

## PHOTOMETRIC RESULTS

|                   |   |                      |                  |
|-------------------|---|----------------------|------------------|
| <b>Name:</b>      | <b>REBA 50 EXT L1980+INT ASYM K3 830 HO</b> |                      |                  |
| <b>Number:</b>    | 90517+90500L007                             | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 23-01-2020                                  | <b>Length:</b>       | 1980 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>        | 57,16 W          |
| <b>Lamp flux:</b> | 8400,00 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°    |

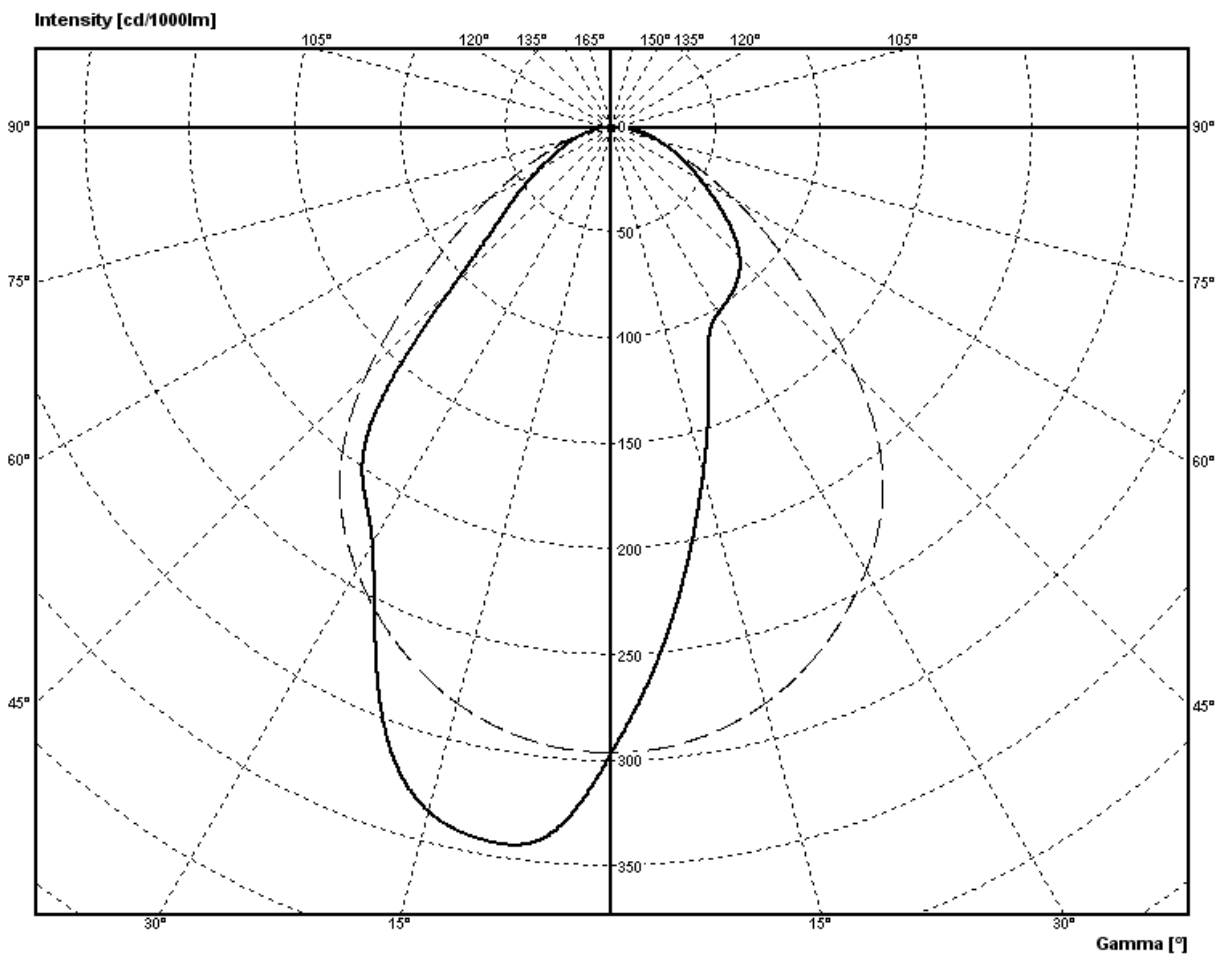
|                  |        |        |        |        |        |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>C-planes:</b> | 0,0°   | 15,0°  | 30,0°  | 45,0°  | 60,0°  | 75,0°  | 90,0°  | 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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|------------|--------------------------------------|---------------|-----------------|
| Name:      | REBA 50 EXT L1980+INT ASYM K3 830 HO |               |                 |
| Number:    | 90517+90500L007                      | Diameter:     | 0 mm            |
| Report:    | 23-01-2020                           | Length:       | 1980 mm         |
| Meas.-no.: | 01                                   | Width:        | 50 mm           |
| Lamp type: | LED 830 - 01                         | Height:       | 72 mm           |
| Number:    | 01                                   | Power:        | 57,16 W         |
| Lamp flux: | 8400,00 lm                           | Operator:     | INDELAGUE GROUP |
| Date:      | 23-01-2020 15:43:22                  | Output ratio: | 56,7 %          |

Polar diagram REBA 50 EXT L1980+INT ASYM K3 830 HO / Direct in 15° C / 5° G



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| <b>Number:</b>    | 90517+90500L007                             | <b>Diameter:</b>     | 0 mm            |
| <b>Report:</b>    | 23-01-2020                                  | <b>Length:</b>       | 1980 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>        | 57,16 W         |
| <b>Lamp flux:</b> | 8400,00 lm                                  | <b>Operator:</b>     | INDELAGUE 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>           |            | <b>Viewed crosswise</b> |            |            |            |            | <b>Viewed endwise</b> |            |            |            |            |
| <b>2H</b>                       | <b>2H</b>  | 16,2                    | 17,7       | 16,6       | 18,0       | 18,3       | 19,9                  | 21,3       | 20,2       | 21,6       | 22,0       |
| <b>2H</b>                       | <b>3H</b>  | 16,7                    | 18,0       | 17,1       | 18,4       | 18,7       | 20,5                  | 21,9       | 20,9       | 22,2       | 22,5       |
| <b>2H</b>                       | <b>4H</b>  | 16,9                    | 18,1       | 17,3       | 18,5       | 18,9       | 20,8                  | 22,0       | 21,2       | 22,4       | 22,7       |
| <b>2H</b>                       | <b>6H</b>  | 17,0                    | 18,2       | 17,4       | 18,6       | 18,9       | 21,0                  | 22,1       | 21,4       | 22,5       | 22,9       |
| <b>2H</b>                       | <b>8H</b>  | 17,0                    | 18,1       | 17,4       | 18,5       | 18,9       | 21,0                  | 22,1       | 21,4       | 22,5       | 22,9       |
| <b>2H</b>                       | <b>12H</b> | 17,0                    | 18,1       | 17,4       | 18,5       | 18,9       | 21,0                  | 22,1       | 21,4       | 22,5       | 22,9       |
| <b>4H</b>                       | <b>2H</b>  | 16,7                    | 17,9       | 17,1       | 18,3       | 18,6       | 19,9                  | 21,1       | 20,3       | 21,5       | 21,8       |
| <b>4H</b>                       | <b>3H</b>  | 17,3                    | 18,4       | 17,7       | 18,8       | 19,2       | 20,6                  | 21,7       | 21,1       | 22,1       | 22,5       |
| <b>4H</b>                       | <b>4H</b>  | 17,6                    | 18,6       | 18,1       | 19,0       | 19,4       | 21,0                  | 21,9       | 21,4       | 22,3       | 22,8       |
| <b>4H</b>                       | <b>6H</b>  | 17,8                    | 18,6       | 18,3       | 19,1       | 19,5       | 21,2                  | 22,0       | 21,7       | 22,5       | 22,9       |
| <b>4H</b>                       | <b>8H</b>  | 17,8                    | 18,6       | 18,3       | 19,1       | 19,5       | 21,3                  | 22,1       | 21,8       | 22,5       | 23,0       |
| <b>4H</b>                       | <b>12H</b> | 17,9                    | 18,6       | 18,4       | 19,0       | 19,5       | 21,4                  | 22,1       | 21,8       | 22,5       | 23,0       |
| <b>8H</b>                       | <b>4H</b>  | 17,8                    | 18,5       | 18,2       | 19,0       | 19,4       | 20,9                  | 21,7       | 21,4       | 22,2       | 22,6       |
| <b>8H</b>                       | <b>6H</b>  | 18,0                    | 18,6       | 18,5       | 19,1       | 19,6       | 21,2                  | 21,8       | 21,7       | 22,3       | 22,8       |
| <b>8H</b>                       | <b>8H</b>  | 18,1                    | 18,7       | 18,6       | 19,2       | 19,7       | 21,4                  | 21,9       | 21,9       | 22,4       | 22,9       |
| <b>8H</b>                       | <b>12H</b> | 18,2                    | 18,6       | 18,7       | 19,1       | 19,7       | 21,4                  | 21,9       | 22,0       | 22,4       | 22,9       |
| <b>12H</b>                      | <b>4H</b>  | 17,8                    | 18,5       | 18,2       | 18,9       | 19,4       | 20,9                  | 21,6       | 21,4       | 22,1       | 22,6       |
| <b>12H</b>                      | <b>6H</b>  | 18,0                    | 18,6       | 18,6       | 19,1       | 19,6       | 21,2                  | 21,8       | 21,7       | 22,3       | 22,8       |
| <b>12H</b>                      | <b>8H</b>  | 18,1                    | 18,6       | 18,7       | 19,1       | 19,6       | 21,3                  | 21,8       | 21,9       | 22,3       | 22,8       |

UGR values are corrected for lamp flux of 8400 lm by 7,4

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| <b>Number:</b>    | 90517+90500L007                             | <b>Diameter:</b>     | 0 mm             |
| <b>Report:</b>    | 23-01-2020                                  | <b>Length:</b>       | 1980 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>        | 57,16 W          |
| <b>Lamp flux:</b> | 8400,00 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 L1980+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    | 4435,05 | 4549,17 | 4745,84 | 5366,30 | 6952,32 | 11460,4 | 20707,9 | 16954,7 | 13247,5 |
| 50,00    | 3788,32 | 3718,83 | 3937,64 | 4438,11 | 5755,46 | 8996,53 | 17130,0 | 13343,4 | 10146,1 |
| 55,00    | 3062,57 | 3007,69 | 3356,93 | 3705,00 | 4728,13 | 7100,92 | 14151,6 | 10118,2 | 7457,66 |
| 60,00    | 2458,96 | 2393,50 | 2821,04 | 3081,56 | 3844,24 | 5627,42 | 11553,2 | 7503,23 | 5396,05 |
| 65,00    | 1992,62 | 1933,49 | 2241,57 | 2449,83 | 3094,63 | 4307,57 | 9283,11 | 5442,50 | 3802,67 |
| 70,00    | 1582,23 | 1564,79 | 1724,53 | 1914,68 | 2386,54 | 3337,01 | 7474,55 | 3888,50 | 2616,88 |
| 75,00    | 1213,03 | 1176,26 | 1292,72 | 1429,93 | 1795,82 | 2602,14 | 6278,48 | 2767,36 | 1829,71 |
| 80,00    | 894,54  | 786,55  | 901,45  | 1000,45 | 1256,24 | 1884,44 | 5222,87 | 1896,07 | 1227,19 |
| 85,00    | 510,49  | 390,29  | 467,79  | 524,68  | 670,28  | 1021,00 | 3763,13 | 1047,86 | 670,28  |

| G/C [cd/ | 135,00  | 150,00  | 165,00  | 180,00  | 195,00  | 210,00  | 225,00  | 240,00  | 255,00  |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 45,00    | 10441,2 | 8967,65 | 7802,56 | 5435,33 | 7802,56 | 8967,65 | 10441,2 | 13247,5 | 16954,7 |
| 50,00    | 7966,08 | 5950,40 | 4799,89 | 3542,04 | 4799,89 | 5950,40 | 7966,08 | 10146,1 | 13343,4 |
| 55,00    | 5437,15 | 3974,88 | 3327,99 | 2652,79 | 3327,99 | 3974,88 | 5437,15 | 7457,66 | 10118,2 |
| 60,00    | 3741,89 | 2875,61 | 2471,72 | 1977,23 | 2471,72 | 2875,61 | 3741,89 | 5396,05 | 7503,23 |
| 65,00    | 2586,74 | 2084,19 | 1846,68 | 1463,67 | 1846,68 | 2084,19 | 2586,74 | 3802,67 | 5442,50 |
| 70,00    | 1818,94 | 1542,09 | 1396,28 | 1103,88 | 1396,28 | 1542,09 | 1818,94 | 2616,88 | 3888,50 |
| 75,00    | 1330,41 | 1167,48 | 1044,65 | 821,24  | 1044,65 | 1167,48 | 1330,41 | 1829,71 | 2767,36 |
| 80,00    | 928,99  | 808,52  | 693,02  | 505,61  | 693,02  | 808,52  | 928,99  | 1227,19 | 1896,07 |
| 85,00    | 524,68  | 472,66  | 416,90  | 291,71  | 416,90  | 472,66  | 524,68  | 670,28  | 1047,86 |

| G/C [cd/ | 270,00  | 285,00  | 300,00  | 315,00  | 330,00  | 345,00  |
|----------|---------|---------|---------|---------|---------|---------|
| 45,00    | 20707,9 | 11460,4 | 6952,32 | 5366,30 | 4745,84 | 4549,17 |
| 50,00    | 17130,0 | 8996,53 | 5755,46 | 4438,11 | 3937,64 | 3718,83 |
| 55,00    | 14151,6 | 7100,92 | 4728,13 | 3705,00 | 3356,93 | 3007,69 |
| 60,00    | 11553,2 | 5627,42 | 3844,24 | 3081,56 | 2821,04 | 2393,50 |
| 65,00    | 9283,11 | 4307,57 | 3094,63 | 2449,83 | 2241,57 | 1933,49 |
| 70,00    | 7474,55 | 3337,01 | 2386,54 | 1914,68 | 1724,53 | 1564,79 |
| 75,00    | 6278,48 | 2602,14 | 1795,82 | 1429,93 | 1292,72 | 1176,26 |
| 80,00    | 5222,87 | 1884,44 | 1256,24 | 1000,45 | 901,45  | 786,55  |
| 85,00    | 3763,13 | 1021,00 | 670,28  | 524,68  | 467,79  | 390,29  |

## HEADQUARTERS

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