

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 : 20150327

2. Purpose of Report : Test

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

4. Test Period : 20150327 ~ 20150327

5. Test Environment

Ambient Temp. : (23.92 +- 3) °C

Relative Humidity : (20.02 +- 10) % RH

6. Test Result : Refer to the attachment

Test Item

Name of Product :

FEELUX

Model / Rating :

Model : FEELUX

Rating :

Confirmation	Test by kjc	Technical manager kjc
--------------	----------------	--------------------------

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
20150327-0003	FEELUX		LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.4337, 0.4024	
Correlated Color Temperature	K	3058	
Ra	-	83.6	
Power Factor	%	1.000	
Input Voltage	V	24.000	
Input Current	A	0.047	
Input Watt	W	1.12	
Lamp Flux	lm	56.6	
Efficient	lm/W	50.18	
Illuminance	lx	25	1 m
		6	2 m
		3	3 m

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

Sample photo

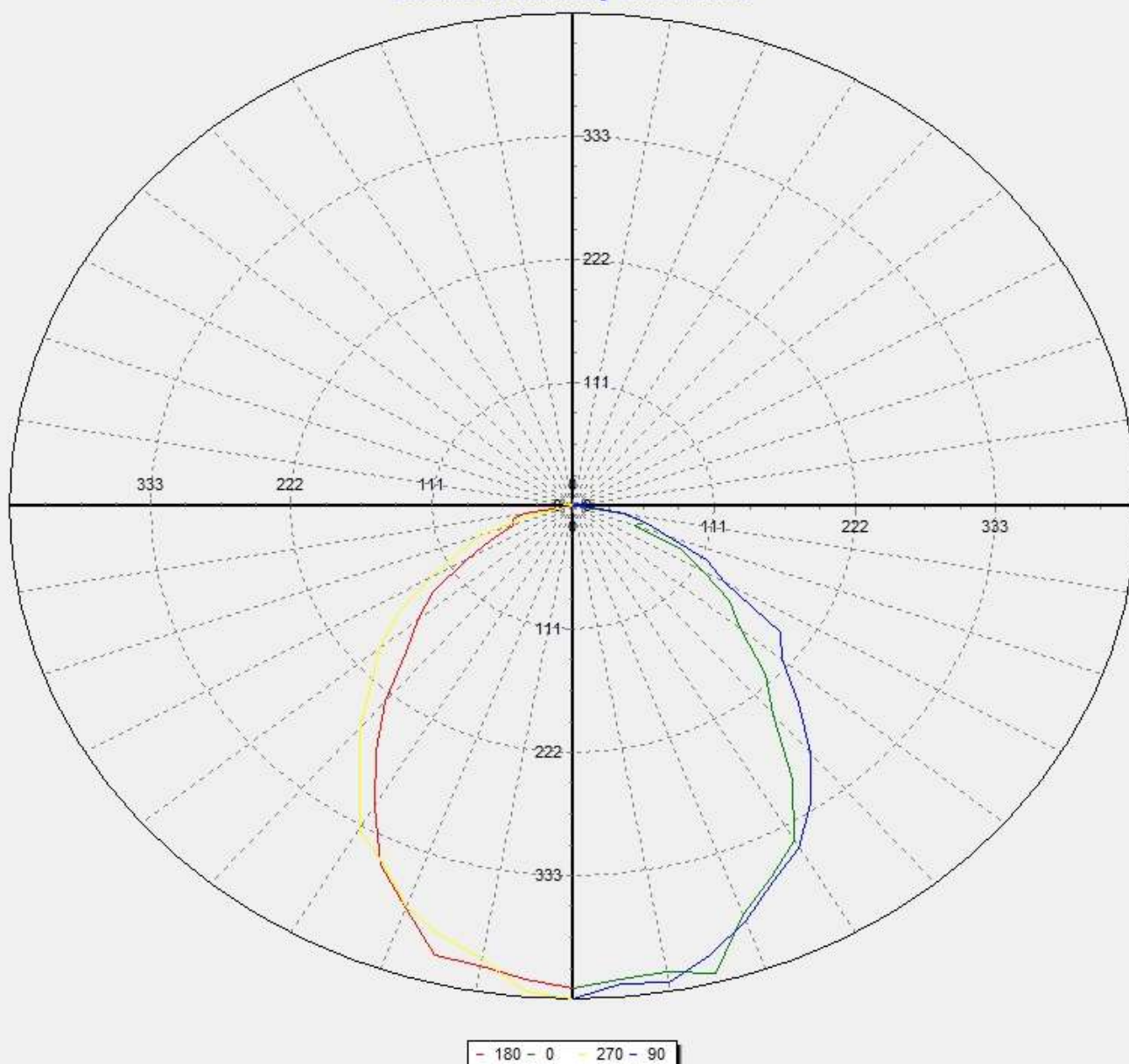
Click to load image

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21

Luminous Intensity Distribution

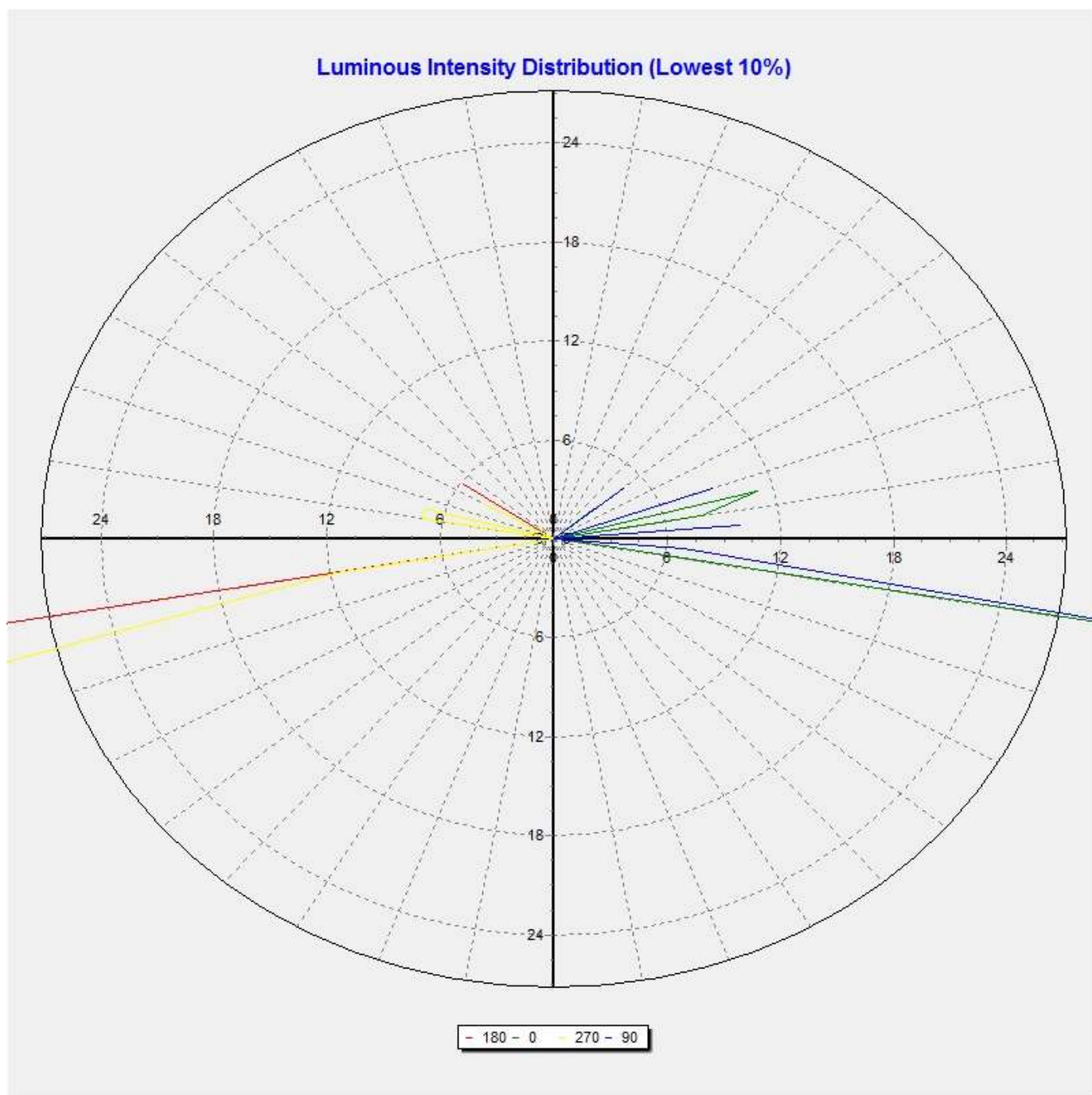


All luminous intensity values are in Cd/KLm unit.

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21



All luminous intensity values are in Cd/KLm unit.

Luminaire

Lamp	Report			20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\Startup\Data\150327\NDV 1W FLEX 3000K -1.jdt			
Lamp flux (lm)	5	Operator	Current (A)	0.047
Total flux (lm)	5	Date	Power Factor	1
				2015-03-27 오후 6:09:21

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
0	24.60	24.26	23.83	24.22	23.89	24.20	24.03	24.32	23.96	25.12	24.91	24.76	24.26	24.53	24.42
5	24.18	24.06	24.52	24.80	23.55	24.85	23.59	24.31	24.23	24.48	24.37	24.24	23.87	23.61	25.08
10	24.11	23.36	24.11	23.82	23.93	23.88	23.91	24.12	24.45	24.67	24.22	23.85	24.20	24.66	23.71
15	24.63	23.03	23.63	23.52	23.50	23.66	23.21	23.32	22.84	23.67	23.07	22.94	23.94	23.53	23.22
20	22.15	22.58	22.59	22.25	22.95	22.53	22.40	21.51	22.09	22.48	22.02	23.09	22.86	22.84	22.35
25	20.90	21.44	22.53	21.51	22.23	21.34	21.31	21.39	21.85	21.11	21.72	20.77	21.86	21.67	20.94
30	19.69	19.04	19.44	20.08	19.98	20.56	20.65	19.50	19.79	20.13	19.82	19.68	20.59	20.28	19.57
35	17.02	17.07	17.05	18.11	18.75	18.43	18.36	18.71	18.21	18.50	18.39	18.15	17.74	17.91	17.74
40	13.88	14.90	15.04	14.87	16.16	16.54	16.51	17.30	17.05	16.47	17.15	16.76	16.51	15.73	14.63
45	12.10	12.55	11.60	12.63	13.29	13.73	14.87	15.32	14.95	14.22	14.86	14.56	13.62	13.54	12.62
50	9.68	9.82	10.44	10.75	10.91	12.08	12.06	12.40	12.57	12.19	12.73	12.26	11.79	10.96	10.95
55	8.47	8.34	8.58	8.89	8.86	10.41	10.35	10.75	11.16	11.27	10.73	10.08	10.41	9.57	8.67
60	6.71	6.56	6.95	7.29	7.71	8.27	7.73	8.99	8.76	7.79	9.07	7.90	8.14	7.64	7.08
65	5.29	5.22	5.31	5.54	6.13	6.06	6.54	6.79	6.90	6.59	6.59	6.40	6.04	5.74	5.77
70	2.92	3.80	4.82	5.12	3.84	4.83	5.03	4.85	5.55	4.32	5.31	4.29	5.04	4.37	3.96
75	3.32	3.11	3.27	3.25	4.63	3.21	3.93	3.62	3.58	3.50	3.15	3.23	3.08	2.62	3.29
80	2.25	2.97	2.34	2.73	2.53	2.63	2.61	1.57	1.75	2.31	2.02	2.11	2.07	2.29	2.32
85	0.05	0.47	1.16	1.09	1.79	0.82	1.61	0.86	0.46	0.39	0.71	1.27	1.25	1.44	1.31
90	-0.10	0.34	-0.28	-0.21	0.37	0.05	0.54	0.56	0.24	-0.37	0.78	0.76	0.67	0.54	0.21
95	-0.07	-0.03	-0.16	-0.32	0.54	-0.12	-0.18	0.37	0.64	0.56	-0.45	-0.16	-0.18	0.33	-0.23
100	0.45	-0.08	0.27	0.01	-0.15	0.30	0.34	0.69	-0.47	-0.28	0.07	-0.58	0.01	0.03	0.37
105	0.63	0.84	0.76	-0.32	-0.29	-0.41	0.37	-0.13	-0.23	-0.03	-0.18	0.15	0.45	0.02	0.43
110	-0.52	0.36	-0.25	0.30	-0.82	0.61	0.29	0.17	0.46	0.51	0.03	-0.04	0.79	0.03	0.10
115	-0.59	0.05	0.18	-0.33	0.18	0.13	0.39	-0.60	-0.09	-0.51	0.22	0.02	0.08	-0.11	0.27
120	-0.22	0.03	0.71	0.26	-0.51	-0.52	-0.16	-0.21	-0.34	-0.46	0.28	-0.11	0.00	0.20	0.18
125	-0.44	0.26	-0.60	0.11	0.29	-0.07	-0.12	0.24	0.57	-0.40	-0.01	-0.36	-0.14	-0.01	0.16
130	0.16	0.35	0.28	0.00	0.01	0.74	-0.25	-0.14	0.38	0.27	0.47	-0.53	-0.06	-0.19	0.10

Luminaire

Lamp	Report			20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt			
Lamp flux (lm)	5	Operator	Current (A)	0.047
Total flux (lm)	5	Date	Power Factor	1
				2015-03-27 오후 6:09:21

Luminous Intensity Data (Continued)

GWC	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	24.74	24.51	24.85	24.60	24.26	23.83	24.22	23.89	24.20	24.03	24.32	23.96	25.12	24.91	24.76
5	24.98	24.14	24.54	24.22	24.62	24.39	23.84	24.74	24.62	24.06	24.37	23.58	24.84	24.38	24.05
10	24.11	24.05	24.16	23.78	23.81	23.91	23.67	22.79	24.16	23.22	23.44	23.27	23.40	23.92	24.05
15	23.55	22.57	24.01	23.68	22.40	22.65	23.61	22.97	23.39	23.01	22.92	23.30	22.68	22.93	23.21
20	21.80	21.83	22.72	21.83	21.69	22.66	22.35	21.30	21.95	22.20	21.65	21.40	21.79	21.66	22.05
25	20.52	20.89	21.00	20.22	19.93	19.76	20.27	20.57	20.26	20.67	20.51	20.19	20.06	20.74	21.31
30	19.24	18.37	18.33	17.69	18.06	17.71	17.65	18.62	18.44	19.35	19.05	19.04	19.00	18.92	19.45
35	17.04	16.35	14.93	15.25	15.94	15.85	15.70	16.87	16.78	16.91	16.64	16.84	16.63	17.45	17.47
40	14.71	14.21	14.11	13.03	12.41	13.19	13.36	13.84	13.90	15.00	15.93	15.09	14.79	14.76	15.51
45	12.42	12.71	11.34	10.51	11.28	10.73	10.98	11.76	12.31	12.55	12.65	13.30	12.71	12.60	13.49
50	9.48	10.17	9.37	8.97	8.53	8.90	9.87	9.55	9.54	10.53	11.30	11.59	11.32	10.93	11.90
55	8.60	7.83	7.84	7.60	7.53	7.42	7.49	7.69	8.49	8.95	8.64	9.08	9.49	9.39	8.70
60	7.24	6.61	5.98	5.46	5.18	5.66	5.84	6.21	6.50	6.47	7.53	7.10	7.37	7.24	7.38
65	5.68	4.68	4.79	4.09	4.15	4.66	4.78	4.20	4.87	4.91	5.42	5.69	5.61	6.58	5.30
70	4.47	3.64	4.02	2.86	3.15	3.44	3.36	3.88	3.26	3.99	3.43	2.76	4.40	3.71	3.84
75	2.94	3.12	2.77	2.81	3.00	2.47	2.41	1.57	2.84	2.86	2.53	2.76	2.14	2.18	2.89
80	2.49	1.92	2.31	2.27	2.01	1.82	1.82	2.10	1.72	1.61	1.49	1.98	0.66	1.11	1.10
85	0.19	0.56	-0.23	-0.22	0.10	-0.24	0.13	0.23	1.16	1.17	0.99	1.04	-0.20	0.06	0.56
90	-0.17	0.08	-0.38	-0.48	0.04	-1.08	-0.07	0.05	0.75	-0.07	0.41	0.47	-0.16	0.78	-0.42
95	-0.18	-0.81	-0.32	-0.09	0.25	0.18	-0.67	-0.29	0.09	-0.15	-0.06	-0.07	-0.08	0.04	-0.77
100	0.58	0.19	0.35	0.07	-0.15	0.30	0.62	-0.40	-0.25	-0.02	-0.57	-0.39	0.40	-0.07	0.00
105	0.03	0.45	-0.03	-0.08	0.17	-0.62	0.28	0.50	-0.50	0.81	0.39	-0.30	0.40	0.31	0.07
110	-0.04	-0.39	0.28	-0.13	0.10	0.14	-0.30	0.24	0.29	-0.39	-0.15	0.66	-0.36	-0.36	0.74
115	-0.44	0.45	-0.25	-0.32	-0.21	0.34	0.06	-0.40	-0.50	-0.13	0.02	0.35	-0.09	-0.75	-0.44
120	-0.32	0.00	0.39	-0.06	0.06	0.25	0.82	0.59	0.31	0.87	0.23	0.20	0.24	-0.51	-0.40
125	0.02	-0.18	0.38	0.33	-0.39	-0.25	0.49	-0.30	0.14	0.55	-0.05	0.37	-0.13	0.61	0.16
130	-0.55	-0.03	-0.31	-0.58	-0.22	-0.66	0.06	-0.17	0.46	0.16	0.28	0.26	-0.03	0.16	0.02

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\Startup\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21

Luminous Intensity Data (Continued)

GWC	300	310	320	330	340	350	360
0	24.26	24.53	24.42	24.74	24.51	24.85	24.60
5	24.08	24.57	24.19	23.92	23.87	23.98	24.18
10	23.11	23.64	23.39	23.97	24.10	24.07	24.11
15	23.40	23.06	23.21	23.00	23.26	22.50	24.63
20	22.21	22.98	22.11	22.15	21.65	21.51	22.15
25	20.33	20.96	20.36	20.86	20.52	20.53	20.90
30	18.80	19.15	19.64	19.24	19.34	19.26	19.69
35	16.39	17.30	17.17	16.53	15.69	16.57	17.02
40	15.08	14.52	14.08	13.95	14.07	13.53	13.88
45	12.90	12.34	12.33	11.79	11.43	11.69	12.10
50	11.02	10.35	10.10	9.70	8.71	9.41	9.68
55	8.89	8.33	7.66	7.64	8.11	7.50	8.47
60	6.66	7.09	6.64	6.54	6.56	5.67	6.71
65	5.15	5.29	5.34	4.52	4.60	5.16	5.29
70	4.63	4.06	4.10	3.84	3.78	3.76	2.92
75	2.35	2.26	3.65	2.41	3.15	3.41	3.32
80	2.14	2.06	2.25	1.87	2.66	1.88	2.25
85	1.56	0.67	0.68	0.61	0.16	0.37	0.05
90	0.08	0.08	1.19	-0.02	0.08	-0.22	-0.10
95	-0.02	-0.21	-0.07	0.21	0.53	-0.19	-0.07
100	-0.30	-0.38	-0.10	0.11	0.57	-0.25	0.45
105	-0.50	0.12	0.18	-0.20	0.39	-0.12	0.63
110	0.52	0.50	-0.62	-0.53	-0.10	0.02	-0.52
115	0.89	-0.19	0.88	0.01	0.02	0.65	-0.59
120	0.12	0.03	0.08	0.65	0.75	0.44	-0.22
125	0.47	-0.03	0.70	0.51	-0.28	0.23	-0.44
130	-0.39	0.39	0.20	0.80	0.64	0.28	0.16

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\Startup\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5Operator	Current (A) 0.047
Total flux (lm)	5Date	Power Factor 1
		2015-03-27 오후 6:09:21

Luminous Flux Table

Total Lamp Lumens: 56.6
 Luminaire Efficiency (lm/W): 56.63
 CIE Classification: Direct

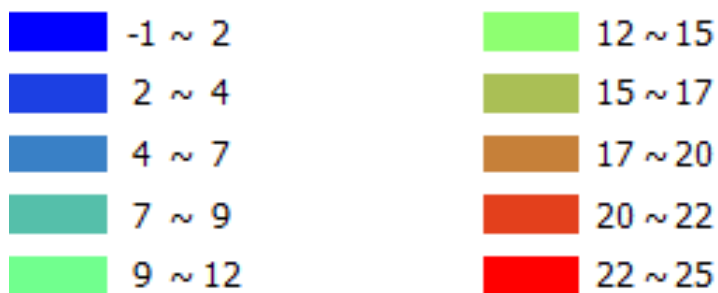
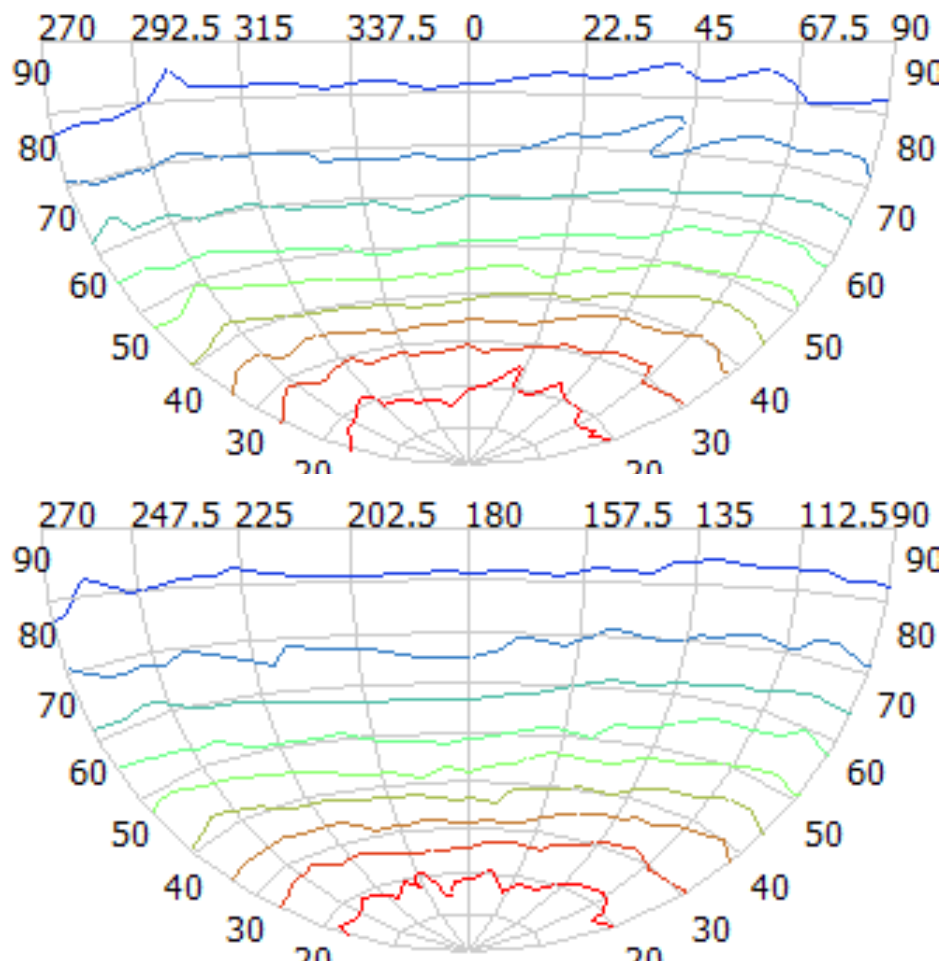
Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	0.15	0.15	0.26	0.26
5	1.16	1.31	2.31	2.31
10	2.27	3.58	6.32	6.32
15	3.30	6.88	12.15	12.14
20	4.16	11.03	19.49	19.48
25	4.85	15.88	28.05	28.04
30	5.28	21.15	37.38	37.36
35	5.38	26.54	46.89	46.86
40	5.27	31.81	56.20	56.17
45	4.93	36.74	64.92	64.88
50	4.47	41.21	72.81	72.77
55	3.98	45.19	79.84	79.80
60	3.34	48.54	85.75	85.71
65	2.71	51.24	90.54	90.49
70	2.10	53.34	94.24	94.19
75	1.58	54.92	97.03	96.98
80	1.11	56.02	98.98	98.93
85	0.36	56.39	99.63	99.58
90	0.08	56.47	99.76	99.71
95	-0.03	56.43	99.71	99.65
100	0.02	56.45	99.74	99.69
105	0.06	56.51	99.84	99.79
110	0.03	56.54	99.89	99.84
115	-0.01	56.53	99.87	99.82
120	0.05	56.58	99.96	99.91
125	0.04	56.62	100.03	99.98
130	0.01	56.63	100.05	100.00

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\Startup\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21

IsoCandela (Type C)

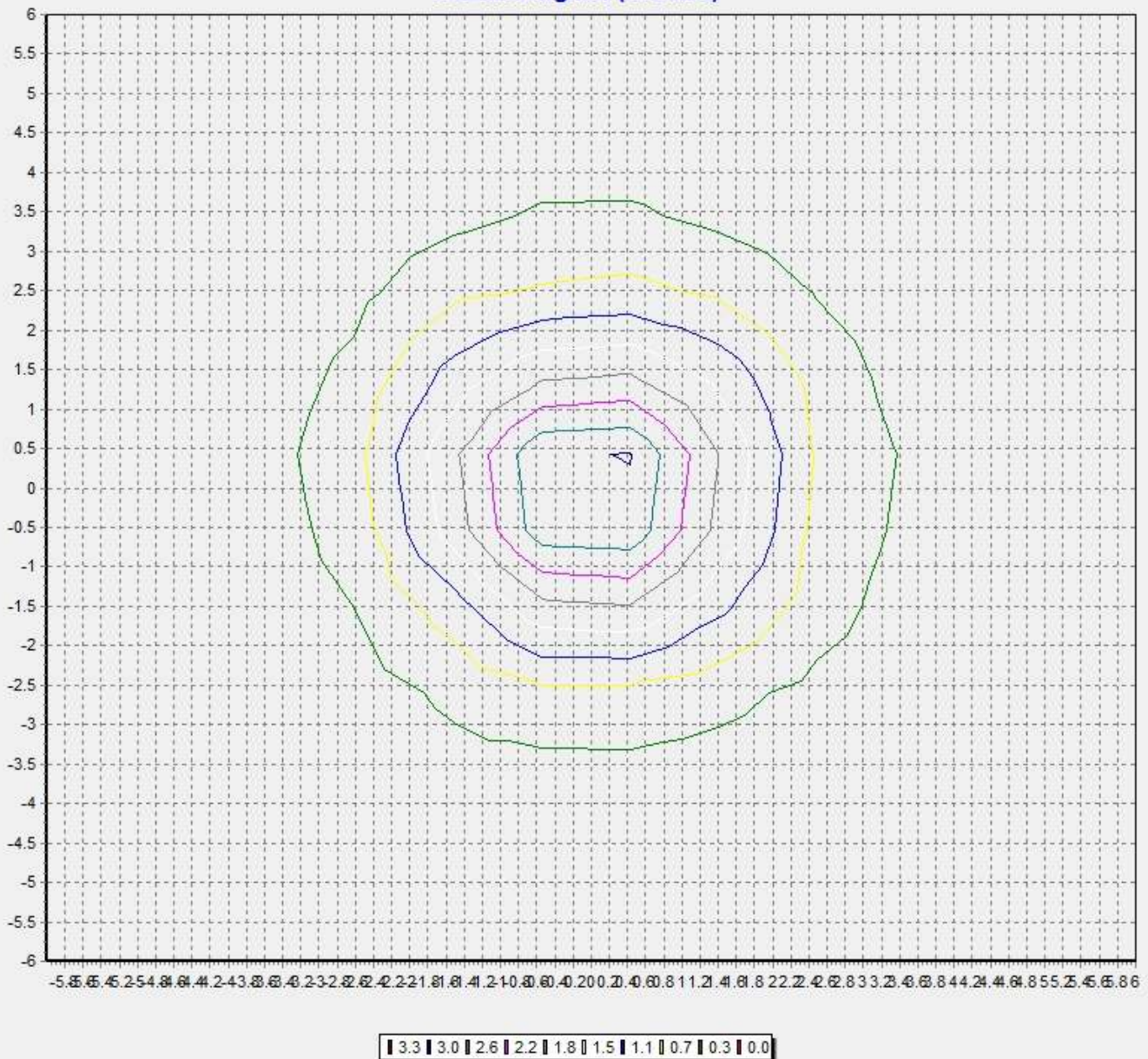


Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21

IsoLux Diagram (Ground)



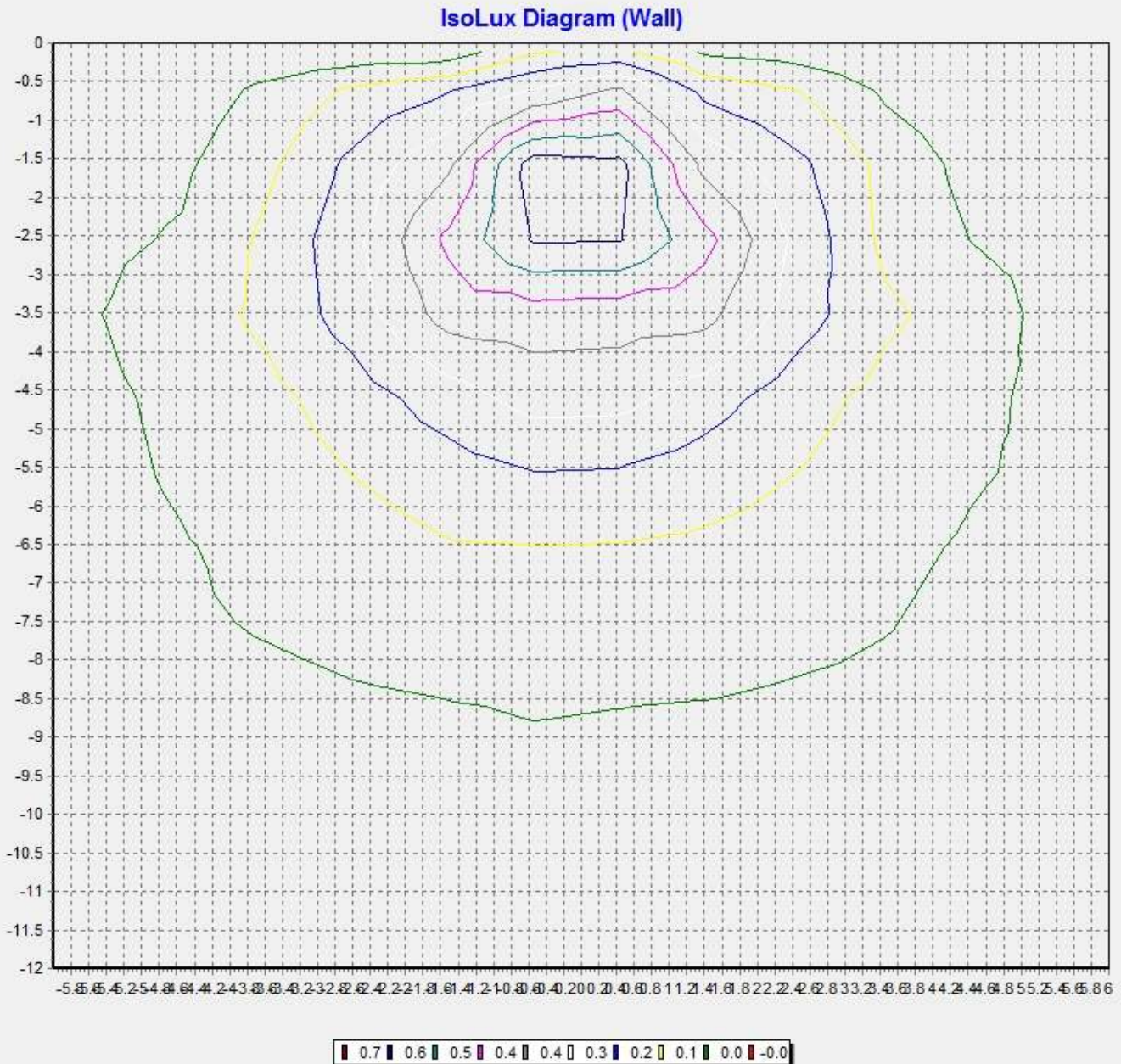
Pole Height (m): 2.7

Area Width (m): 12

Luminaire

Lamp	Report	20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\Startup\Data\150327\NDV 1W FLEX 3000K -1.jdt	
Lamp flux (lm)	5 Operator	Current (A) 0.047
Total flux (lm)	5 Date	Power Factor 1

2015-03-27 오후 6:09:21



Pole Height (m): 2.7 Wall Distance (m): 2.7
Aiming Plane: 0 Wall Height (m): 12

Luminaire

Lamp

Report

20150327-0003

No. of lamps	1	Voltage (V)	24	Filename	C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt
Lamp flux (lm)	57	Current (A)	0.047	Operator	
Total flux (lm)	57	Power Factor	1	Date	2015-03-27 오후 6:09:21

Illuminance Levels (Ground)

6.00	0.02	0.03	0.03	0.04	0.06	0.08	0.07	0.08	0.06	0.04	0.03	0.03	0.02
5.00	0.03	0.03	0.06	0.08	0.09	0.14	0.15	0.14	0.09	0.08	0.06	0.03	0.03
4.00	0.03	0.05	0.07	0.13	0.16	0.27	0.29	0.27	0.16	0.13	0.07	0.06	0.03
3.00	0.03	0.07	0.13	0.19	0.32	0.47	0.53	0.47	0.32	0.17	0.12	0.07	0.04
2.00	0.05	0.07	0.14	0.27	0.70	1.05	1.40	1.04	0.67	0.28	0.14	0.07	0.05
1.00	0.06	0.10	0.20	0.37	0.93	2.01	2.67	1.99	0.95	0.39	0.21	0.11	0.06
0.00	0.05	0.10	0.21	0.39	1.21	2.67	3.37	2.77	1.34	0.44	0.23	0.12	0.06
-1.00	0.05	0.09	0.19	0.34	0.84	1.83	2.56	1.88	0.89	0.37	0.19	0.10	0.06
-2.00	0.04	0.06	0.12	0.24	0.59	0.91	1.30	0.96	0.64	0.25	0.13	0.06	0.05
-3.00	0.03	0.06	0.10	0.14	0.27	0.41	0.49	0.45	0.29	0.16	0.11	0.07	0.03
-4.00	0.02	0.04	0.05	0.11	0.13	0.24	0.26	0.24	0.14	0.12	0.06	0.05	0.02
-5.00	0.02	0.02	0.04	0.07	0.07	0.12	0.13	0.12	0.08	0.07	0.05	0.03	0.02
-6.00	0.02	0.02	0.02	0.03	0.05	0.06	0.07	0.06	0.06	0.03	0.03	0.02	0.02
-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.): 3.37

All illuminance level values are in lux.

Illum. (Min.): 0.02

Illum. Avg.: 0.33

Total Optical Solution Provider



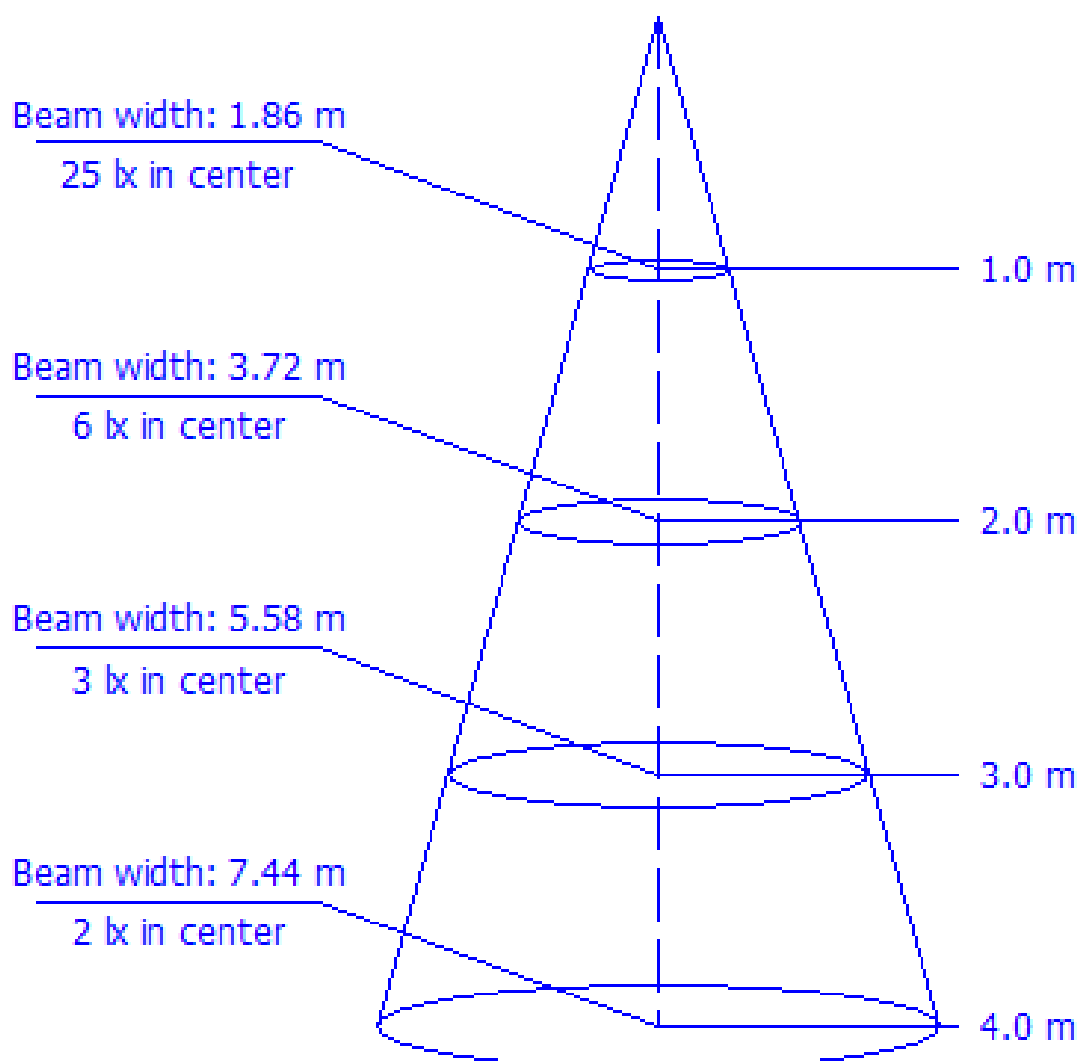
<http://www.jnctech.co.kr>
J & C Technology Co., Ltd.

Luminaire

Lamp	Report				20150327-0003
No. of lamps	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt				
Lamp flux (lm)	5	Operator	Current (A)	0.047	
Total flux (lm)	5	Date	Power Factor	1	2015-03-27 오후 6:09:21

2015-03-27 오후 6:09:21

Illuminance Cone Diagram



Beam Angle = 86 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp

Report

20150327-0003

No. of lamps	1	Voltage (V)	24	Filename	C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150327\NDV 1W FLEX 3000K -1.jdt
Lamp flux (lm)	57	Current (A)	0.047	Operator	
Total flux (lm)	57	Power Factor	1	Date	2015-03-27 오후 6:09:21

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	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.05	1.05	1.05	1.01	1.01	1.01	0.99
Room CR 1	1.04	1.00	0.97	1.02	0.98	0.95	0.98	0.95	0.92	0.94	0.92	0.90	0.90	0.89	0.87	0.85
Room CR 2	0.91	0.85	0.80	0.90	0.84	0.79	0.86	0.82	0.78	0.83	0.79	0.76	0.80	0.77	0.74	0.72
Room CR 3	0.81	0.74	0.68	0.80	0.73	0.67	0.77	0.71	0.66	0.74	0.69	0.65	0.72	0.68	0.64	0.62
Room CR 4	0.73	0.64	0.58	0.71	0.64	0.58	0.69	0.62	0.57	0.67	0.61	0.56	0.65	0.60	0.56	0.54
Room CR 5	0.65	0.57	0.51	0.64	0.56	0.51	0.62	0.55	0.50	0.60	0.54	0.50	0.59	0.53	0.49	0.47
Room CR 6	0.59	0.51	0.45	0.58	0.50	0.45	0.57	0.50	0.44	0.55	0.49	0.44	0.54	0.48	0.44	0.42
Room CR 7	0.54	0.46	0.40	0.53	0.45	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.49	0.44	0.39	0.37
Room CR 8	0.50	0.42	0.36	0.49	0.41	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	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.42	0.36	0.32	0.31
Room CR 10	0.42	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