

TEST REPORT

1. Applicant

Client Name : FEELUX Co. Ltd.

Address : 235-48 Gwangjeok-ro Gwangjeok-myeon Yangju-si Gyeonggi-do 482-844 Korea

Date of Receipt : 20150820

2. Purpose of Report : Sample test

3. Test Standard / Item : LED / NDV1 30K-24V -1

4. Test Period : 20150820 ~ 20150820

5. Test Environment

Ambient Temp. : (26.22 +- 3) °C

Relative Humidity : (69.23 +- 10) % RH

6. Test Result : Refer to the attachment

Test Item

Name of Product :

Model / Rating :

Model :

Rating :

Confirmation	Test by Jincheol, Kim	Technical manager Soobeom, Park
--------------	--------------------------	------------------------------------

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).

TEST RESULT

Report Number	Sample Name	Sample Number	Test Standard
20150820-0002			LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.4329, 0.4007	
Correlated Color Temperature	K	3058	
Ra	-	84.1	
Power Factor	%	1.000	
Input Voltage	V	24.000	
Input Current	A	0.051	
Input Watt	W	1.24	
Lamp Flux	lm	96.1	
Efficient	lm/W	78.51	
Illuminance	lx	43	1 m
		11	2 m
		5	3 m

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

Sample photo

Click to load image

Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Lamp flux (lm) 96

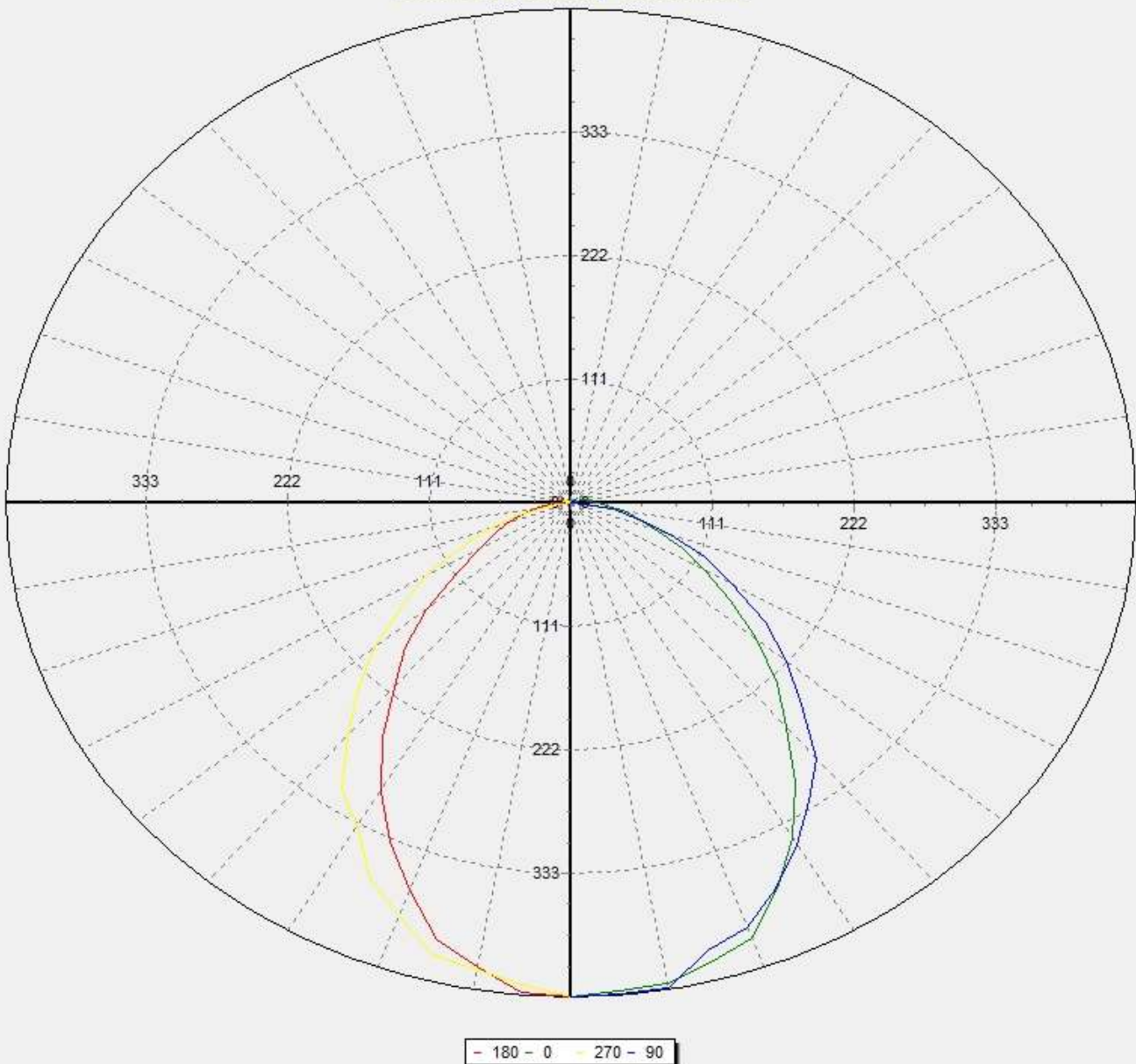
CtOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

Luminous Intensity Distribution



All luminous intensity values are in Cd/Klm unit.

Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Lamp flux (lm) 96

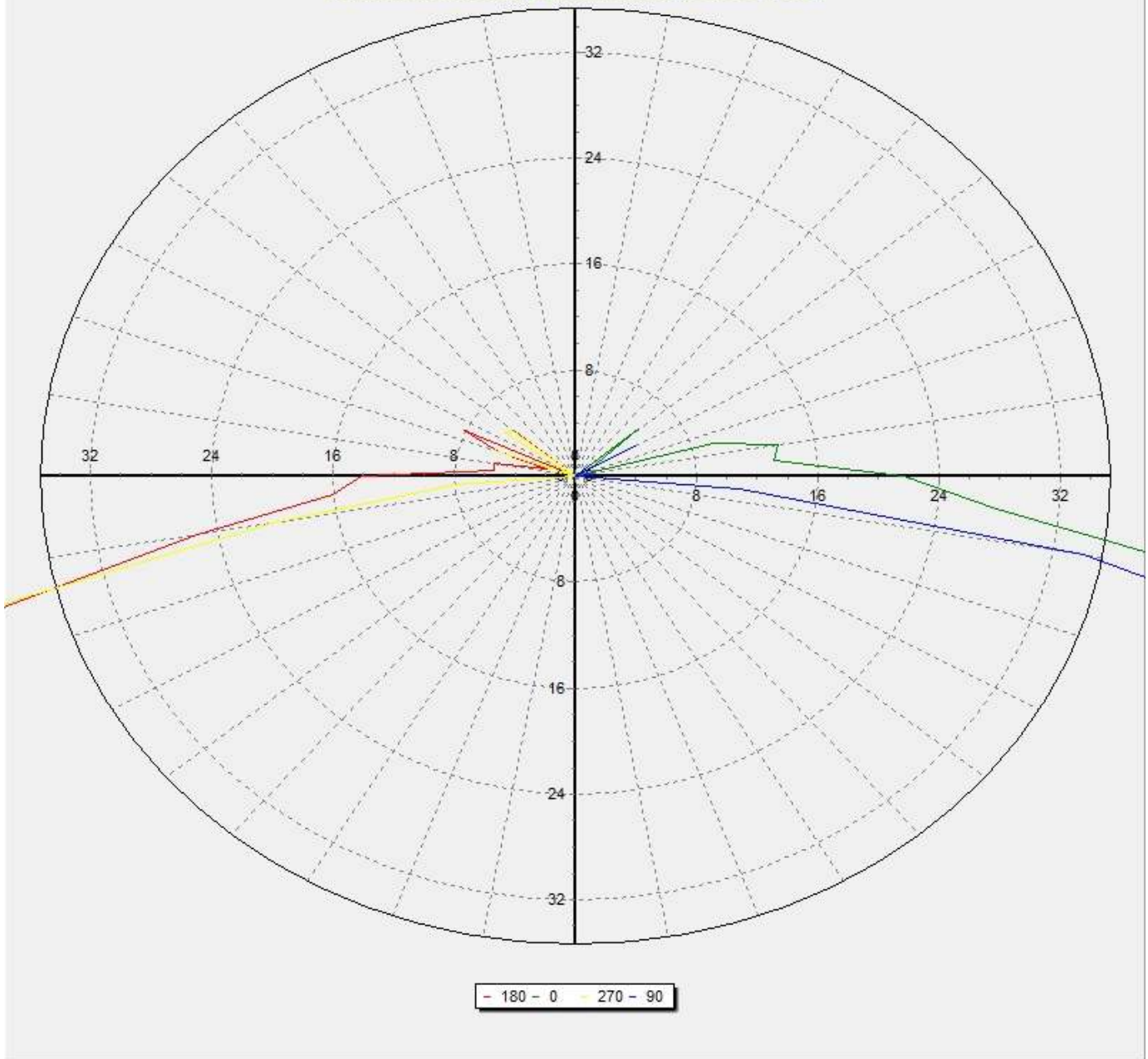
CtOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

Luminous Intensity Distribution (Lowest 10%)



All luminous intensity values are in Cd/Klm unit.

Luminaire

Lamp		Report	20150820-0002
No. of lamps	1	VcFilename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt
Lamp flux (lm)	96	CtOperator	0.051
Total flux (lm)	96	PcDateFactor	1
			2015-08-20 오후 12:15:13

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
0	42.63	42.67	43.23	42.37	43.18	42.34	42.37	42.51	41.89	42.62	42.49	42.70	42.55	42.19	42.12
5	42.26	42.26	42.44	42.81	42.61	42.30	42.67	42.77	42.30	42.58	41.94	42.08	42.79	42.38	42.02
10	42.07	41.83	42.11	41.80	42.26	41.90	41.58	41.79	41.05	42.45	42.04	42.57	41.35	41.42	41.49
15	41.01	40.41	40.46	40.77	40.69	40.90	41.03	41.66	40.68	39.91	40.46	40.67	40.50	39.99	40.42
20	40.03	39.45	39.06	39.14	39.26	38.80	39.13	39.42	39.38	38.99	38.63	37.97	38.69	37.82	37.82
25	36.74	36.54	36.82	36.84	36.24	37.29	37.93	36.96	36.94	36.65	37.07	36.00	36.34	35.89	35.35
30	33.43	32.75	33.50	33.95	34.29	34.28	34.94	35.21	34.30	34.06	34.00	33.76	33.08	33.00	31.94
35	29.49	28.63	30.22	30.26	30.85	30.56	31.28	31.95	32.53	31.36	30.76	30.86	29.63	28.85	28.60
40	25.25	25.26	25.74	26.20	26.37	27.58	28.05	28.71	28.52	28.82	28.36	27.86	27.22	25.41	24.27
45	22.01	21.63	22.15	22.76	22.55	22.84	24.59	24.94	25.19	24.63	24.60	23.36	22.77	20.93	21.03
50	18.19	18.61	18.55	18.49	19.27	19.67	20.56	21.41	21.52	21.26	20.88	19.79	18.46	17.50	17.55
55	14.65	14.51	15.32	15.65	16.60	16.17	16.73	17.61	18.32	17.95	17.77	16.43	15.42	14.78	14.34
60	11.74	10.95	11.61	12.31	12.74	13.53	12.95	13.55	14.67	13.86	14.13	12.37	12.15	12.39	11.43
65	9.32	8.08	9.16	9.25	10.24	10.46	11.37	10.41	10.77	11.12	10.50	10.06	10.10	9.11	8.11
70	6.60	7.16	7.49	7.52	7.86	7.62	7.09	7.78	8.61	8.01	8.02	7.39	6.43	6.08	6.49
75	5.30	5.00	5.57	4.93	5.74	6.26	6.00	5.44	5.67	5.30	4.27	5.33	5.03	5.14	4.65
80	4.28	3.90	3.17	3.79	3.50	4.49	4.02	3.52	3.16	3.28	2.32	3.14	3.74	3.40	3.02
85	2.68	3.11	2.45	2.55	2.90	2.29	2.18	1.81	1.37	1.05	1.11	1.56	1.84	1.76	2.21
90	2.09	2.58	2.52	1.25	2.11	1.18	1.58	0.93	0.56	-0.06	0.65	0.73	1.50	1.12	0.93
95	1.26	1.74	0.95	0.96	0.99	0.45	0.72	0.13	0.22	0.11	0.22	0.95	0.05	0.82	0.36
100	1.30	0.97	1.05	0.49	0.68	0.75	0.93	-0.47	0.35	-0.45	-0.07	-0.29	-0.02	0.34	0.46
105	0.91	0.31	-0.10	0.29	0.06	-0.22	0.36	-0.37	-0.25	0.00	-0.15	0.18	0.19	-0.46	0.09
110	-0.01	0.98	0.11	0.03	0.18	-0.43	-0.13	0.30	0.08	-0.17	1.09	0.10	0.05	-0.07	0.29
115	-0.02	0.12	-0.10	0.21	-0.57	-0.16	0.66	0.01	0.40	-0.36	0.20	0.14	0.11	0.14	0.67
120	0.01	0.12	-0.18	0.41	0.18	0.33	1.10	0.59	0.40	0.44	-0.54	0.10	0.80	0.68	0.41
125	0.15	0.33	0.28	0.24	-0.39	0.47	0.21	-0.28	0.24	-0.38	0.00	-0.06	-0.31	0.28	0.50
130	0.52	-0.03	-0.02	-0.23	-0.13	0.01	-0.39	0.46	0.40	0.11	0.42	-0.05	-0.05	-0.13	-0.10

Luminaire

Lamp		Report	20150820-0002
No. of lamps	1	VcFilename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt
Lamp flux (lm)	96	CtOperator	0.051
Total flux (lm)	96	PcDateFactor	1
			2015-08-20 오후 12:15:13

Luminous Intensity Data (Continued)

GWC	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	42.18	42.09	42.03	42.63	42.67	43.23	42.37	43.18	42.34	42.37	42.51	41.89	42.62	42.49	42.70
5	41.97	42.78	42.52	42.45	42.02	42.08	41.97	42.01	42.13	41.98	42.19	42.10	41.79	41.84	42.41
10	41.06	41.09	40.67	40.71	40.99	40.62	40.21	41.07	41.02	41.15	41.24	41.91	40.91	41.59	41.45
15	40.35	39.44	39.36	39.00	38.85	39.16	39.15	38.70	40.05	39.71	39.68	39.79	40.30	39.31	40.15
20	36.72	37.54	36.70	35.58	35.87	36.34	35.54	36.53	37.31	37.52	37.31	38.01	37.86	37.73	38.30
25	34.71	34.47	34.03	32.21	33.57	32.35	33.40	33.63	34.41	34.64	34.98	35.15	35.83	35.08	35.94
30	31.55	30.76	29.90	28.74	28.94	29.03	29.24	29.74	31.06	31.43	32.34	32.37	32.26	32.28	33.35
35	27.71	26.58	26.74	24.72	24.74	25.70	25.26	26.37	27.20	28.39	28.92	29.33	30.19	30.15	30.02
40	23.45	23.76	22.17	20.75	21.47	21.23	22.23	22.65	23.81	24.15	24.84	26.04	26.14	26.44	26.50
45	19.93	19.46	18.75	17.62	18.59	17.95	18.24	18.52	19.32	20.34	21.65	22.64	22.64	22.95	23.05
50	16.67	15.62	15.50	14.26	14.49	14.45	14.88	15.77	16.05	16.45	18.33	18.33	19.30	19.54	18.88
55	13.54	13.24	12.23	10.41	11.22	11.04	12.80	12.38	12.64	13.35	14.28	14.93	15.57	16.26	15.76
60	9.57	9.92	9.42	7.99	8.01	8.34	8.93	9.33	10.49	10.73	11.21	11.51	12.74	12.27	12.37
65	7.98	7.49	6.92	6.38	6.48	6.47	6.95	6.87	8.04	7.75	8.99	8.63	9.13	9.25	9.10
70	5.60	5.38	4.83	5.20	4.60	4.54	5.18	5.29	5.84	6.15	6.28	6.00	6.82	6.34	6.70
75	4.58	4.32	3.79	3.91	3.73	3.41	3.51	3.72	4.00	3.56	3.62	4.51	4.37	4.53	4.51
80	2.78	3.44	2.82	2.44	2.42	2.49	2.17	2.38	2.07	2.46	1.53	1.62	1.96	2.21	2.04
85	1.27	1.37	1.77	1.55	2.38	2.52	1.84	1.49	1.45	0.97	0.73	0.73	0.76	0.11	0.96
90	1.21	1.30	1.44	1.36	1.36	1.02	0.62	0.99	0.28	0.48	-0.23	0.62	-0.40	0.17	0.33
95	1.33	0.84	0.95	0.52	0.81	0.15	0.83	0.28	-0.02	0.35	-0.25	-0.08	-0.32	0.55	-0.21
100	0.03	0.27	-0.16	0.52	-0.07	0.43	0.10	0.73	-0.39	0.00	0.03	0.78	-0.46	0.23	-0.33
105	0.45	0.81	0.45	0.19	0.88	0.44	0.18	0.01	0.09	-1.03	-0.05	-0.26	0.01	-0.13	-0.64
110	-0.56	-0.11	1.04	0.52	0.22	0.12	0.10	-0.04	-0.07	0.35	0.32	0.02	0.55	0.02	0.19
115	0.31	-0.25	0.43	0.78	-0.13	0.37	-0.40	-0.10	0.16	0.00	0.05	0.06	-0.47	0.05	-0.05
120	-0.13	0.38	0.15	-0.11	-0.01	-0.61	-0.28	-0.70	-0.10	0.18	0.14	0.26	0.07	0.46	0.64
125	0.34	0.03	0.02	-0.09	0.49	0.08	0.83	0.44	0.30	0.13	-0.75	-0.24	0.56	0.41	-0.24
130	0.22	0.79	0.36	0.49	0.05	0.37	0.20	0.26	-0.03	0.93	0.82	0.66	0.50	0.25	0.43

Luminaire

Lamp		Report	20150820-0002
No. of lamps	1	VcFilename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt
Lamp flux (lm)	96	CtOperator	0.051
Total flux (lm)	96	PcDateFactor	1
2015-08-20 오후 12:15:13			

Luminous Intensity Data (Continued)

GWC	300	310	320	330	340	350	360
0	42.55	42.19	42.12	42.18	42.09	42.03	42.63
5	41.98	42.93	42.06	42.45	42.39	42.04	42.26
10	41.49	41.40	40.97	40.96	41.19	41.78	42.07
15	39.60	40.32	39.96	40.87	41.21	40.63	41.01
20	38.33	38.46	38.83	38.36	39.01	38.96	40.03
25	36.46	36.15	36.11	36.05	35.28	35.26	36.74
30	33.47	33.40	32.37	32.52	32.77	32.25	33.43
35	29.89	29.17	28.55	28.93	28.08	27.94	29.49
40	26.18	25.72	24.55	24.57	23.16	24.27	25.25
45	22.09	21.86	21.40	20.38	20.65	20.37	22.01
50	17.90	18.12	17.85	17.80	16.67	16.97	18.19
55	15.57	14.41	14.26	14.94	13.82	13.05	14.65
60	12.15	12.11	11.33	11.15	11.30	10.58	11.74
65	9.47	8.94	8.92	8.50	7.76	7.76	9.32
70	7.25	6.73	6.23	6.10	6.41	6.16	6.60
75	4.05	4.48	4.45	4.46	4.82	5.26	5.30
80	3.15	3.23	2.71	3.47	2.92	3.60	4.28
85	1.01	1.77	1.72	2.49	2.37	1.82	2.68
90	1.19	1.07	1.77	1.86	1.36	1.28	2.09
95	-0.01	0.01	1.10	0.37	0.36	0.77	1.26
100	0.55	-0.05	0.24	0.54	1.15	0.63	1.30
105	0.14	-0.23	0.09	0.92	0.63	0.15	0.91
110	0.03	0.61	0.01	0.50	-0.13	-0.30	-0.01
115	-0.33	0.39	0.17	-0.30	0.62	-0.24	-0.02
120	0.71	-0.13	0.05	0.48	0.18	0.44	0.01
125	0.32	0.23	0.37	-0.13	0.13	0.12	0.15
130	0.24	-0.05	0.18	0.47	-0.34	0.01	0.52

Luminaire

Lamp		Report	20150820-0002
No. of lamps	1	VcFilename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt
Lamp flux (lm)	96	CtOperator	0.051
Total flux (lm)	96	PcDateFactor	1
			2015-08-20 오후 12:15:13

Luminous Flux Table

Total Lamp Lumens: 96.1
 Luminaire Efficiency (lm/W): 96.11
 CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	0.25	0.25	0.26	0.26
5	2.02	2.27	2.37	2.37
10	3.94	6.22	6.47	6.47
15	5.70	11.91	12.40	12.39
20	7.14	19.05	19.82	19.82
25	8.23	27.28	28.39	28.38
30	8.88	36.16	37.63	37.62
35	9.09	45.25	47.08	47.08
40	8.88	54.13	56.33	56.32
45	8.34	62.47	65.00	64.99
50	7.53	70.00	72.84	72.83
55	6.58	76.58	79.69	79.68
60	5.43	82.01	85.34	85.33
65	4.36	86.37	89.87	89.87
70	3.34	89.71	93.36	93.35
75	2.46	92.17	95.91	95.90
80	1.60	93.77	97.58	97.57
85	0.94	94.71	98.56	98.54
90	0.59	95.30	99.17	99.16
95	0.28	95.58	99.46	99.45
100	0.16	95.74	99.63	99.61
105	0.06	95.80	99.69	99.67
110	0.08	95.88	99.77	99.76
115	0.04	95.92	99.81	99.80
120	0.09	96.01	99.90	99.89
125	0.06	96.07	99.96	99.95
130	0.05	96.11	100.01	100.00

Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\WNV1 30K-24V -1.jdt

Lamp flux (lm) 96

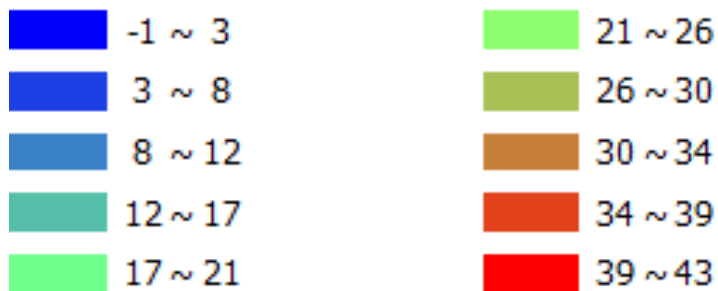
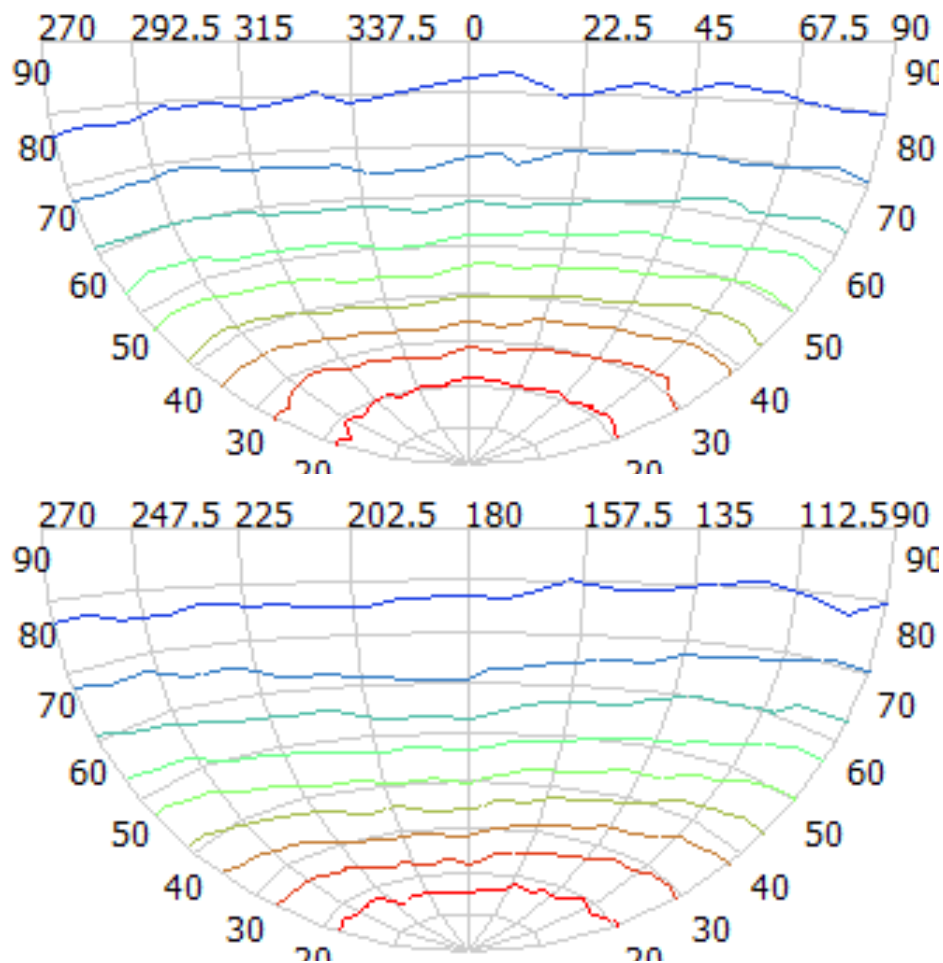
CtOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

IsoCandela (Type C)



Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Lamp flux (lm) 96

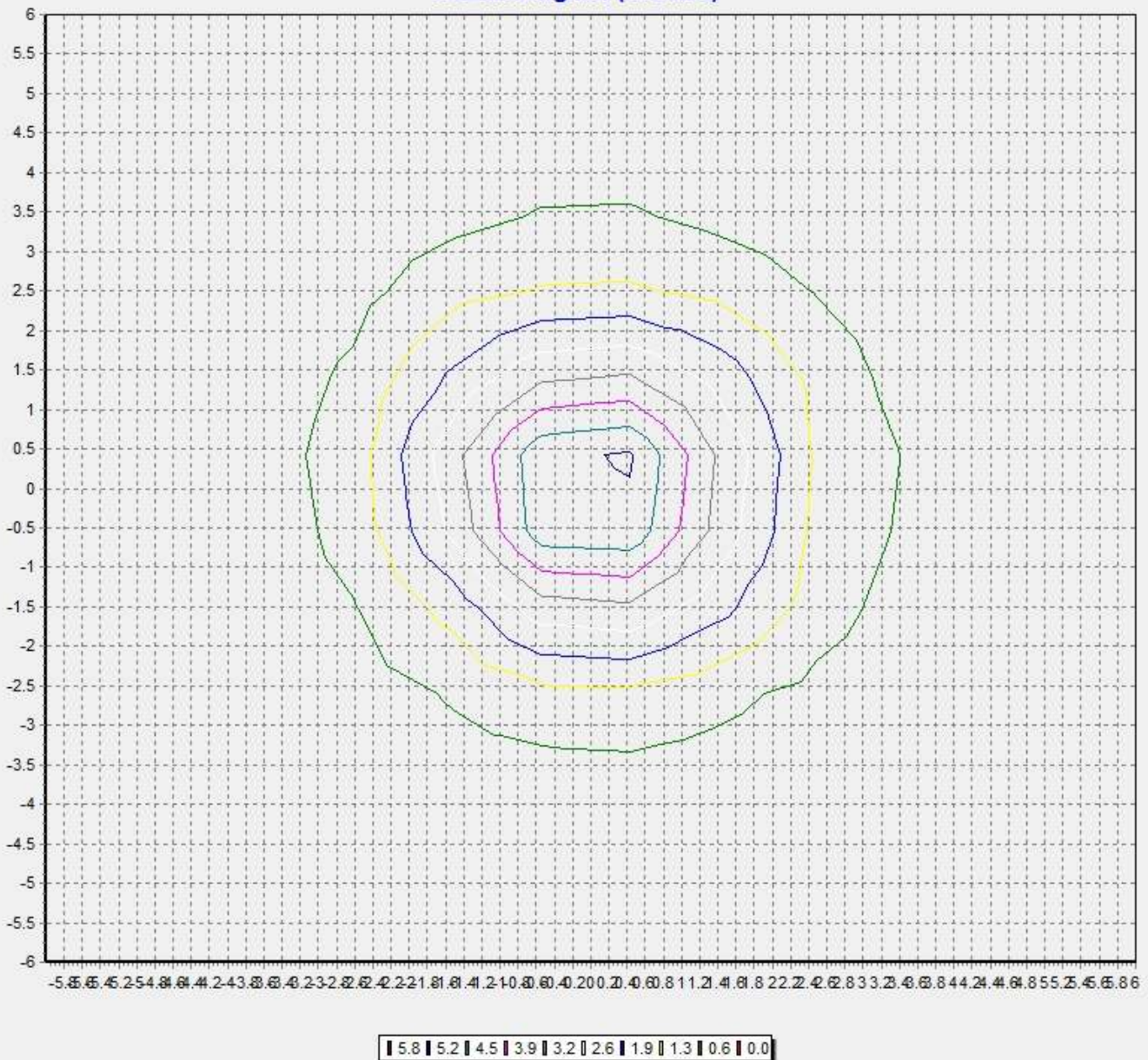
CtOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

IsoLux Diagram (Ground)



Pole Height (m): 2.7

Area Width (m): 12

Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\WNV1 30K-24V -1.jdt

Lamp flux (lm) 96

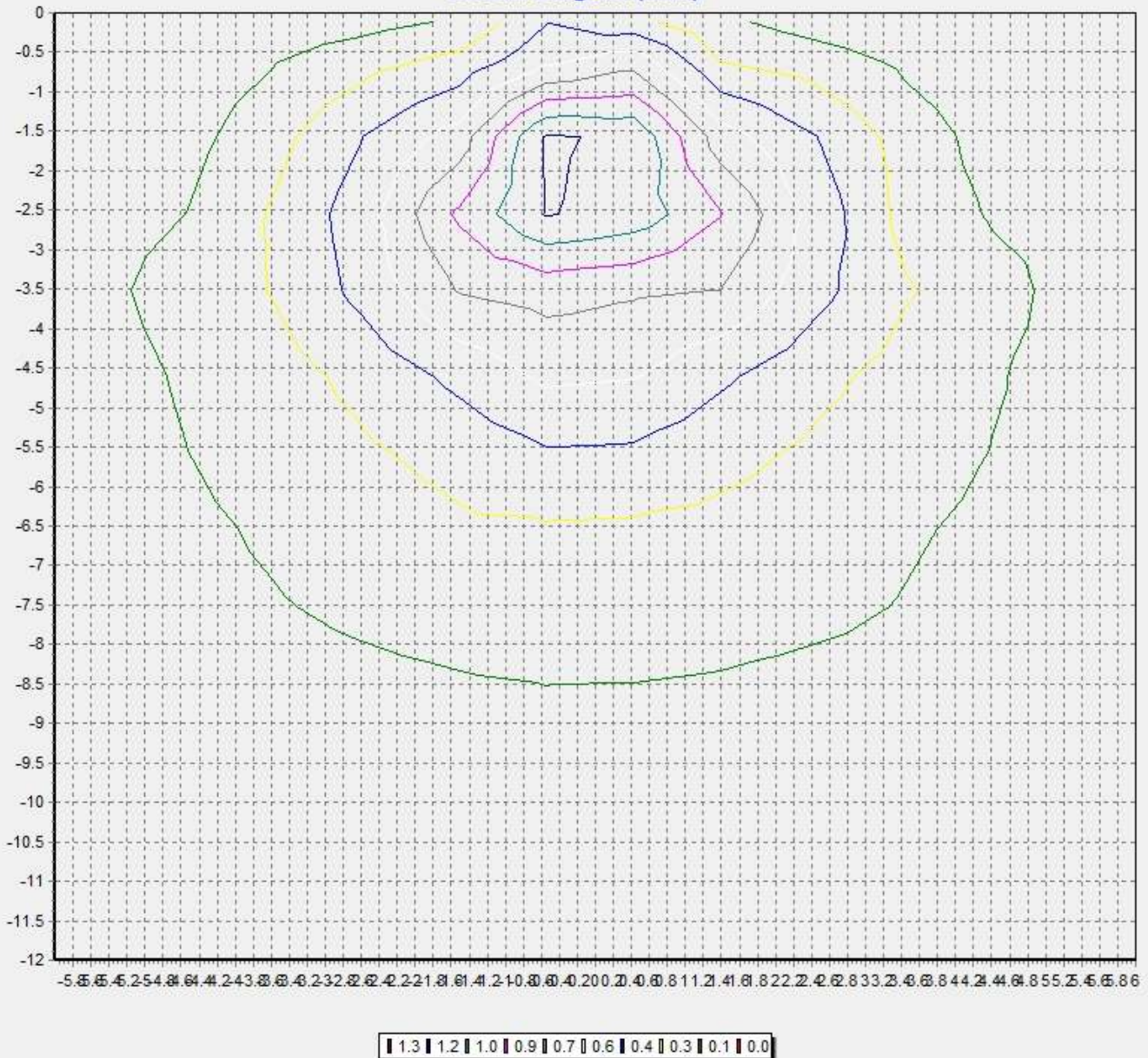
CtOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

IsoLux Diagram (Wall)



Pole Height (m): 2.7

Wall Distance (m): 2.7

Aiming Plane: 0

Wall Height (m): 12

Luminaire

Lamp

No. of lamps	1	Voltage (V)	24
Lamp flux (lm)	96	Current (A)	0.051
Total flux (lm)	96	Power Factor	1

Report

20150820-0002

Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Operator

Date

2015-08-20 오후 12:15:13

Illuminance Levels (Ground)

6.00	0.03	0.04	0.04	0.06	0.10	0.12	0.13	0.12	0.10	0.06	0.05	0.05	0.03
5.00	0.04	0.04	0.09	0.12	0.14	0.23	0.24	0.23	0.14	0.13	0.09	0.05	0.05
4.00	0.04	0.09	0.11	0.21	0.25	0.45	0.50	0.46	0.27	0.23	0.11	0.09	0.05
3.00	0.05	0.10	0.20	0.29	0.51	0.76	0.93	0.79	0.53	0.30	0.22	0.12	0.06
2.00	0.07	0.10	0.22	0.44	1.13	1.73	2.37	1.75	1.14	0.49	0.24	0.11	0.09
1.00	0.09	0.16	0.33	0.63	1.52	3.29	4.51	3.36	1.65	0.71	0.38	0.19	0.10
0.00	0.07	0.14	0.32	0.64	1.96	4.39	5.85	4.63	2.29	0.81	0.42	0.20	0.11
-1.00	0.07	0.13	0.29	0.56	1.39	2.99	4.54	3.32	1.56	0.67	0.35	0.17	0.10
-2.00	0.06	0.09	0.18	0.38	0.96	1.52	2.25	1.66	1.12	0.47	0.23	0.11	0.08
-3.00	0.04	0.08	0.17	0.23	0.42	0.64	0.85	0.73	0.49	0.29	0.20	0.11	0.05
-4.00	0.03	0.07	0.08	0.17	0.21	0.38	0.45	0.41	0.25	0.20	0.10	0.09	0.04
-5.00	0.03	0.03	0.07	0.11	0.12	0.19	0.22	0.20	0.13	0.12	0.09	0.05	0.04
-6.00	0.02	0.03	0.04	0.05	0.08	0.10	0.12	0.11	0.09	0.06	0.04	0.04	0.03
-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.): 5.85

All illuminance level values are in lux.

Illum. (Min.): 0.02

Illum. Avg.: 0.55

Total Optical Solution Provider



<http://www.jnctech.co.kr>
J & C Technology Co., Ltd.

Luminaire

Lamp

Report

20150820-0002

No. of lamps 1

VcFilename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Lamp flux (lm) 96

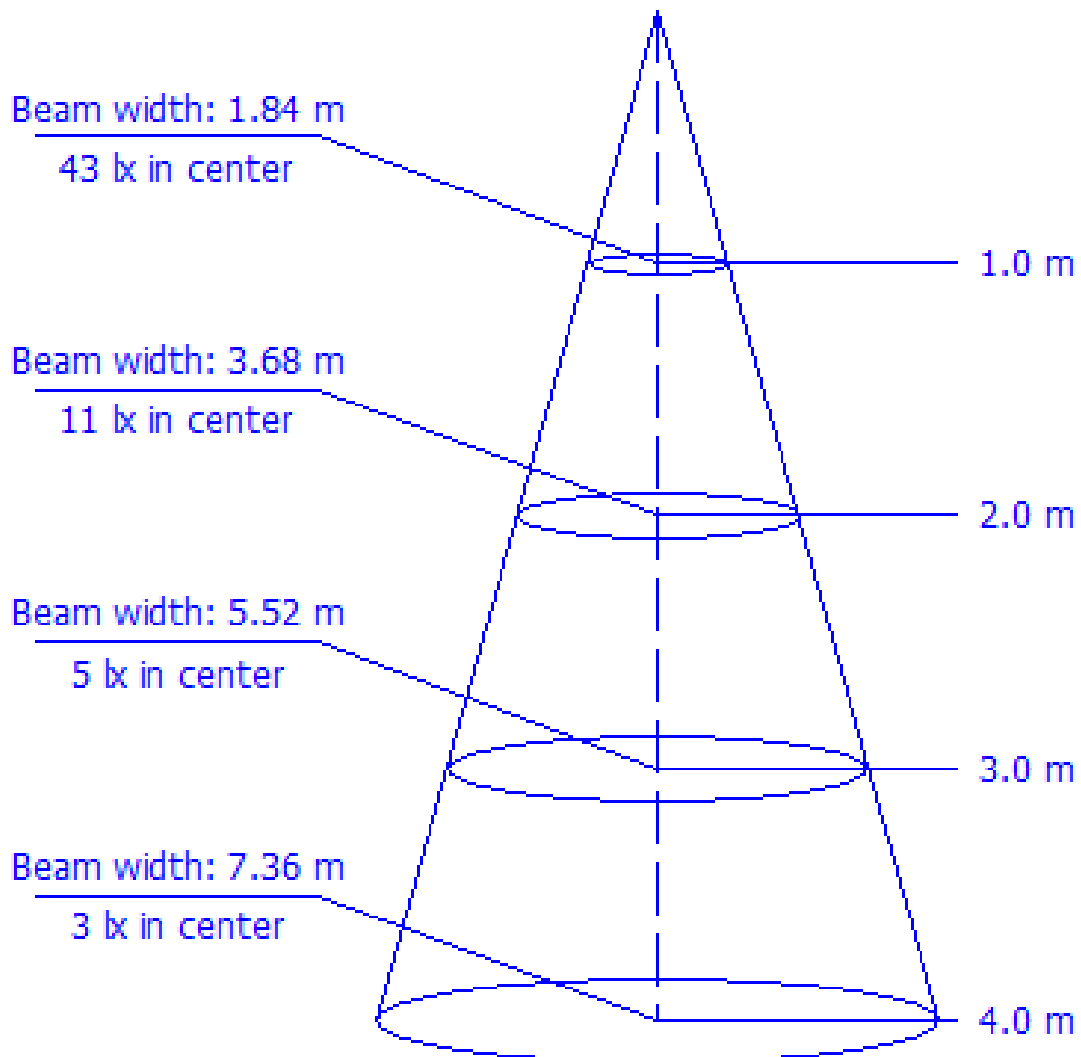
CcOperator 0.051

Total flux (lm) 96

PcDateFactor 1

2015-08-20 오후 12:15:13

Illuminance Cone Diagram



Beam Angle = 85 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp

No. of lamps	1	Voltage (V)	24
Lamp flux (lm)	96	Current (A)	0.051
Total flux (lm)	96	Power Factor	1

Report

20150820-0002

Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\NDV1 30K-24V -1.jdt

Operator

Date

2015-08-20 오후 12:15:13

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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.99
Room CR 1	1.05	1.01	0.97	1.02	0.99	0.95	0.98	0.95	0.92	0.94	0.91	0.89	0.90	0.88	0.86	0.84
Room CR 2	0.92	0.86	0.81	0.90	0.84	0.80	0.87	0.82	0.77	0.83	0.79	0.76	0.80	0.77	0.74	0.72
Room CR 3	0.82	0.74	0.68	0.80	0.73	0.68	0.77	0.71	0.66	0.74	0.69	0.65	0.72	0.67	0.64	0.62
Room CR 4	0.73	0.65	0.59	0.72	0.64	0.58	0.69	0.63	0.57	0.67	0.61	0.56	0.65	0.60	0.56	0.53
Room CR 5	0.66	0.58	0.51	0.65	0.57	0.51	0.63	0.56	0.50	0.61	0.54	0.50	0.59	0.53	0.49	0.47
Room CR 6	0.60	0.51	0.45	0.59	0.51	0.45	0.57	0.50	0.45	0.55	0.49	0.44	0.54	0.48	0.44	0.42
Room CR 7	0.55	0.46	0.40	0.54	0.46	0.40	0.52	0.45	0.40	0.51	0.44	0.40	0.49	0.44	0.39	0.37
Room CR 8	0.50	0.42	0.36	0.49	0.42	0.36	0.48	0.41	0.36	0.47	0.40	0.36	0.45	0.40	0.35	0.34
Room CR 9	0.46	0.38	0.33	0.46	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.42	0.36	0.32	0.30
Room CR 10	0.43	0.35	0.30	0.42	0.35	0.30	0.41	0.34	0.30	0.40	0.34	0.30	0.39	0.34	0.30	0.28