

# TEST REPORT

**1. Applicant**

\* Client Name : KH FEELUX Co. Ltd.  
\* Address : 235-48 Gwangjeok-ro Gwangjeok-myeon Yangju-Si Gyeonggi-do South Korea  
\* Date of Receipt : 240509

**2. Purpose of Report :****3. Number of Report :** KH FEELUX**4. Test Standard / Item :** / 240509 FNN1 24K-24V-C90-1M**5. Test Period :** 240509 ~ 240509**6. Test Environment**

\* Ambient Temp. : 25.0 +- 3 °C  
\* Relative Humidity : 60.0 +- 10 % RH

**7. Test Item**

\* Name of Product :  
\* Rating :  
\* Model :

**8. Test Result :** Refer to the attachment

| Confirmation | Test by |      | Technical manager |      |
|--------------|---------|------|-------------------|------|
|              | 장상윤     | Sign | 장상윤               | Sign |

\*\*\*\*\*

- \* The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
- \* This report cannot be reproduced, except in full.
- \* This report is for reference only. It cannot replace the report by standard organization(s).

## Result

| Report Number | Sample Name | Sample Number | Test Standard |
|---------------|-------------|---------------|---------------|
| KH FEELUX     |             |               |               |

| Test Item                         | Unit | Result          | Notice |
|-----------------------------------|------|-----------------|--------|
| Beam Distribution Test            |      | See Attachement |        |
| ATHD                              | %    | 0.0             |        |
| CIE 1931 Cx, Cy                   |      | 0.4884 , 0.4112 |        |
| Correlated Color Temperature      | K    | 2342            |        |
| Ra                                |      | 91.95           |        |
| Power Factor                      |      | 1.000           |        |
| Input Voltage                     | V    | 23.960          |        |
| Input Current                     | A    | 0.299           |        |
| Input Watt                        | W    | 7.1525          |        |
| Lamp Flux                         | lm   | 333.2           |        |
| Efficient                         | lm/W | 46.59           |        |
| luminous Intensity (Max , Center) | cd   | 115 , 115       |        |
| Illuminance                       | lx   | 115             | 1 m    |
|                                   |      | 29              | 2 m    |
|                                   |      | 13              | 3 m    |

\* This test result is for the sample provided by the client.

\* Sample photo

Click to load image

Luminaire KH FEELUX

Lamp

Report

KH FEELUX

No. of lamps 1

Voltage (V) 23.96

Filename 240509 FNN1 24K-24V-C90-1M.jdt

Lamp flux (lm) 333

Current (A) 0.29851

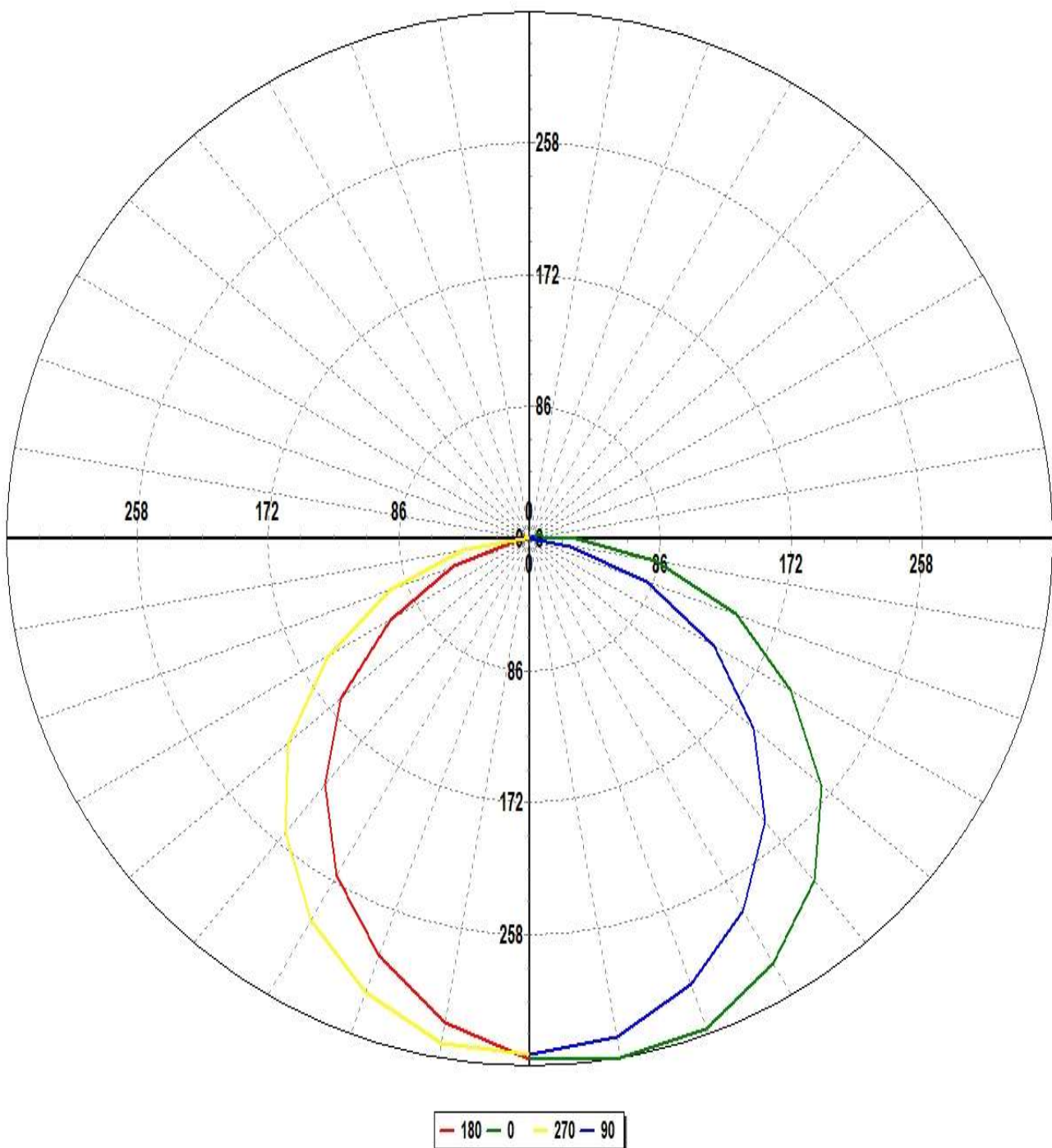
Operator

Total flux (lm) 333

Power Factor 1

Date 2024-05-09 오후 5:10:36

## Luminous Intensity Distribution



Luminaire KH FEELUX

Lamp

Report

KH FEELUX

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Lamp flux (lm) 333

Current (A) 0.29851

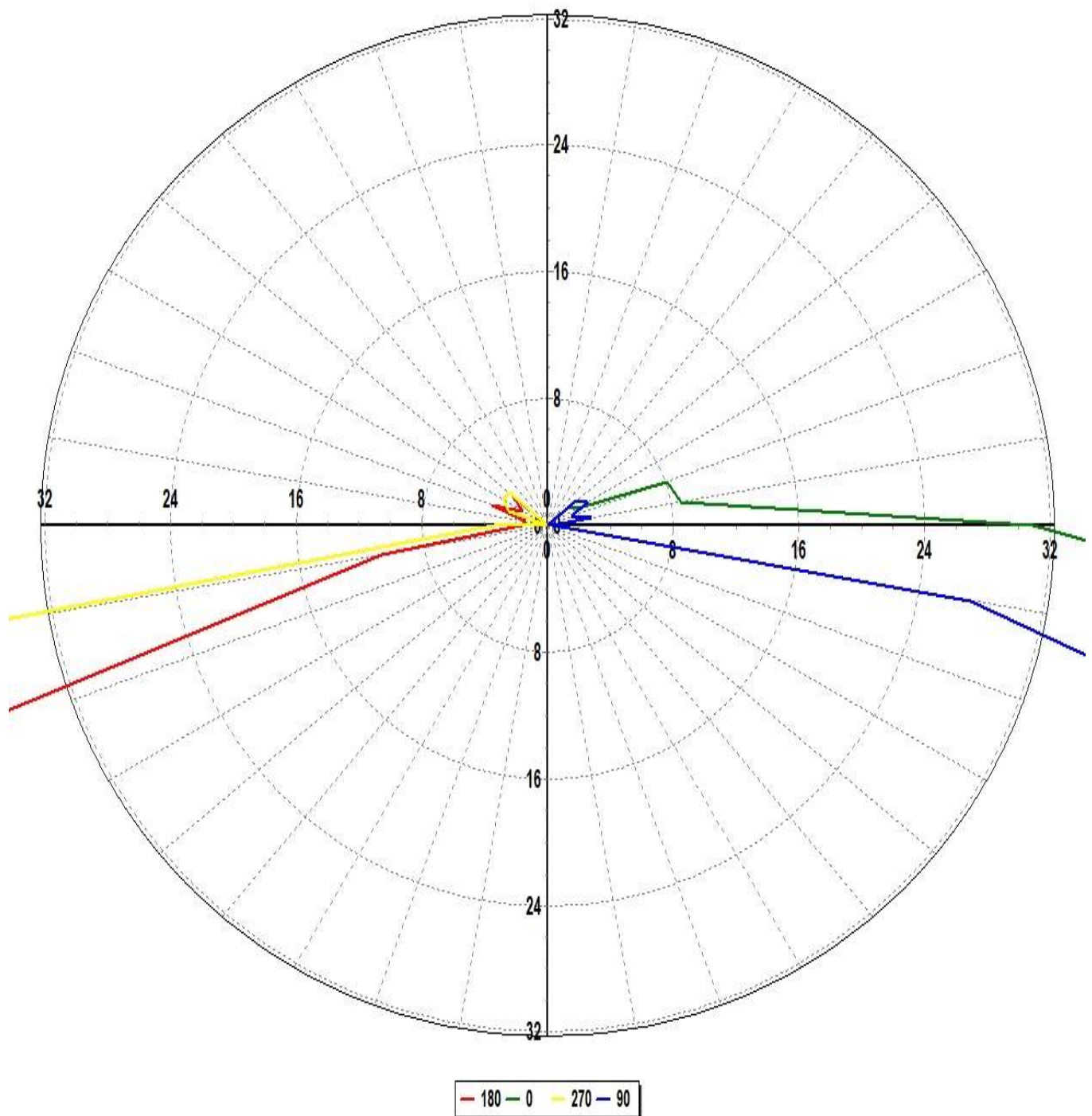
Operator

Total flux (lm) 333

Power Factor 1

Date 2024-05-09 오후 5:10:36

## Luminous Intensity Distribution (Lowest 10%)



Luminaire KH FEELUX

Lamp

Report

KH FEELUX

|                 |     |              |         |          |                                |
|-----------------|-----|--------------|---------|----------|--------------------------------|
| No. of lamps    | 1   | Voltage (V)  | 23.96   | Filename | 240509 FNN1 24K-24V-C90-1M.jdt |
| Lamp flux (lm)  | 333 | Current (A)  | 0.29851 | Operator |                                |
| Total flux (lm) | 333 | Power Factor | 1       | Date     | 2024-05-09 오후 5:10:36          |

## Luminous Intensity Data

Maximum (cd) : 115

Minimum (cd) : -1

| G/C | 0      | 30     | 60     | 90     | 120    | 150    | 180    | 210    | 240    | 270    | 300    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0   | 113.17 | 112.78 | 112.76 | 112.27 | 112.97 | 110.85 | 113.17 | 112.78 | 112.76 | 112.27 | 112.97 |
| 10  | 114.57 | 113.99 | 112.27 | 110.04 | 107.79 | 105.51 | 106.9  | 107.37 | 108.92 | 111.5  | 113.13 |
| 20  | 113.24 | 111.75 | 107.38 | 103.24 | 99.4   | 95.63  | 96.59  | 99     | 100.59 | 105.06 | 109.2  |
| 30  | 106.68 | 104.95 | 99.96  | 93.49  | 87.48  | 82.36  | 84.44  | 86.39  | 90.22  | 95.79  | 102.12 |
| 40  | 96.96  | 93.52  | 88.56  | 80.2   | 73.44  | 67.55  | 69.8   | 71.89  | 76.74  | 83.39  | 91.32  |
| 50  | 83.51  | 79.28  | 73     | 64.12  | 57.54  | 50.3   | 54.05  | 56.17  | 60.55  | 69     | 76.9   |
| 60  | 66.14  | 63.13  | 56.04  | 46.66  | 38.57  | 31.96  | 35.26  | 38.22  | 43.81  | 51.04  | 60.89  |
| 70  | 48.06  | 44.99  | 37.57  | 27.25  | 19.41  | 13.73  | 17.66  | 20.07  | 24.68  | 32.5   | 42.99  |
| 80  | 28.08  | 25.53  | 16.99  | 9.1    | 4.62   | 1.98   | 3.58   | 4.88   | 7.96   | 14.64  | 23.51  |
| 90  | 10.29  | 7.88   | 3.48   | 0.12   | 0.94   | 0.85   | 0.54   | 0.16   | 0.78   | 1.12   | 7.27   |
| 100 | 2.87   | 2.04   | 1.01   | 0.93   | 1.4    | 0.95   | 0.47   | 0      | 0.61   | -0.8   | 1.38   |
| 110 | 2.69   | 2.25   | 0.71   | 0.53   | 0.59   | 0.98   | 1.26   | 0.73   | 0.57   | 0.87   | 0.72   |
| 120 | 0.74   | 0.42   | 0.75   | 0.99   | 0.5    | 0.74   | 0.61   | 0.81   | 0.78   | 1.1    | -0.16  |
| 130 | 0.6    | 0.77   | 0.65   | 0.74   | 1.98   | 1.31   | 0.97   | 0.36   | 0.58   | 1.05   | 1.22   |

Luminaire KH FEELUX

Lamp

Report

KH FEELUX

No. of lamps 1

Voltage (V) 23.96

Filename 240509 FNN1 24K-24V-C90-1M.jdt

Lamp flux (lm) 333

Current (A) 0.29851

Operator

Total flux (lm) 333

Power Factor 1

Date 2024-05-09 오후 5:10:36

## Luminous Intensity Data (Continued)

Maximum (cd) : 115

Minimum (cd) : -1

| G/C | 330    | 360    |
|-----|--------|--------|
| 0   | 110.85 | 113.17 |
| 10  | 114.63 | 114.57 |
| 20  | 113.23 | 113.24 |
| 30  | 107.36 | 106.68 |
| 40  | 97.72  | 96.96  |
| 50  | 85.48  | 83.51  |
| 60  | 69.6   | 66.14  |
| 70  | 52.16  | 48.06  |
| 80  | 31.84  | 28.08  |
| 90  | 13.19  | 10.29  |
| 100 | 2.88   | 2.87   |
| 110 | 2.13   | 2.69   |
| 120 | 0.96   | 0.74   |
| 130 | 0.48   | 0.6    |

Luminaire KH FEELUX

Lamp

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KH FEELUX

No. of lamps 1

Voltage (V) 23.96

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Operator

Total flux (lm) 333

Power Factor 1

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## Luminous Flux Table

Total Lamp Lumens: 333.19

Luminaire Efficiency (lm/W): 46.58

CIE Classification: Direct

| Elevation | Lumens | Cumulative | Lamp % | Luminaire % |
|-----------|--------|------------|--------|-------------|
| 0         | 2.69   | 2.69       | 0.81   | 0.81        |
| 10        | 21.03  | 23.71      | 7.12   | 7.12        |
| 20        | 39.15  | 62.87      | 18.87  | 18.87       |
| 30        | 52.08  | 114.95     | 34.50  | 34.50       |
| 40        | 58.14  | 173.09     | 51.95  | 51.95       |
| 50        | 56.63  | 229.72     | 68.94  | 68.95       |
| 60        | 47.53  | 277.25     | 83.21  | 83.21       |
| 70        | 32.68  | 309.93     | 93.02  | 93.02       |
| 80        | 15.52  | 325.45     | 97.67  | 97.68       |
| 90        | 4.25   | 329.71     | 98.95  | 98.96       |
| 100       | 1.24   | 330.94     | 99.32  | 99.33       |
| 110       | 1.20   | 332.15     | 99.68  | 99.69       |
| 120       | 0.65   | 332.80     | 99.88  | 99.88       |
| 130       | 0.39   | 333.19     | 100.00 | 100.00      |

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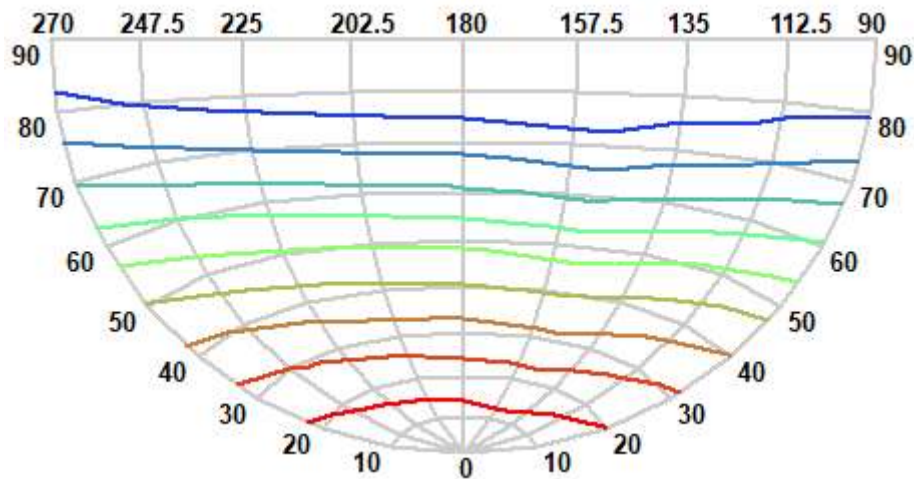
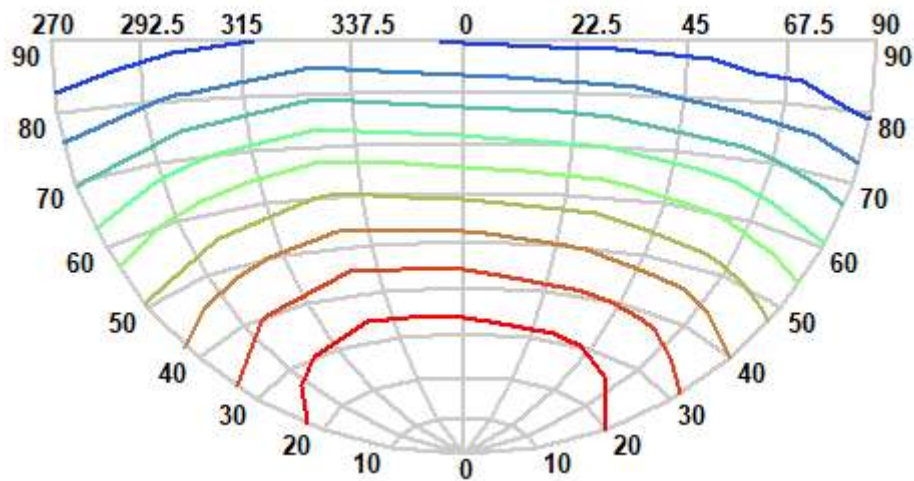
Operator

Total flux (lm) 333

Power Factor 1

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## IsoCandela (Type C)



Luminaire KH FEELUX

Lamp

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Voltage (V) 23.96

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Lamp flux (lm) 333

Current (A) 0.29851

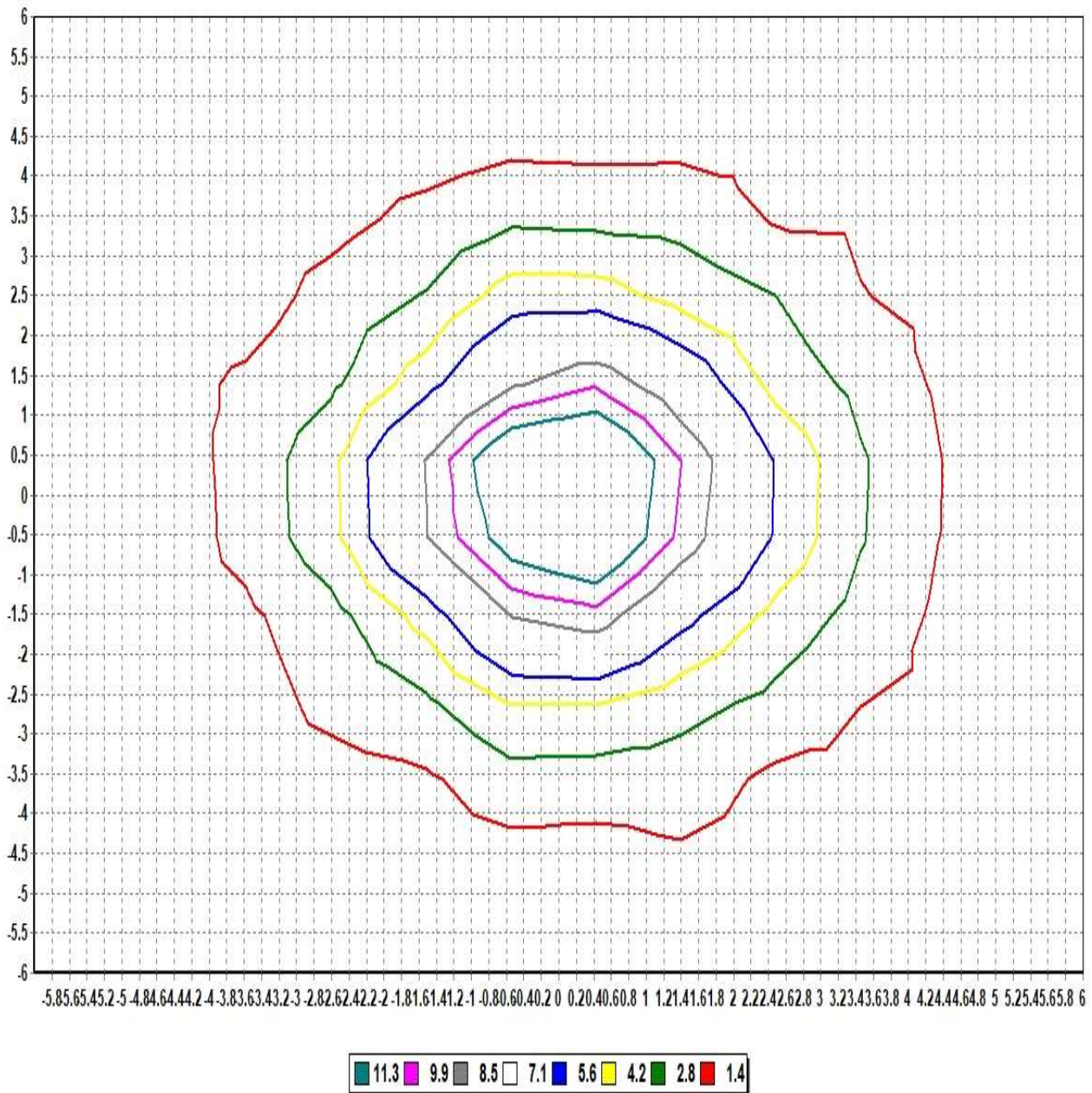
Operator

Total flux (lm) 333

Power Factor 1

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## IsoLux Diagram (Ground)



Pole Height (m): 2.7

Area Width (m): 12

Total Optical Solution Provider

Luminaire KH FEELUX

Lamp

Report

KH FEELUX

No. of lamps 1

Voltage (V) 23.96

Filename 240509 FNN1 24K-24V-C90-1M.jdt

Lamp flux (lm) 333

Current (A) 0.29851

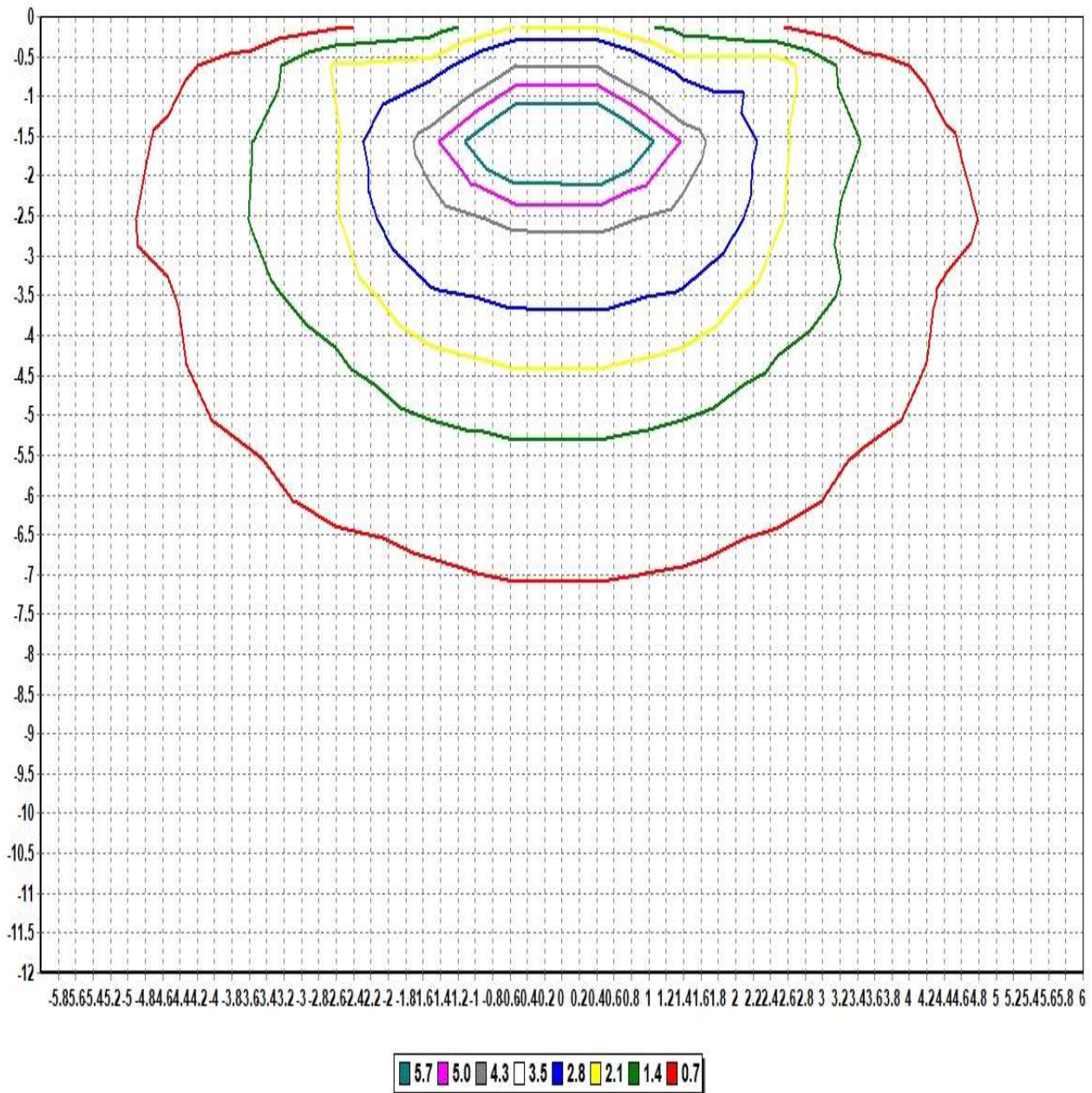
Operator

Total flux (lm) 333

Power Factor 1

Date 2024-05-09 오후 5:10:36

## IsoLux Diagram (Wall)



Pole Height (m): 2.7

Wall Distance (m): 2.7

Aiming Plane: 0

Wall Height (m): 12

Total Optical Solution Provider

Luminaire KH FEELUX

Lamp

|                 |     |              |         |
|-----------------|-----|--------------|---------|
| No. of lamps    | 1   | Voltage (V)  | 23.96   |
| Lamp flux (lm)  | 333 | Current (A)  | 0.29851 |
| Total flux (lm) | 333 | Power Factor | 1       |

Report

KH FEELUX

Filename 240509 FNN1 24K-24V-C90-1M.jdt

Operator

Date

2024-05-09 오후 5:10:36

## Illuminance Levels (Ground)

|       |       |       |       |       |       |       |       |       |      |      |      |      |      |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 6.00  | 0.15  | 0.20  | 0.16  | 0.17  | 0.24  | 0.38  | 0.34  | 0.35  | 0.40 | 0.34 | 0.23 | 0.27 | 0.23 |
| 5.00  | 0.16  | 0.16  | 0.25  | 0.37  | 0.66  | 0.93  | 0.90  | 0.90  | 0.89 | 0.48 | 0.36 | 0.30 | 0.30 |
| 4.00  | 0.09  | 0.17  | 0.58  | 0.88  | 0.79  | 1.29  | 1.29  | 1.28  | 1.21 | 1.06 | 0.81 | 0.42 | 0.29 |
| 3.00  | 0.16  | 0.23  | 0.72  | 1.00  | 2.19  | 2.29  | 2.76  | 2.91  | 2.49 | 1.46 | 1.17 | 0.58 | 0.35 |
| 2.00  | 0.19  | 0.61  | 0.76  | 1.86  | 3.01  | 4.68  | 6.04  | 5.85  | 3.91 | 2.72 | 1.24 | 0.92 | 0.43 |
| 1.00  | 0.21  | 0.68  | 0.90  | 2.09  | 4.59  | 8.87  | 12.42 | 10.24 | 5.91 | 3.06 | 1.65 | 1.14 | 0.53 |
| 0.00  | 0.24  | 0.75  | 1.03  | 2.35  | 5.33  | 12.05 | 15.52 | 12.95 | 7.14 | 3.54 | 1.76 | 1.19 | 0.53 |
| -1.00 | 0.20  | 0.67  | 0.89  | 2.11  | 4.52  | 8.42  | 12.59 | 9.62  | 5.79 | 3.04 | 1.65 | 1.13 | 0.52 |
| -2.00 | 0.21  | 0.61  | 0.76  | 1.92  | 2.75  | 4.57  | 6.24  | 5.69  | 3.53 | 2.75 | 1.21 | 0.91 | 0.43 |
| -3.00 | 0.17  | 0.27  | 0.76  | 0.88  | 2.10  | 2.20  | 2.95  | 2.80  | 2.36 | 1.28 | 1.19 | 0.61 | 0.34 |
| -4.00 | 0.11  | 0.19  | 0.51  | 0.84  | 0.77  | 1.20  | 1.40  | 1.19  | 1.17 | 1.00 | 0.72 | 0.44 | 0.31 |
| -5.00 | 0.17  | 0.13  | 0.23  | 0.34  | 0.64  | 0.87  | 0.97  | 0.85  | 0.85 | 0.43 | 0.33 | 0.25 | 0.31 |
| -6.00 | 0.12  | 0.19  | 0.15  | 0.17  | 0.23  | 0.34  | 0.38  | 0.32  | 0.37 | 0.32 | 0.21 | 0.25 | 0.20 |
| -6.00 | -5.00 | -4.00 | -3.00 | -2.00 | -1.00 | 0.00  | 1.00  | 2.00  | 3.00 | 4.00 | 5.00 | 6.00 |      |

Illum. (Max.) : 15.524

Illum. (Min.) : 0.0911

Illum. (Avg.) : 1.8199

All illuminance level values are in lux.



Luminaire KH FEELUX

Lamp

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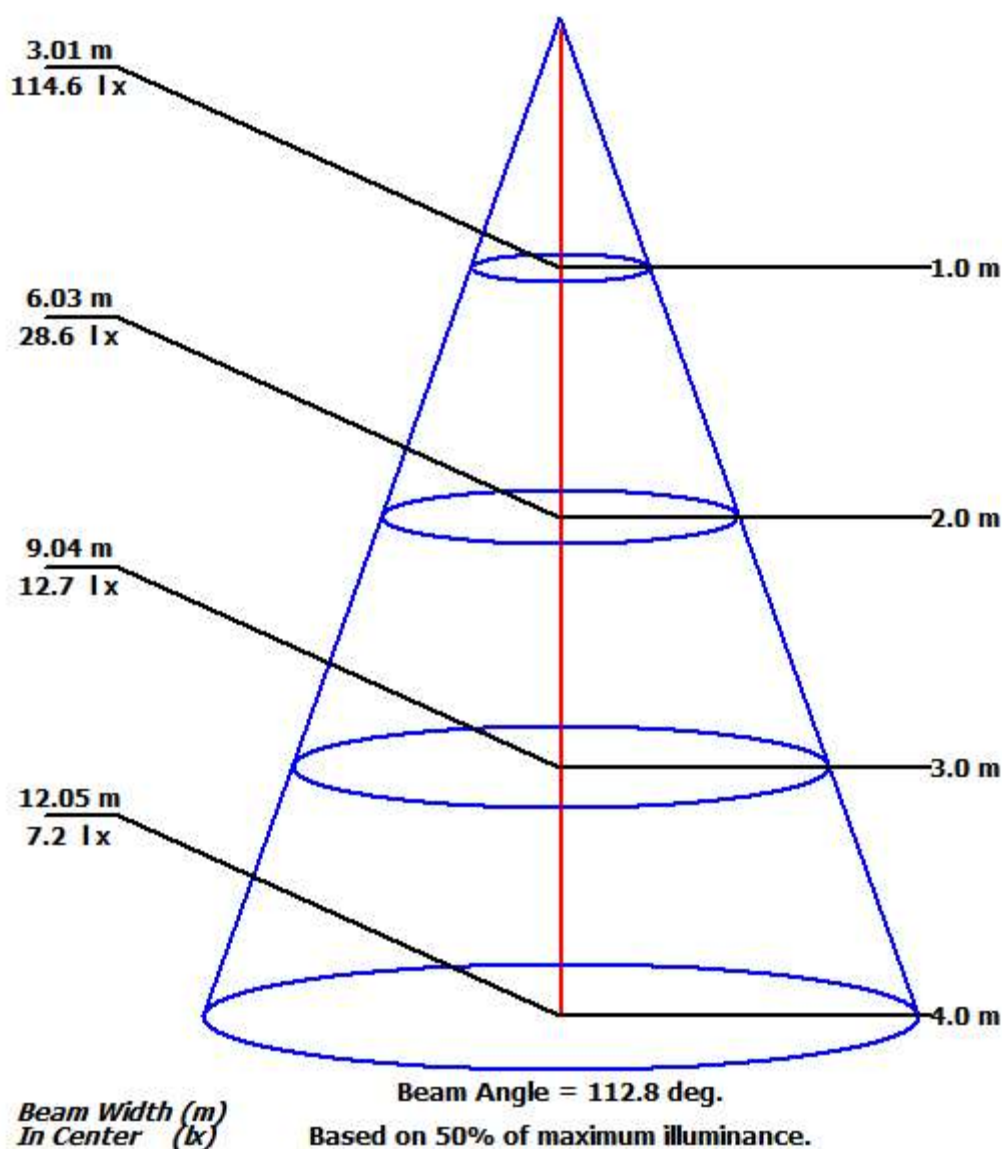
Operator

Total flux (lm) 333

Power Factor 1

Date 2024-05-09 오후 5:10:36

## Illuminance Cone Diagram



Luminaire KH FEELUX

Lamp

|                 |     |              |         |
|-----------------|-----|--------------|---------|
| No. of lamps    | 1   | Voltage (V)  | 23.96   |
| Lamp flux (lm)  | 333 | Current (A)  | 0.29851 |
| Total flux (lm) | 333 | Power Factor | 1       |

Report

KH FEELUX

Filename 240509 FNN1 24K-24V-C90-1M.jdt

Operator

Date

2024-05-09 오후 5:10:36

## Coefficient of Utilization

|                         |                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                         | Refl. Ceiling (%) | 80%  | 80%  | 80%  | 70%  | 70%  | 70%  | 50%  | 50%  | 50%  | 30%  | 30%  | 30%  | 10%  | 10%  | 10%  | 0%   |
|                         | Refl. Wall (%)    | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0%   |
| Eff. Floor Cavity Refl. |                   | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  |
| Room CR 0               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 1               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 2               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 3               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 4               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 5               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 6               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 7               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 8               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 9               |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Room CR 10              |                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |