

## PHOTOMETRIC RESULTS

|                   |   |                      |                  |
|-------------------|---|----------------------|------------------|
| <b>Name:</b>      | <b>REBA 50 EXT L1138+INT ASYM K3 830 HO</b> |                      |                  |
| <b>Number:</b>    | 90517+90500L004                             | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 23-01-2020                                  | <b>Length:</b>       | 1138 mm          |
| <b>Meas.-no.:</b> | 01  | <b>Width:</b>        | 50 mm            |
| <b>Lamp type:</b> | LED 830 - 01                                | <b>Height:</b>       | 72 mm            |
| <b>Number:</b>    | 01  | <b>Power:</b>        | 32,11 W          |
| <b>Lamp flux:</b> | 4800,00 lm                                  | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 23-01-2020 15:43:22                         | <b>Output ratio:</b> | 56,7 %           |

## Protocol

**LiTG-class:** A50  
**UTE-class:** 0,57 C  
**IES-class:** 60 - 88 - 97 - 100 - 57  
**TM5-class:** BZ3

|  |            |          |
|--|------------|----------|
| <b>Divergences in the plane through maximum intensity:</b> | Horizontal | Vertical |
| <b>One half peak divergence</b>                            | 93,9°      | 54,8°    |
| <b>Half peak side angle (left)</b>                         | -46,9°     | -40,0°   |
| <b>Half peak side angle (right)</b>                        | 46,9°      | 14,8°    |
| <b>One tenth peak divergence</b>                           | 140,7°     | 130,5°   |
| <b>Tenth peak side angle (left)</b>                        | -70,3°     | -62,5°   |
| <b>Tenth peak side angle (right)</b>                       | 70,3°      | 68,0°    |

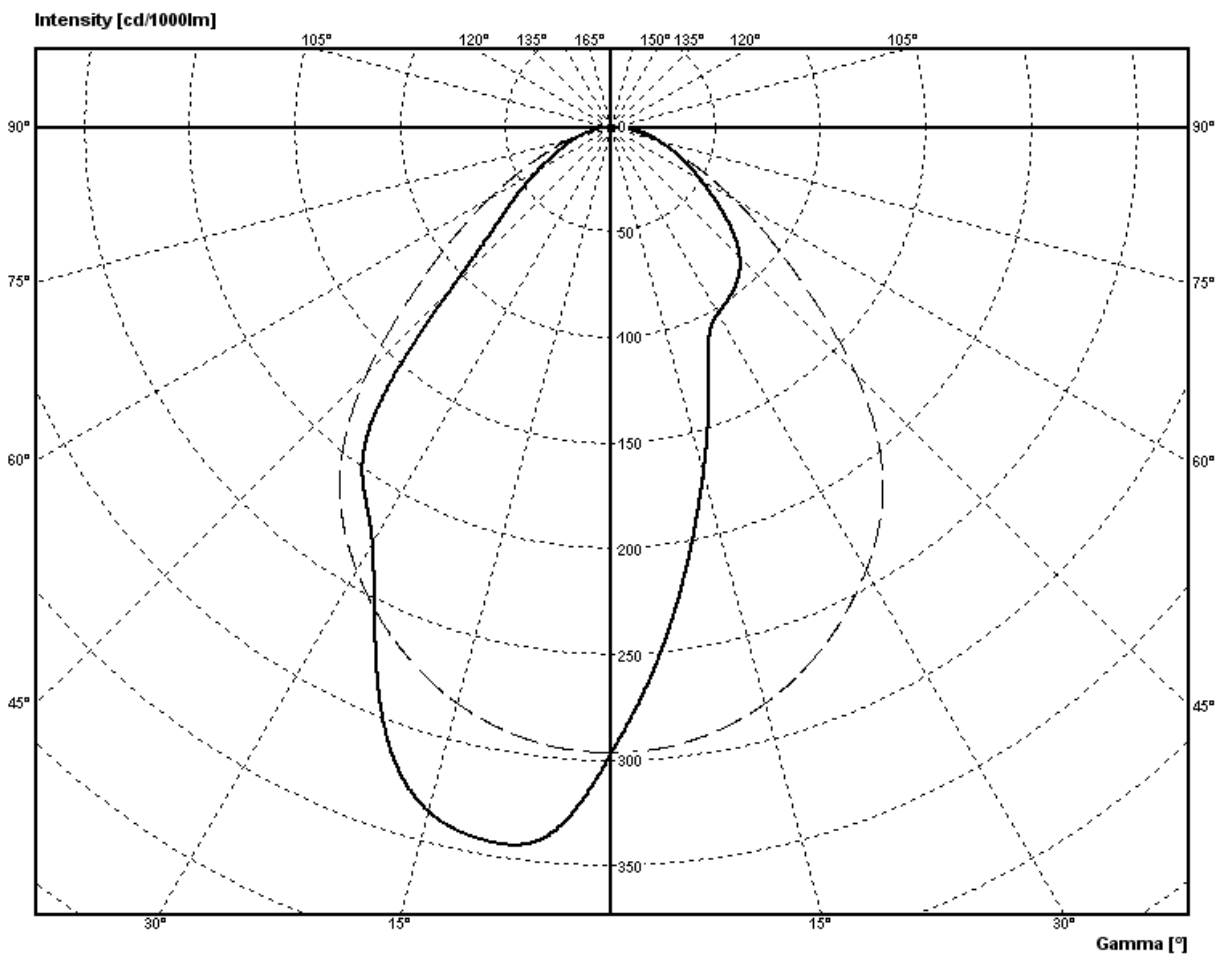
|                  |        |        |        |        |        |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>C-planes:</b> | 0,0°   | 15,0°  | 30,0°  | 45,0°  | 60,0°  | 75,0°  | 90,0°  | 105,0° | 120,0° | 135,0° |
|                  | 150,0° | 165,0° | 180,0° | 195,0° | 210,0° | 225,0° | 240,0° | 255,0° | 270,0° | 285,0° |
|                  | 300,0° | 315,0° | 330,0° | 345,0° |        |        |        |        |        |        |

|               |       |       |       |       |       |       |       |       |       |       |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Gamma:</b> | 0,0°  | 5,0°  | 10,0° | 15,0° | 20,0° | 25,0° | 30,0° | 35,0° | 40,0° | 45,0° |
|               | 50,0° | 55,0° | 60,0° | 65,0° | 70,0° | 75,0° | 80,0° | 85,0° | 90,0° |       |

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|------------|--------------------------------------|---------------|-----------------|
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| Number:    | 90517+90500L004                      | Diameter:     | 0 mm            |
| Report:    | 23-01-2020                           | Length:       | 1138 mm         |
| Meas.-no.: | 01                                   | Width:        | 50 mm           |
| Lamp type: | LED 830 - 01                         | Height:       | 72 mm           |
| Number:    | 01                                   | Power:        | 32,11 W         |
| Lamp flux: | 4800,00 lm                           | Operator:     | INDELAGUE GROUP |
| Date:      | 23-01-2020 15:43:22                  | Output ratio: | 56,7 %          |

Polar diagram REBA 50 EXT L1138+INT ASYM K3 830 HO / Direct in 15° C / 5° G



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| <b>Number:</b>    | 90517+90500L004                             | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 23-01-2020                                  | <b>Length:</b>       | 1138 mm          |
| <b>Meas.-no.:</b> | 01  | <b>Width:</b>        | 50 mm            |
| <b>Lamp type:</b> | LED 830 - 01                                | <b>Height:</b>       | 72 mm            |
| <b>Number:</b>    | 01  | <b>Power:</b>        | 32,11 W          |
| <b>Lamp flux:</b> | 4800,00 lm                                  | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 23-01-2020 15:43:22                         | <b>Output ratio:</b> | 56,7 %           |

## UGR Unified Glare Ratios

|                                 |            |                  |            |            |            |            |                |            |            |            |            |
|---------------------------------|------------|------------------|------------|------------|------------|------------|----------------|------------|------------|------------|------------|
| <b>Ceiling reflectance</b>      |            | <b>0,7</b>       | <b>0,7</b> | <b>0,5</b> | <b>0,5</b> | <b>0,3</b> | <b>0,7</b>     | <b>0,7</b> | <b>0,5</b> | <b>0,5</b> | <b>0,3</b> |
| <b>Wall reflectance</b>         |            | <b>0,5</b>       | <b>0,3</b> | <b>0,5</b> | <b>0,3</b> | <b>0,3</b> | <b>0,5</b>     | <b>0,3</b> | <b>0,5</b> | <b>0,3</b> | <b>0,3</b> |
| <b>Floor cavity reflectance</b> |            | <b>0,2</b>       | <b>0,2</b> | <b>0,2</b> | <b>0,2</b> | <b>0,2</b> | <b>0,2</b>     | <b>0,2</b> | <b>0,2</b> | <b>0,2</b> | <b>0,2</b> |
| <b>Room dimension</b>           |            | Viewed crosswise |            |            |            |            | Viewed endwise |            |            |            |            |
| <b>2H</b>                       | <b>2H</b>  | 16,2             | 17,7       | 16,5       | 18,0       | 18,3       | 19,8           | 21,3       | 20,1       | 21,6       | 21,9       |
| <b>2H</b>                       | <b>3H</b>  | 16,7             | 18,0       | 17,1       | 18,4       | 18,7       | 20,4           | 21,8       | 20,8       | 22,1       | 22,4       |
| <b>2H</b>                       | <b>4H</b>  | 16,9             | 18,1       | 17,3       | 18,5       | 18,8       | 20,7           | 21,9       | 21,1       | 22,3       | 22,6       |
| <b>2H</b>                       | <b>6H</b>  | 17,0             | 18,2       | 17,4       | 18,5       | 18,9       | 20,9           | 22,0       | 21,3       | 22,4       | 22,8       |
| <b>2H</b>                       | <b>8H</b>  | 17,0             | 18,1       | 17,4       | 18,5       | 18,9       | 20,9           | 22,0       | 21,3       | 22,4       | 22,8       |
| <b>2H</b>                       | <b>12H</b> | 17,0             | 18,1       | 17,4       | 18,5       | 18,9       | 20,9           | 22,0       | 21,3       | 22,3       | 22,8       |
| <b>4H</b>                       | <b>2H</b>  | 16,7             | 17,9       | 17,1       | 18,3       | 18,6       | 19,8           | 21,1       | 20,2       | 21,4       | 21,8       |
| <b>4H</b>                       | <b>3H</b>  | 17,3             | 18,4       | 17,7       | 18,7       | 19,2       | 20,6           | 21,6       | 21,0       | 22,0       | 22,4       |
| <b>4H</b>                       | <b>4H</b>  | 17,6             | 18,5       | 18,1       | 19,0       | 19,4       | 20,9           | 21,8       | 21,3       | 22,2       | 22,7       |
| <b>4H</b>                       | <b>6H</b>  | 17,8             | 18,6       | 18,2       | 19,0       | 19,5       | 21,1           | 21,9       | 21,6       | 22,4       | 22,8       |
| <b>4H</b>                       | <b>8H</b>  | 17,8             | 18,6       | 18,3       | 19,0       | 19,5       | 21,2           | 22,0       | 21,7       | 22,4       | 22,9       |
| <b>4H</b>                       | <b>12H</b> | 17,9             | 18,6       | 18,3       | 19,0       | 19,5       | 21,2           | 21,9       | 21,7       | 22,4       | 22,9       |
| <b>8H</b>                       | <b>4H</b>  | 17,7             | 18,5       | 18,2       | 18,9       | 19,4       | 20,9           | 21,6       | 21,3       | 22,1       | 22,5       |
| <b>8H</b>                       | <b>6H</b>  | 18,0             | 18,6       | 18,4       | 19,1       | 19,6       | 21,1           | 21,7       | 21,6       | 22,2       | 22,7       |
| <b>8H</b>                       | <b>8H</b>  | 18,1             | 18,6       | 18,6       | 19,2       | 19,6       | 21,3           | 21,8       | 21,8       | 22,3       | 22,8       |
| <b>8H</b>                       | <b>12H</b> | 18,1             | 18,6       | 18,7       | 19,1       | 19,6       | 21,3           | 21,8       | 21,8       | 22,3       | 22,8       |
| <b>12H</b>                      | <b>4H</b>  | 17,7             | 18,4       | 18,2       | 18,9       | 19,4       | 20,8           | 21,5       | 21,3       | 22,0       | 22,5       |
| <b>12H</b>                      | <b>6H</b>  | 18,0             | 18,6       | 18,5       | 19,1       | 19,6       | 21,1           | 21,7       | 21,6       | 22,2       | 22,7       |
| <b>12H</b>                      | <b>8H</b>  | 18,1             | 18,6       | 18,7       | 19,1       | 19,6       | 21,2           | 21,7       | 21,8       | 22,2       | 22,7       |

UGR values are corrected for lamp flux of 4800 lm by 5,4

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| <b>Meas.-no.:</b> | 01  | <b>Width:</b>        | 50 mm            |
| <b>Lamp type:</b> | LED 830 - 01                                | <b>Height:</b>       | 72 mm            |
| <b>Number:</b>    | 01  | <b>Power:</b>        | 32,11 W          |
| <b>Lamp flux:</b> | 4800,00 lm                                  | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 23-01-2020 15:43:22                         | <b>Output ratio:</b> | 56,7 %           |

Luminance [cd/m<sup>2</sup>] REBA 50 EXT L1138+INT ASYM K3 830 HO / Direct in 15° C / 5° 

| G/C [cd/ | 0,00    | 15,00   | 30,00   | 45,00   | 60,00   | 75,00   | 90,00   | 105,00  | 120,00  |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 45,00    | 4436,18 | 4537,51 | 4719,70 | 5319,15 | 6863,95 | 11255,7 | 20177,7 | 16651,9 | 13079,1 |
| 50,00    | 3789,28 | 3708,59 | 3914,31 | 4395,87 | 5675,15 | 8815,74 | 16612,5 | 13075,2 | 10004,5 |
| 55,00    | 3063,35 | 2998,84 | 3335,66 | 3667,03 | 4656,09 | 6941,03 | 13645,8 | 9890,41 | 7344,03 |
| 60,00    | 2459,58 | 2386,02 | 2802,00 | 3047,67 | 3780,50 | 5485,64 | 11060,5 | 7314,18 | 5306,57 |
| 65,00    | 1993,13 | 1927,08 | 2225,50 | 2421,00 | 3038,88 | 4186,00 | 8803,92 | 5288,90 | 3734,17 |
| 70,00    | 1582,63 | 1559,30 | 1711,43 | 1890,59 | 2339,84 | 3231,13 | 6996,03 | 3765,12 | 2565,67 |
| 75,00    | 1213,34 | 1171,89 | 1282,31 | 1410,70 | 1757,59 | 2508,71 | 5759,87 | 2667,99 | 1790,75 |
| 80,00    | 894,77  | 783,47  | 893,75  | 986,05  | 1227,05 | 1807,07 | 4626,59 | 1818,22 | 1198,68 |
| 85,00    | 510,62  | 388,67  | 463,54  | 516,58  | 653,19  | 972,32  | 3081,28 | 997,91  | 653,19  |

| G/C [cd/ | 135,00  | 150,00  | 165,00  | 180,00  | 195,00  | 210,00  | 225,00  | 240,00  | 255,00  |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 45,00    | 10349,5 | 8918,26 | 7782,57 | 5436,71 | 7782,57 | 8918,26 | 10349,5 | 13079,1 | 16651,9 |
| 50,00    | 7890,27 | 5915,14 | 4786,67 | 3542,94 | 4786,67 | 5915,14 | 7890,27 | 10004,5 | 13075,2 |
| 55,00    | 5381,42 | 3949,69 | 3318,20 | 2653,46 | 3318,20 | 3949,69 | 5381,42 | 7344,03 | 9890,41 |
| 60,00    | 3700,75 | 2856,21 | 2463,99 | 1977,74 | 2463,99 | 2856,21 | 3700,75 | 5306,57 | 7314,18 |
| 65,00    | 2556,30 | 2069,25 | 1840,56 | 1464,05 | 1840,56 | 2069,25 | 2556,30 | 3734,17 | 5288,90 |
| 70,00    | 1796,06 | 1530,37 | 1391,38 | 1104,16 | 1391,38 | 1530,37 | 1796,06 | 2565,67 | 3765,12 |
| 75,00    | 1312,52 | 1158,07 | 1040,77 | 821,45  | 1040,77 | 1158,07 | 1312,52 | 1790,75 | 2667,99 |
| 80,00    | 915,62  | 801,61  | 690,30  | 505,74  | 690,30  | 801,61  | 915,62  | 1198,68 | 1818,22 |
| 85,00    | 516,58  | 468,37  | 415,17  | 291,79  | 415,17  | 468,37  | 516,58  | 653,19  | 997,91  |

| G/C [cd/ | 270,00  | 285,00  | 300,00  | 315,00  | 330,00  | 345,00  |
|----------|---------|---------|---------|---------|---------|---------|
| 45,00    | 20177,7 | 11255,7 | 6863,95 | 5319,15 | 4719,70 | 4537,51 |
| 50,00    | 16612,5 | 8815,74 | 5675,15 | 4395,87 | 3914,31 | 3708,59 |
| 55,00    | 13645,8 | 6941,03 | 4656,09 | 3667,03 | 3335,66 | 2998,84 |
| 60,00    | 11060,5 | 5485,64 | 3780,50 | 3047,67 | 2802,00 | 2386,02 |
| 65,00    | 8803,92 | 4186,00 | 3038,88 | 2421,00 | 2225,50 | 1927,08 |
| 70,00    | 6996,03 | 3231,13 | 2339,84 | 1890,59 | 1711,43 | 1559,30 |
| 75,00    | 5759,87 | 2508,71 | 1757,59 | 1410,70 | 1282,31 | 1171,89 |
| 80,00    | 4626,59 | 1807,07 | 1227,05 | 986,05  | 893,75  | 783,47  |
| 85,00    | 3081,28 | 972,32  | 653,19  | 516,58  | 463,54  | 388,67  |

## HEADQUARTERS

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