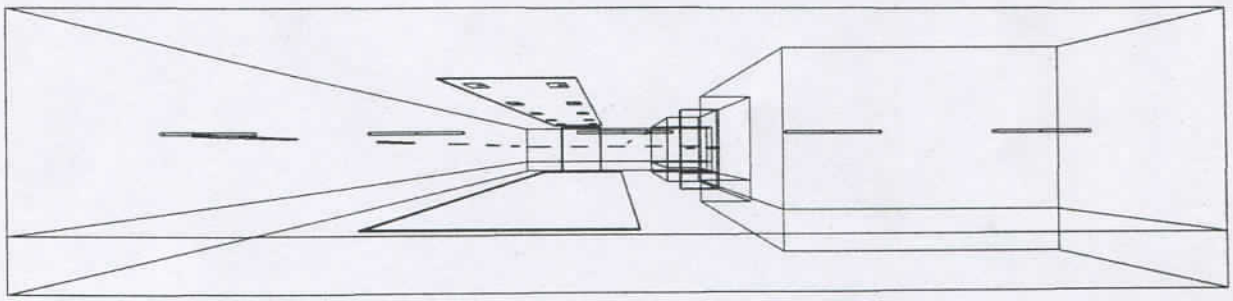
PERFORMANCE
iNLIGHTING

# CITAONICA ODELJENJA UMETNOSTI

Installation Notes:
Customer: Gradska biblioteka
Project Code:
Date 10/08/2016

Notes



Remarks:

## 1.1 General Notes

| Surface | Dimensions [m] | Angle° | Color | Coefficient Reflectance | Average Illum. [lux] | Ave.Luminance [cd/m²] |
|---|---|---|---|---|---|---|
| Ceiling | 18.49x23.39 | Plane | RGB=255,255,255 | 80% | 90 | 23.01 |
| Wall 16 | 4.79x23.39 | -90° | RGB=255,255,255 | 70% | 257 | 57.25 |
| Wall 15 | 4.79x18.49 | -180° | RGB=255,255,255 | 70% | 231 | 51.51 |
| Wall 14 | 4.79x2.09 | 90° | RGB=255,255,255 | 70% | 190 | 42.30 |
| Wall 13 | 4.79x6.29 | 0° | RGB=255,255,255 | 70% | 209 | 46.67 |
| Wall 12 | 4.79x8.39 | 90° | RGB=255,255,255 | 70% | 195 | 43.45 |
| Wall 11 | 4.79x2.59 | -180° | RGB=255,255,255 | 70% | 168 | 37.43 |
| Wall 10 | 4.79x3.79 | 90° | RGB=255,255,255 | 70% | 190 | 42.31 |
| Wall 9 | 4.79x2.59 | 0° | RGB=255,255,255 | 70% | 167 | 37.25 |
| Wall 8 | 4.79x0.30 | 90° | RGB=255,255,255 | 70% | 195 | 43.47 |
| Wall 7 | 4.79x2.59 | -180° | RGB=255,255,255 | 70% | 168 | 37.39 |
| Wall 6 | 4.79x3.79 | 90° | RGB=255,255,255 | 70% | 194 | 43.24 |
| Wall 5 | 4.79x2.59 | 0° | RGB=255,255,255 | 70% | 175 | 38.94 |
| Wall 4 | 4.79x5.79 | 90° | RGB=255,255,255 | 70% | 180 | 40.01 |
| Wall 3 | 4.79x6.19 | -180° | RGB=255,255,255 | 70% | 205 | 45.57 |
| Wall 2 | 4.79x2.09 | 90° | RGB=255,255,255 | 70% | 199 | 44.27 |
| Wall 1 | 4.79x18.39 | 0° | RGB=255,255,255 | 70% | 243 | 54.07 |
| Floor | 18.49x23.39 | Plane | RGB=205,153,95 | 40% | 184 | 23.43 |

| | |
|---|---|
| Dimensions of Room Bounding Box [m]: | 17.90x22.80x4.20 |
| Calculation Points Grid of Bounding Box [m]: | direction X 0.59 - Y 0.59 - Z 0.59 |

## 1.2 Energy Calculation (Working Plane)

| | |
|---|---|
| Area | 307.58 m2 |
| Average Illuminance | 396.22 lx |
| Specific Power | 13.46 W/m2 |
| Lighting Engineering Specific Power | 3.40 W/(m2 * 100lx) |
| Energy Efficiency | 29.44 (m2*lx)/W |
| Total Power Used | 4140.00 W |

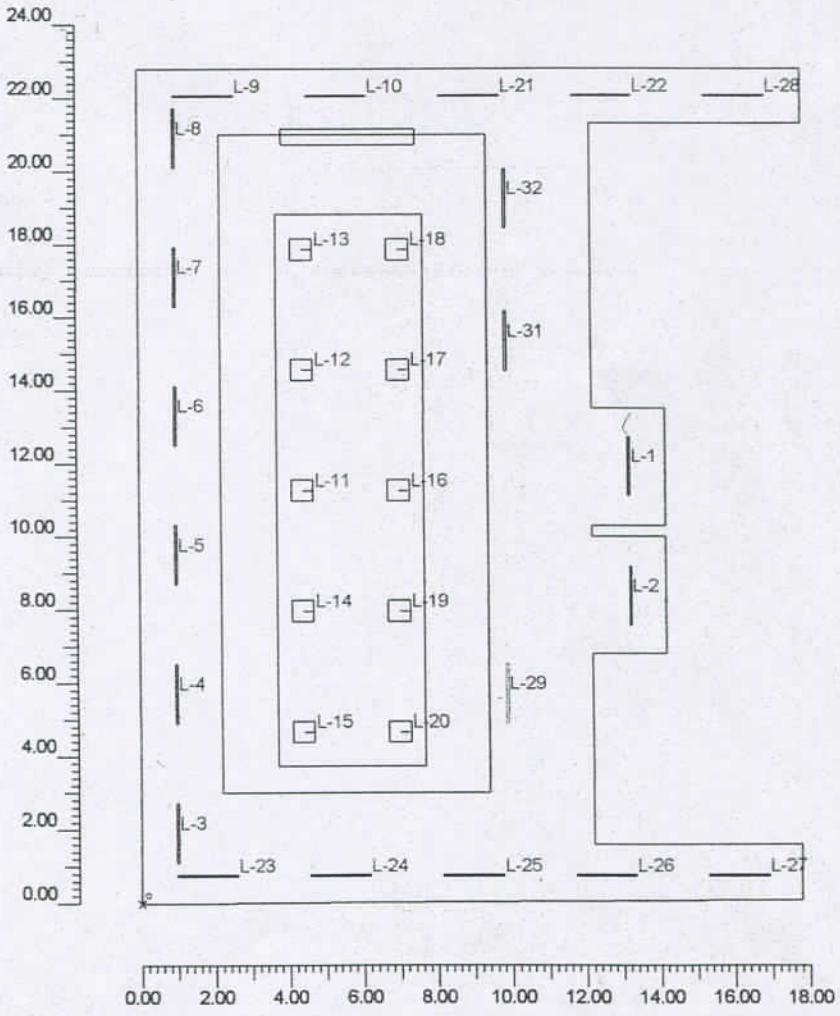
## 1.3 Uniformity Installation Parameters

| Surface | Results | Average | Minimum | Maximum | Min/Ave | Min/Max | Ave/Max |
|---|---|---|---|---|---|---|---|
| Working Plane (h=0.85 m) | Horizontal Illuminance (E) | 396 lux | 0 lux | 743 lux | 0.00 | 0.00 | 0.53 |
| Floor | Horizontal Illuminance (E) | 184 lux | 0 lux | 503 lux | 0.00 | 0.00 | 0.37 |

| | |
|---|---|
| Calculation Type | Dir.+Indir.(7 Inter-Reflections) |

## 2.1 2D Plane view

Scale 1/200



## 3.1 Luminaire/Measurements Info

| Ref. | Line | Luminaire Name (Measurement Name) | Luminaire Code (Measurement Code) | Luminaires nr. | Ref.Lamps | Lamps nr. |
|---|---|---|---|---|---|---|
| A | Plexiform Futura | FUTURA (FUTURA) | FUTURA 595x595 36W 4 (022) | 10 | LMP-A | 1 |
| B | Plexiform Dinamica 36W 1620mm | DINAMICA 36W 4000K schermo (DINAMICA 36W 4000K schermo) | DINAMICA 36W 4000K s (005) | 21 | LMP-B | 90 |

## 3.2 Lamp Information

| Ref.Lamps | Type | Code | Flux lm | Power W | Color K | nr. |
|---|---|---|---|---|---|---|
| LMP-A | 36LED WIN01 | 36LED WIN01 7K-45° | 6000 | 36 | 7000 | 10 |
| LMP-B | -- | LED WHITE N.25 | 43 | 2 | 6500 | 1890 |

## 3.3 Luminaire Table

| Ref. | Lum. | On | Luminaire Position X[m] Y[m] Z[m] | Luminaire Rotation X° Y° Z° | Luminaire Code | Coeff. Mant. | Lamp Code | Flux lm |
|---|---|---|---|---|---|---|---|---|
| A | 1 | X | 4.42;11.26;4.18 | 0.0;0.0;0.0 | FUTURA 595x595 36W 4 | 0.80 | 36LED WIN01 7K-45° | 1*6000 |
| | 2 | X | 7.00;11.26;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 3 | X | 7.00;7.96;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 4 | X | 7.00;4.66;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 5 | X | 7.00;14.56;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 6 | X | 7.00;17.86;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 7 | X | 4.42;14.56;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 8 | X | 4.42;17.86;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 9 | X | 4.42;7.96;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| | 10 | X | 4.42;4.66;4.18 | 0.0;0.0;0.0 | | 0.80 | | |
| B | 1 | X | 13.22;11.93;2.15 | 0.0;0.0;0.0 | DINAMICA 36W 4000K s | 0.80 | LED WHITE N.25 | 90*43 |
| | 2 | X | 13.24;8.36;2.15 | 0.0;0.0;0.0 | | 0.80 | | |
| | 3 | X | 1.00;1.90;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 4 | X | 1.00;5.70;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 5 | X | 1.00;9.50;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 6 | X | 1.00;13.30;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 7 | X | 1.00;17.10;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 8 | X | 1.00;20.90;2.40 | 0.0;0.0;0.0 | | 0.80 | | |
| | 9 | X | 1.79;0.75;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 10 | X | 5.37;0.75;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 11 | X | 8.95;0.75;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 12 | X | 12.53;0.75;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 13 | X | 16.11;0.75;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 14 | X | 1.79;22.05;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 15 | X | 5.37;22.05;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 16 | X | 8.95;22.05;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 17 | X | 12.53;22.05;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 18 | X | 16.11;22.05;2.40 | 0.0;0.0;90.0 | | 0.80 | | |
| | 19 | X | 9.90;5.70;2.70 | 0.0;0.0;180.0 | | 0.80 | | |
| | 20 | X | 9.90;15.35;2.70 | 0.0;0.0;180.0 | | 0.80 | | |
| | 21 | X | 9.90;19.25;2.70 | 0.0;0.0;180.0 | | 0.80 | | |

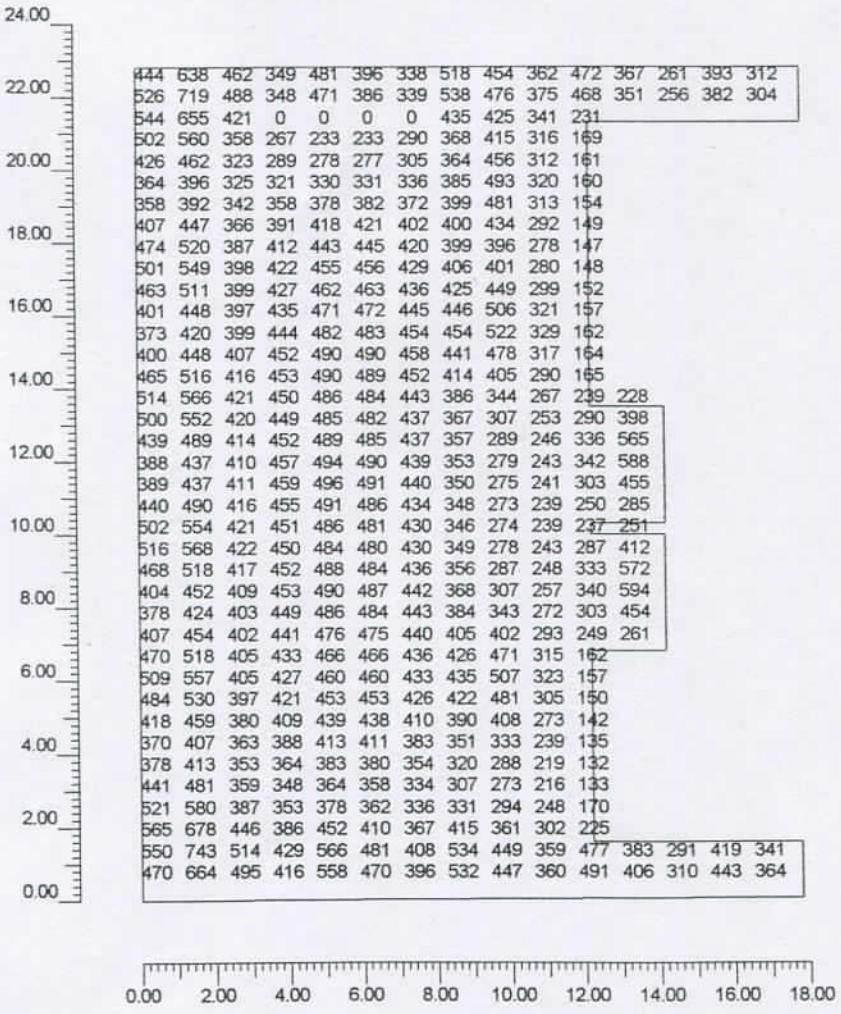
## 4.1 Horizontal Illuminance values on the Working Plane

| O (x:0.00 y:0.00 z:0.85) | Results | Average | Minimum | Maximum | Min/Ave | Min/Max | Ave/Max |
|---|---|---|---|---|---|---|---|
| DX:0.59 DY:0.59 | Horizontal Illuminance (E) | 396 lux | 0 lux | 743 lux | 0.00 | 0.00 | 0.53 |

Calculation Type: Dir.+Indir.(7 Inter-Reflections)

Scale 1/200

Not all the calculated points are visible

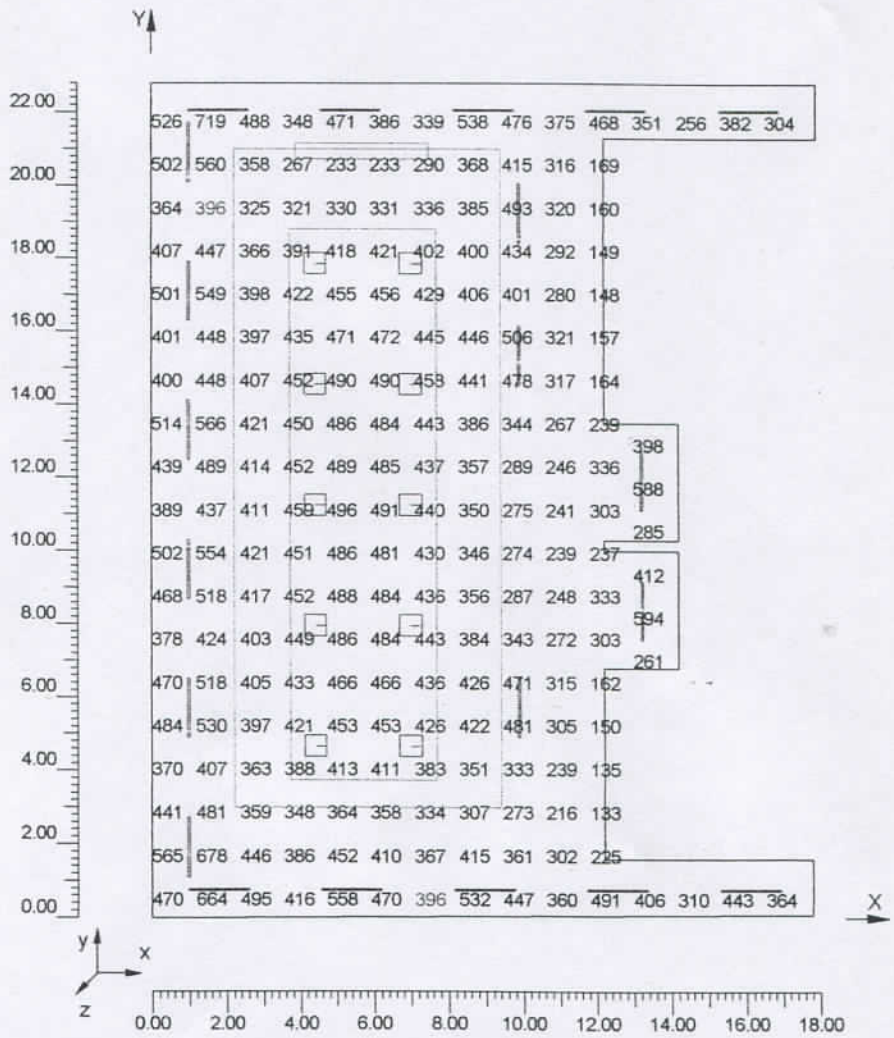


## 4.2 Illuminance values on: Working Plane

| O (x:0.00 y:0.00 z:0.85) | Results | Average | Minimum | Maximum | Min/Ave | Min/Max | Ave/Max |
|---|---|---|---|---|---|---|---|
| DX:0.59 DY:0.59 | Horizontal Illuminance (E) | 396 lux | 0 lux | 743 lux | 0.00 | 0.00 | 0.53 |

Calculation Type Dir.+Indir.(7 Inter-Reflections)

Scale 1/200 CV= 0.266 Not all the calculated points are visible

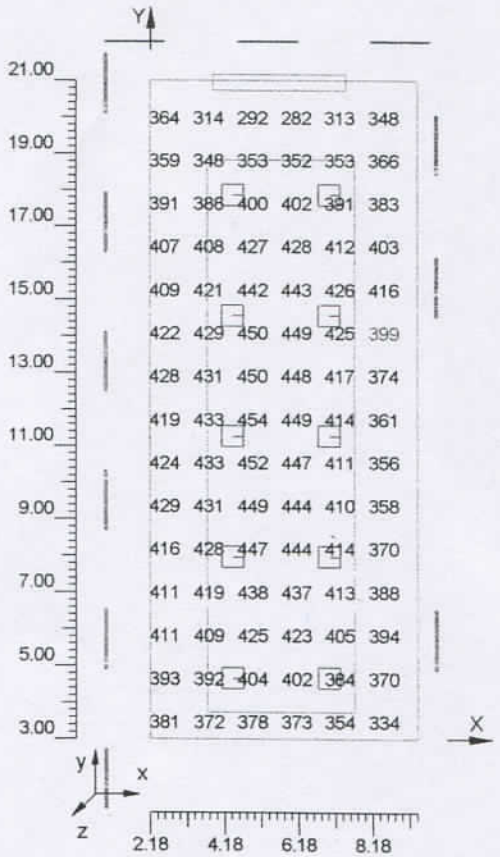


## 4.3 Illuminance values on: Laminat_Part_3_1

| O (x:2.20 y:3.00 z:0.05) | Results | Average | Minimum | Maximum | Min/Ave | Min/Max | Ave/Max |
|---|---|---|---|---|---|---|---|
| DX:0.59 DY:0.59 | Horizontal Illuminance (E) | 399 lux | 246 lux | 455 lux | 0.62 | 0.54 | 0.88 |

Calculation Type Dir.+Indir.(7 Inter-Reflections)

Scale 1/200 CV= 0.103 Not all the calculated points are visible

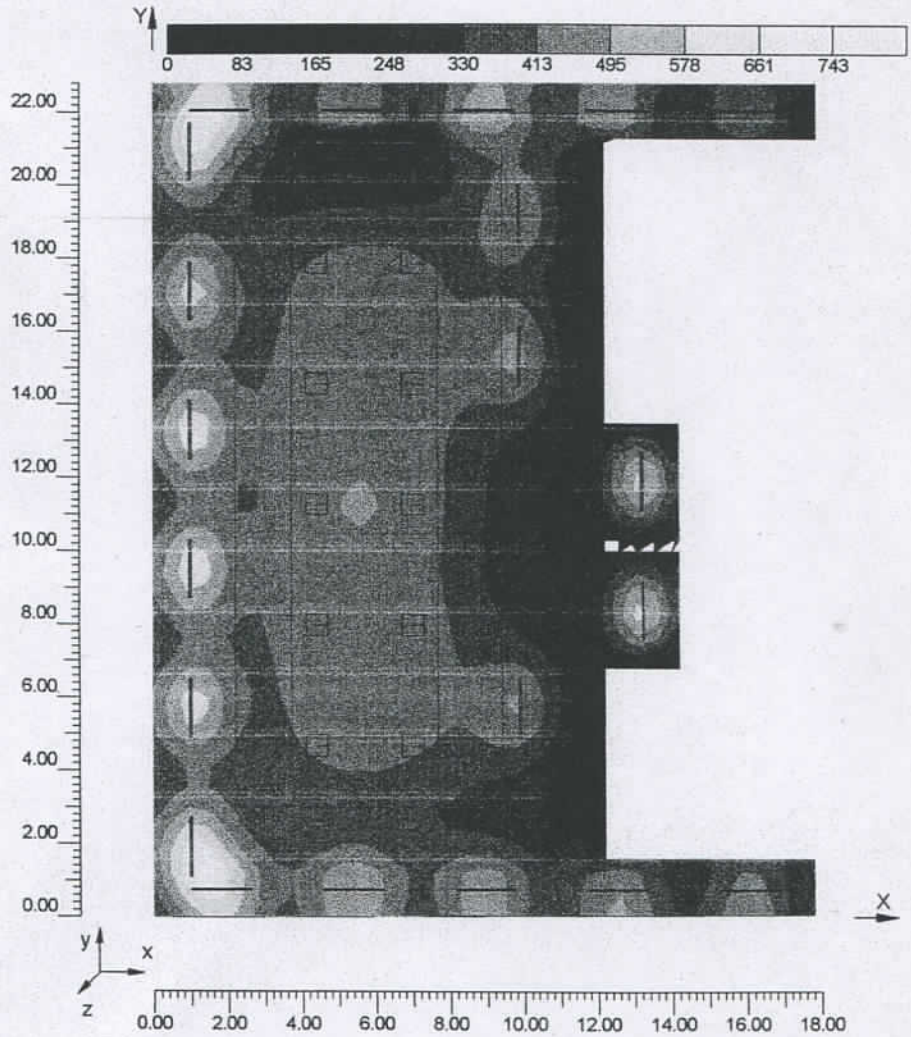


## 4.4 Illuminance Spot Diagram on: Working Plane_1

| O (x:0.00 y:0.00 z:0.85) | Results | Average | Minimum | Maximum | Min/Ave | Min/Max | Ave/Max |
|---|---|---|---|---|---|---|---|
| DX:0.59 DY:0.59 | Horizontal Illuminance (E) | 396 lux | 0 lux | 743 lux | 0.00 | 0.00 | 0.53 |

Calculation Type Dir.+Indir.(7 Inter-Reflections)

Scale 1/200



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