

## PHOTOMETRIC RESULTS

|                   |   |                      |                  |
|-------------------|---|----------------------|------------------|
| <b>Name:</b>      | <b>REBA 50 EXT L1138+INT SYM BLINE 830 HO</b> |                      |                  |
| <b>Number:</b>    | 90517+90497L004                               | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 24-01-2020                                    | <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>        | 28,70 W          |
| <b>Lamp flux:</b> | 4320,00 lm                                    | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 24-01-2020 14:27:36                           | <b>Output ratio:</b> | 63,1 %           |

## Protocol

**LiTG-class:** A40  
**UTE-class:** 0,63 E  
**IES-class:** 50 - 80 - 95 - 100 - 63  
**TM5-class:** BZ5/0.75/BZ4

|  |            |          |
|--|------------|----------|
| <b>Divergences in the plane through maximum intensity:</b> | Horizontal | Vertical |
| <b>One half peak divergence</b>                            | 102,1°     | 100,2°   |
| <b>Half peak side angle (left)</b>                         | -51,0°     | -50,1°   |
| <b>Half peak side angle (right)</b>                        | 51,0°      | 50,1°    |
| <b>One tenth peak divergence</b>                           | 157,2°     | 160,5°   |
| <b>Tenth peak side angle (left)</b>                        | -78,6°     | -80,3°   |
| <b>Tenth peak side angle (right)</b>                       | 78,6°      | 80,3°    |

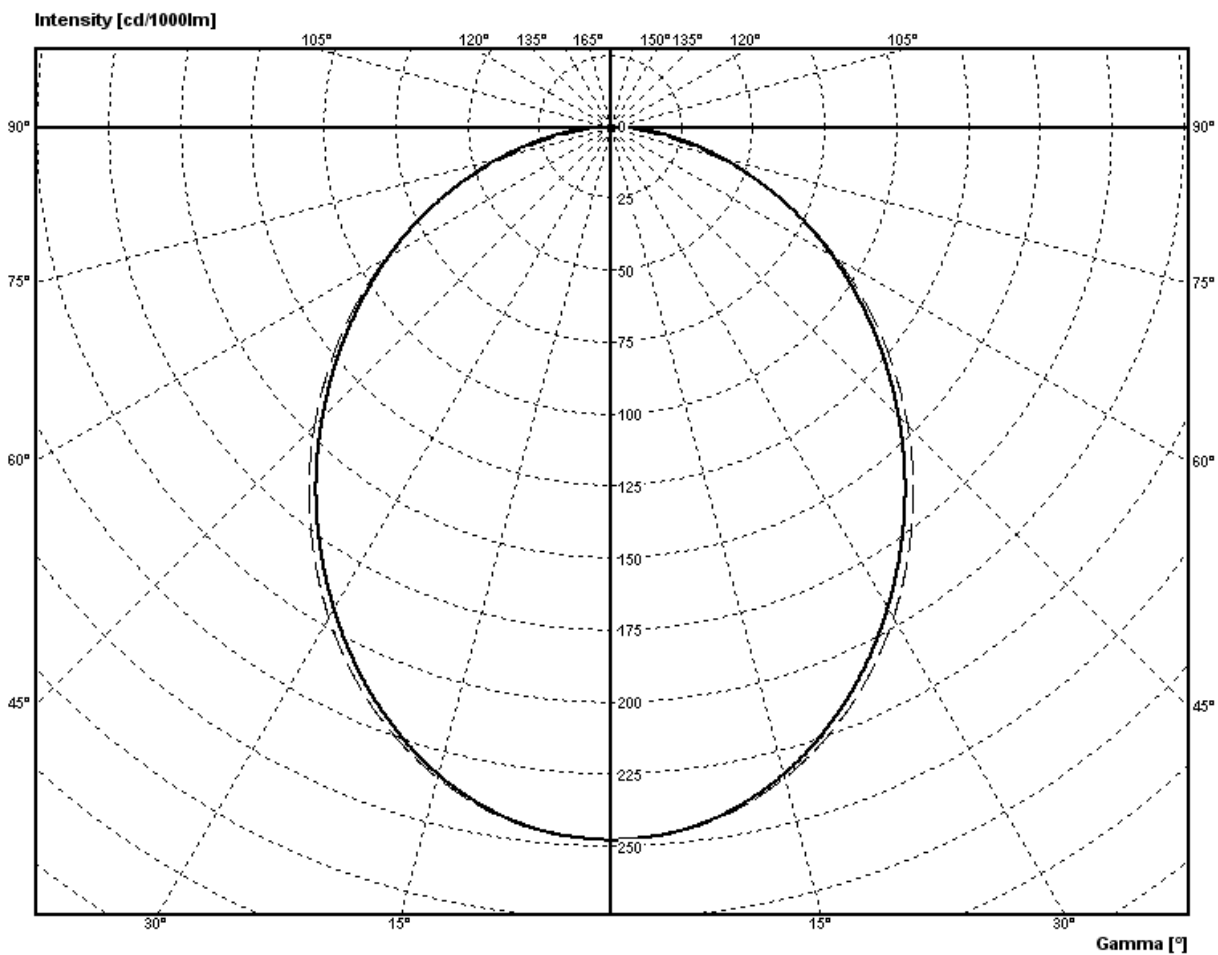
|                  |        |        |        |        |        |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>C-planes:</b> | 0,0°   | 15,0°  | 30,0°  | 45,0°  | 60,0°  | 75,0°  | 90,0°  | 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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| Name:      | REBA 50 EXT L1138+INT SYM BLINE 830 HO |               |                 |
| Number:    | 90517+90497L004                        | Diameter:     | 0 mm            |
| Report:    | 24-01-2020                             | Length:       | 1138 mm         |
| Meas.-no.: | 01                                     | Width:        | 50 mm           |
| Lamp type: | LED 830 - 01                           | Height:       | 72 mm           |
| Number:    | 01                                     | Power:        | 28,70 W         |
| Lamp flux: | 4320,00 lm                             | Operator:     | INDELAGUE GROUP |
| Date:      | 24-01-2020 14:27:36                    | Output ratio: | 63,1 %          |

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



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| <b>Number:</b>    | 90517+90497L004                               | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 24-01-2020                                    | <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>        | 28,70 W          |
| <b>Lamp flux:</b> | 4320,00 lm                                    | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 24-01-2020 14:27:36                           | <b>Output ratio:</b> | 63,1 %           |

## 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>           |            | <b>Viewed crosswise</b> |            |            |            |            | <b>Viewed endwise</b> |            |            |            |            |
| <b>2H</b>                       | <b>2H</b>  | 18,0                    | 19,6       | 18,3       | 19,9       | 20,2       | 20,1                  | 21,7       | 20,4       | 22,0       | 22,3       |
| <b>2H</b>                       | <b>3H</b>  | 18,9                    | 20,4       | 19,3       | 20,8       | 21,1       | 21,5                  | 22,9       | 21,8       | 23,3       | 23,6       |
| <b>2H</b>                       | <b>4H</b>  | 19,3                    | 20,7       | 19,7       | 21,0       | 21,4       | 22,0                  | 23,3       | 22,4       | 23,7       | 24,1       |
| <b>2H</b>                       | <b>6H</b>  | 19,5                    | 20,8       | 19,9       | 21,2       | 21,6       | 22,3                  | 23,6       | 22,7       | 24,0       | 24,4       |
| <b>2H</b>                       | <b>8H</b>  | 19,5                    | 20,8       | 20,0       | 21,2       | 21,6       | 22,4                  | 23,6       | 22,8       | 24,0       | 24,4       |
| <b>2H</b>                       | <b>12H</b> | 19,6                    | 20,7       | 20,0       | 21,1       | 21,5       | 22,4                  | 23,6       | 22,8       | 24,0       | 24,4       |
| <b>4H</b>                       | <b>2H</b>  | 18,6                    | 20,0       | 19,0       | 20,4       | 20,7       | 20,4                  | 21,7       | 20,8       | 22,1       | 22,5       |
| <b>4H</b>                       | <b>3H</b>  | 19,7                    | 20,9       | 20,2       | 21,3       | 21,7       | 21,8                  | 23,0       | 22,3       | 23,4       | 23,8       |
| <b>4H</b>                       | <b>4H</b>  | 20,2                    | 21,3       | 20,7       | 21,7       | 22,1       | 22,5                  | 23,5       | 22,9       | 23,9       | 24,4       |
| <b>4H</b>                       | <b>6H</b>  | 20,5                    | 21,4       | 20,9       | 21,8       | 22,3       | 22,9                  | 23,8       | 23,3       | 24,2       | 24,7       |
| <b>4H</b>                       | <b>8H</b>  | 20,6                    | 21,4       | 21,0       | 21,9       | 22,3       | 23,0                  | 23,8       | 23,4       | 24,3       | 24,8       |
| <b>4H</b>                       | <b>12H</b> | 20,6                    | 21,4       | 21,1       | 21,9       | 22,4       | 23,1                  | 23,9       | 23,5       | 24,3       | 24,8       |
| <b>8H</b>                       | <b>4H</b>  | 20,4                    | 21,3       | 20,9       | 21,7       | 22,2       | 22,5                  | 23,4       | 23,0       | 23,8       | 24,3       |
| <b>8H</b>                       | <b>6H</b>  | 20,7                    | 21,5       | 21,2       | 21,9       | 22,4       | 22,9                  | 23,7       | 23,4       | 24,1       | 24,6       |
| <b>8H</b>                       | <b>8H</b>  | 20,9                    | 21,6       | 21,4       | 22,1       | 22,6       | 23,2                  | 23,8       | 23,7       | 24,3       | 24,8       |
| <b>8H</b>                       | <b>12H</b> | 21,0                    | 21,5       | 21,5       | 22,0       | 22,6       | 23,2                  | 23,8       | 23,8       | 24,3       | 24,8       |
| <b>12H</b>                      | <b>4H</b>  | 20,4                    | 21,2       | 20,9       | 21,7       | 22,2       | 22,5                  | 23,3       | 23,0       | 23,8       | 24,3       |
| <b>12H</b>                      | <b>6H</b>  | 20,8                    | 21,5       | 21,3       | 22,0       | 22,5       | 23,0                  | 23,6       | 23,5       | 24,1       | 24,6       |
| <b>12H</b>                      | <b>8H</b>  | 21,0                    | 21,5       | 21,5       | 22,0       | 22,5       | 23,2                  | 23,7       | 23,7       | 24,2       | 24,7       |

UGR values are corrected for lamp flux of 4320 lm by 5,1

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| <b>Report:</b>    | 24-01-2020                                    | <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>        | 28,70 W          |
| <b>Lamp flux:</b> | 4320,00 lm                                    | <b>Operator:</b>     | INDEL AGUE GROUP |
| <b>Date:</b>      | 24-01-2020 14:27:36                           | <b>Output ratio:</b> | 63,1 %           |

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

| G/C [cd/ | 0,00    | 15,00   | 30,00   | 45,00   | 60,00   | 75,00   | 90,00   | 105,00  | 120,00  |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 45,00    | 6543,92 | 6648,29 | 7086,04 | 7924,85 | 9335,80 | 11741,1 | 16229,7 | 11741,1 | 9335,80 |
| 50,00    | 5640,45 | 5738,98 | 6139,26 | 6917,67 | 8272,44 | 10649,1 | 15438,5 | 10649,1 | 8272,44 |
| 55,00    | 4799,96 | 4895,50 | 5253,17 | 5967,07 | 7223,95 | 9552,72 | 14585,6 | 9552,72 | 7223,95 |
| 60,00    | 4023,79 | 4097,63 | 4414,96 | 5040,50 | 6195,15 | 8390,87 | 13660,5 | 8390,87 | 6195,15 |
| 65,00    | 3275,98 | 3336,29 | 3597,78 | 4134,83 | 5138,96 | 7145,88 | 12561,9 | 7145,88 | 5138,96 |
| 70,00    | 2550,61 | 2601,98 | 2807,22 | 3238,49 | 4066,25 | 5809,79 | 11192,2 | 5809,79 | 4066,25 |
| 75,00    | 1868,99 | 1897,58 | 2046,55 | 2351,82 | 2971,33 | 4336,97 | 9454,69 | 4336,97 | 2971,33 |
| 80,00    | 1237,12 | 1245,89 | 1338,63 | 1512,13 | 1897,85 | 2800,96 | 7164,75 | 2800,96 | 1897,85 |
| 85,00    | 680,83  | 679,73  | 717,41  | 783,43  | 952,08  | 1334,52 | 4289,31 | 1334,52 | 952,08  |

| G/C [cd/ | 135,00  | 150,00  | 165,00  | 180,00  | 195,00  | 210,00  | 225,00  | 240,00  | 255,00  |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 45,00    | 7924,85 | 7086,04 | 6648,29 | 6543,92 | 6648,29 | 7086,04 | 7924,85 | 9335,80 | 11741,1 |
| 50,00    | 6917,67 | 6139,26 | 5738,98 | 5640,45 | 5738,98 | 6139,26 | 6917,67 | 8272,44 | 10649,1 |
| 55,00    | 5967,07 | 5253,17 | 4895,50 | 4799,96 | 4895,50 | 5253,17 | 5967,07 | 7223,95 | 9552,72 |
| 60,00    | 5040,50 | 4414,96 | 4097,63 | 4023,79 | 4097,63 | 4414,96 | 5040,50 | 6195,15 | 8390,87 |
| 65,00    | 4134,83 | 3597,78 | 3336,29 | 3275,98 | 3336,29 | 3597,78 | 4134,83 | 5138,96 | 7145,88 |
| 70,00    | 3238,49 | 2807,22 | 2601,98 | 2550,61 | 2601,98 | 2807,22 | 3238,49 | 4066,25 | 5809,79 |
| 75,00    | 2351,82 | 2046,55 | 1897,58 | 1868,99 | 1897,58 | 2046,55 | 2351,82 | 2971,33 | 4336,97 |
| 80,00    | 1512,13 | 1338,63 | 1245,89 | 1237,12 | 1245,89 | 1338,63 | 1512,13 | 1897,85 | 2800,96 |
| 85,00    | 783,43  | 717,41  | 679,73  | 680,83  | 679,73  | 717,41  | 783,43  | 952,08  | 1334,52 |

| G/C [cd/ | 270,00  | 285,00  | 300,00  | 315,00  | 330,00  | 345,00  |
|----------|---------|---------|---------|---------|---------|---------|
| 45,00    | 16229,7 | 11741,1 | 9335,80 | 7924,85 | 7086,04 | 6648,29 |
| 50,00    | 15438,5 | 10649,1 | 8272,44 | 6917,67 | 6139,26 | 5738,98 |
| 55,00    | 14585,6 | 9552,72 | 7223,95 | 5967,07 | 5253,17 | 4895,50 |
| 60,00    | 13660,5 | 8390,87 | 6195,15 | 5040,50 | 4414,96 | 4097,63 |
| 65,00    | 12561,9 | 7145,88 | 5138,96 | 4134,83 | 3597,78 | 3336,29 |
| 70,00    | 11192,2 | 5809,79 | 4066,25 | 3238,49 | 2807,22 | 2601,98 |
| 75,00    | 9454,69 | 4336,97 | 2971,33 | 2351,82 | 2046,55 | 1897,58 |
| 80,00    | 7164,75 | 2800,96 | 1897,85 | 1512,13 | 1338,63 | 1245,89 |
| 85,00    | 4289,31 | 1334,52 | 952,08  | 783,43  | 717,41  | 679,73  |

## HEADQUARTERS

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