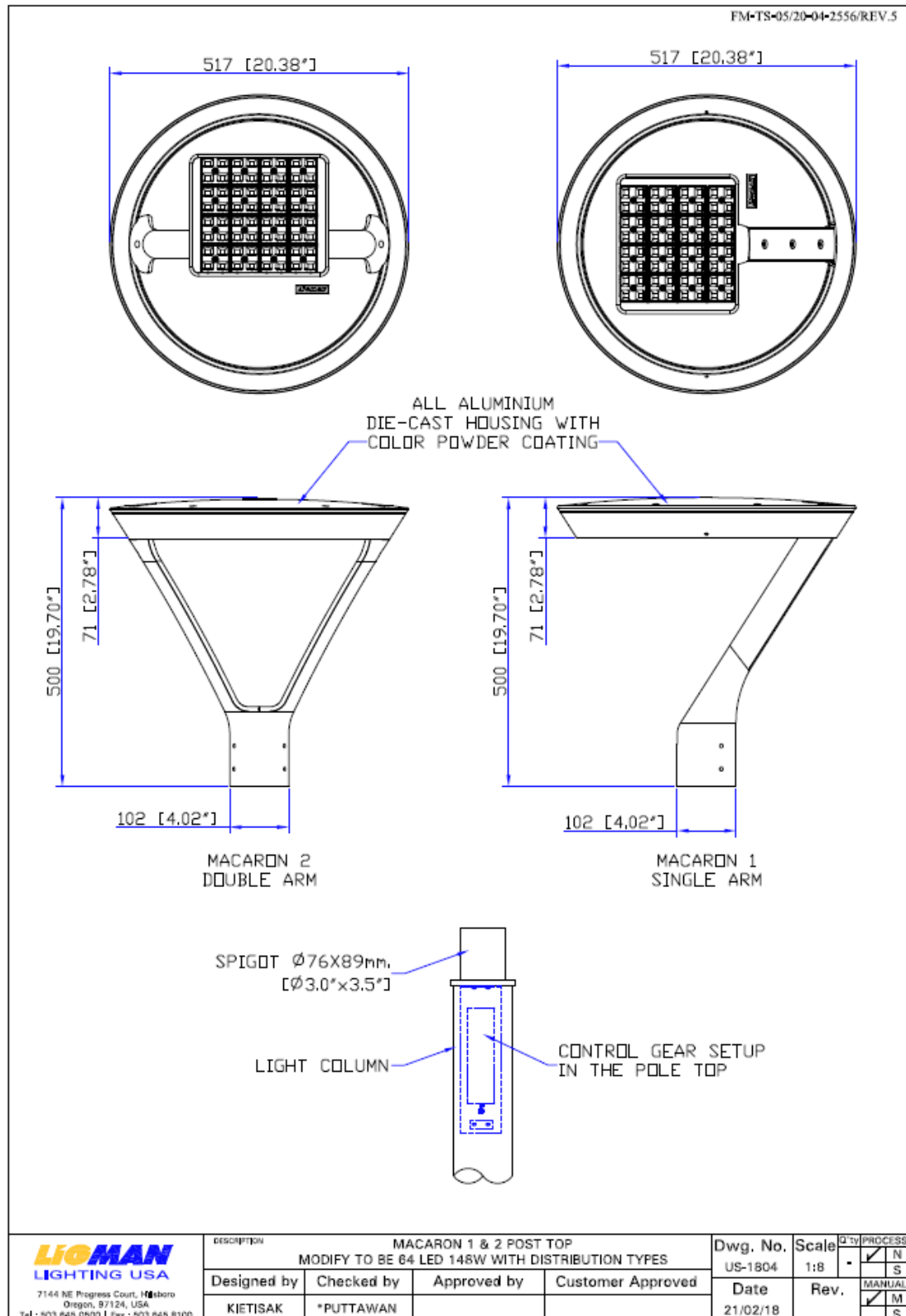
C Halfplanes

180.0 --- 0.0  
270.0 --- 90.0

ULOR 0.00 %  
DLOR 100.00 %  
RN 0.00 %



|                  |                            |                  |                      |             |                            |                    |
|------------------|----------------------------|------------------|----------------------|-------------|----------------------------|--------------------|
| <b>Luminaire</b> |                            | <b>Measurem.</b> |                      | <b>Lamp</b> |                            |                    |
| Code             | UMC-20011-T2-W40 (US-1804) | Code             | LIGMAN               | Code        | UMC-20011-T2-W40 (US-1804) |                    |
| Name             | Macaron Post top LED       | Name             | Macaron Post top LED | Number      | 1                          |                    |
| Line             | lesna 2002 Absolute        | Date             | 21-02-2018           | Position    |                            |                    |
| Luminaire Flux   | 10792.05 lm                | Luminaire Power  | 143.00 W             | Efficacy    | 75.47 lm/W                 | Efficiency 100.00% |
| Lamps Flux       | 10792.05 lm                | Maximum value    | 994.46 cd/klm        | Position    | C=160.00 G=60.00           | CG Asymmetrical    |



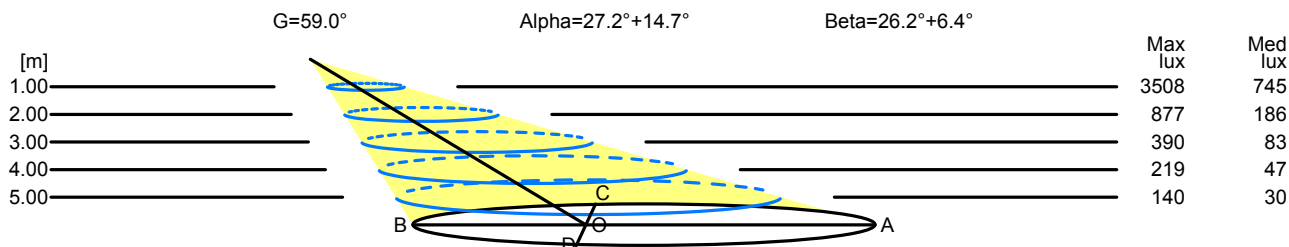
| Luminaire |                            | Measurem. |                      | Lamp     |                            |
|-----------|----------------------------|-----------|----------------------|----------|----------------------------|
| Code      | UMC-20011-T2-W40 (US-1804) | Code      | LIGMAN               | Code     | UMC-20011-T2-W40 (US-1804) |
| Name      | Macaron Post top LED       | Name      | Macaron Post top LED | Number   | 1                          |
| Line      | lesna 2002 Absolute        | Date      | 21-02-2018           | Position |                            |

|                |             |                 |               |          |                  |            |              |
|----------------|-------------|-----------------|---------------|----------|------------------|------------|--------------|
| Luminaire Flux | 10792.05 lm | Luminaire Power | 143.00 W      | Efficacy | 75.47 lm/W       | Efficiency | 100.00%      |
| Lamps Flux     | 10792.05 lm | Maximum value   | 994.46 cd/klm | Position | C=160.00 G=60.00 | CG         | Asymmetrical |

Width at 50.00 % of Max Intensity

| H[m] | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | H[m] | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| OA   | 1.75 | 3.49 | 5.24 | 6.99 | 8.73 | OC   | 0.96 | 1.91 | 2.87 | 3.82 | 4.78 |
| OB   | 1.04 | 2.09 | 3.13 | 4.18 | 5.22 | OD   | 0.22 | 0.44 | 0.66 | 0.87 | 1.09 |

|    | Luminous Intensities [ cd/klm] |         |         |         |         |         |         |         |         |      |
|----|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------|
|    | 0                              | 5       | 15      | 25      | 35      | 45      | 55      | 65      | 75      | 85   |
| OA | 1763.40                        | 1804.30 | 2060.50 | 2524.00 | 3015.50 | 3309.40 | 5080.10 | 4193.80 | 2065.30 | 0.00 |
| OB | 1763.40                        | 1837.40 | 2132.10 | 2558.80 | 3126.20 | 3548.60 | 5258.30 | 4103.80 | 2351.40 | 0.00 |
| OC | 1763.40                        | 3311.20 | 5703.10 | 5135.70 | 3847.20 | 2264.60 | 807.40  | 591.10  | 123.90  | 0.00 |
| OD | 1763.40                        | 747.00  | 318.80  | 501.60  | 503.20  | 480.10  | 1306.60 | 482.20  | 606.80  | 0.00 |

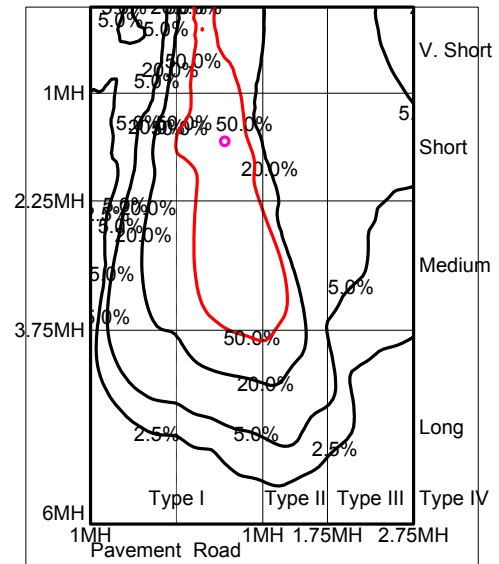
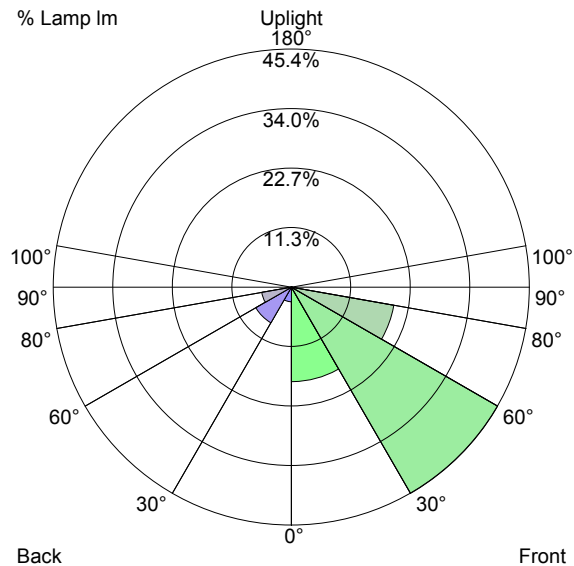


| H[m] | D[m]  | Max lux | Med lux | $\alpha=27.2^\circ+14.7^\circ$ | $G=59.0$ |  |
|------|-------|---------|---------|--------------------------------|----------|--|
| 1.00 | 2.79  | 3508    | 745     |                                |          |  |
| 2.00 | 5.58  | 877     | 186     |                                |          |  |
| 3.00 | 8.37  | 390     | 83      |                                |          |  |
| 4.00 | 11.16 | 219     | 47      |                                |          |  |
| 5.00 | 13.95 | 140     | 30      |                                |          |  |

| H[m] | D[m] | Max lux | Med lux | $\beta=6.4^\circ+26.2^\circ$ | $G=0.0$ |  |
|------|------|---------|---------|------------------------------|---------|--|
| 1.00 | 1.17 | 3508    | 745     |                              |         |  |
| 2.00 | 2.35 | 877     | 186     |                              |         |  |
| 3.00 | 3.52 | 390     | 83      |                              |         |  |
| 4.00 | 4.70 | 219     | 47      |                              |         |  |
| 5.00 | 5.87 | 140     | 30      |                              |         |  |

| Luminaire      |                            | Measur.         |                      | Lamp       |                            |
|----------------|----------------------------|-----------------|----------------------|------------|----------------------------|
| Code           | UMC-20011-T2-W40 (US-1804) | Code            | LIGMAN               | Code       | UMC-20011-T2-W40 (US-1804) |
| Name           | Macaron Post top LED       | Name            | Macaron Post top LED | Number     | 1                          |
| Line           | lesna 2002 Absolute        | Date            | 21-02-2018           | Position   |                            |
| Luminaire Flux | 10792.05 lm                | Luminaire Power | 143.00 W             | Efficacy   | 75.47 lm/W                 |
| Lamps Flux     | 10792.05 lm                | Maximum value   | 994.46 cd/klm        | Position   | C=160.00 G=60.00           |
|                |                            |                 |                      | CG         | Asymmetrical               |
|                |                            |                 |                      | Efficiency | 100.00%                    |

US ROAD STANDARDS



| Luminaire Classification System (LCS)  |              |            |         |
|--|--------------|------------|---------|
| LCS Zone                               | Lumens       | %Lamp      | %Lum    |
| FL                                     | 0° -- 30°    | 1944.2 lm  | 18.0 %  |
| FM                                     | 30° -- 60°   | 4898.3 lm  | 45.4 %  |
| FH                                     | 60° -- 80°   | 2139.6 lm  | 19.8 %  |
| FVH                                    | 80° -- 90°   | 19.3 lm    | 0.2 %   |
| BL                                     | 0° -- 30°    | 300.1 lm   | 2.8 %   |
| BM                                     | 30° -- 60°   | 845.7 lm   | 7.8 %   |
| BH                                     | 60° -- 80°   | 620.7 lm   | 5.8 %   |
| BVH                                    | 80° -- 90°   | 24.1 lm    | 0.2 %   |
| UL                                     | 90° -- 100°  | 0.0 lm     | 0.0 %   |
| UH                                     | 100° -- 180° | 0.0 lm     | 0.0 %   |
| TOTALS                                 |              | 10792.0 lm | 100.0 % |
| BUG B2 U0 G2 Type I Short Asymmetrical |              |            |         |