

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 / NDV11 30K-24V -1 DJ1507 VER1.0

4. Test Period : 20150820 ~ 20150820

5. Test Environment

Ambient Temp. : (25.95 +- 3) °C

Relative Humidity : (74.93 +- 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
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The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

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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
20150820-0009			LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.4323, 0.3987	
Correlated Color Temperature	K	3052	
Ra	-	83.6	
Power Factor	%	1.000	
Input Voltage	V	23.950	
Input Current	A	0.463	
Input Watt	W	11.1	
Lamp Flux	lm	892.3	
Efficient	lm/W	80.47	
Illuminance	lx	377	1 m
		94	2 m
		42	3 m

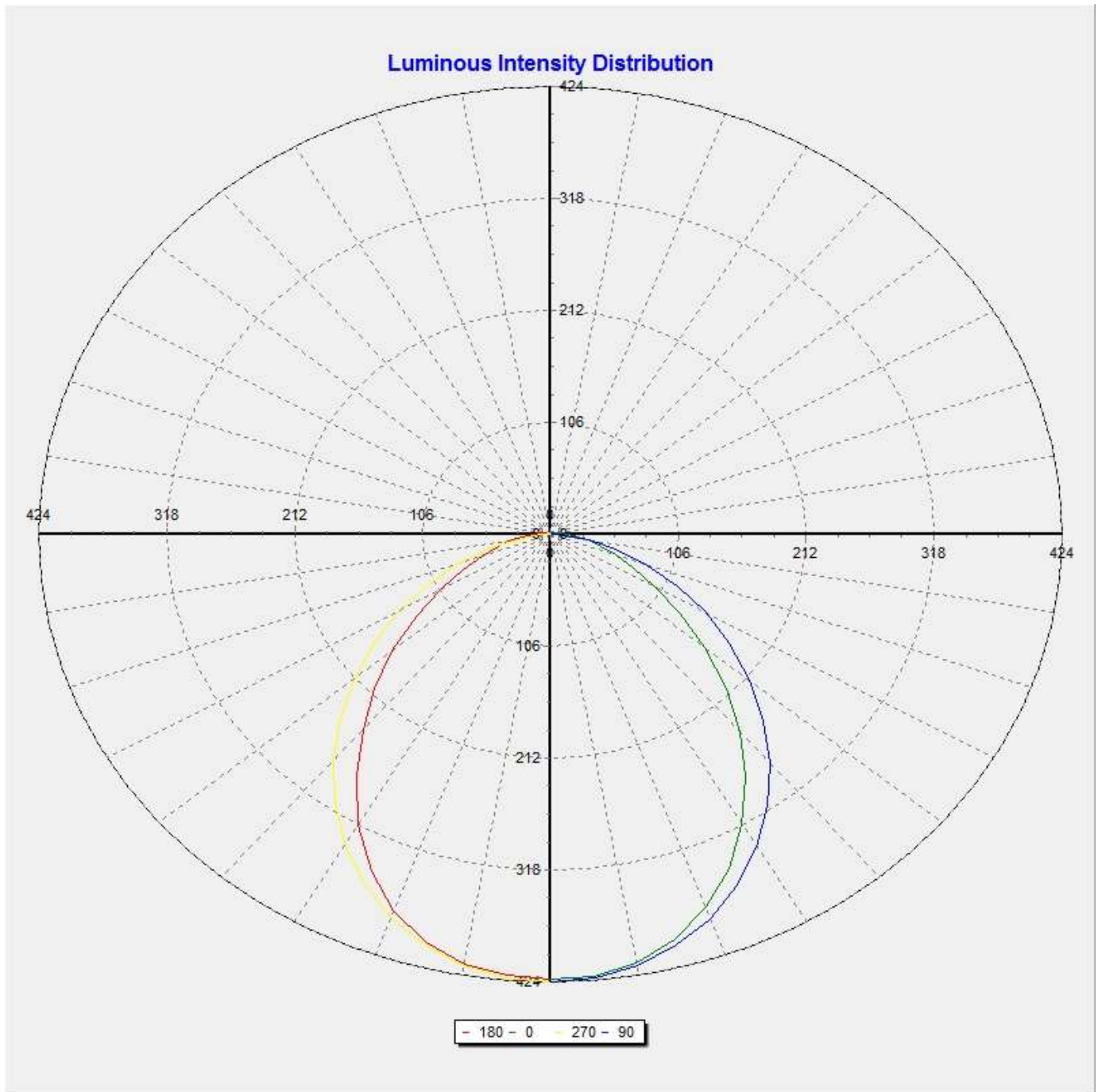
* This test result is for the sample provided by the client.

Sample photo

Click to load image

Luminaire

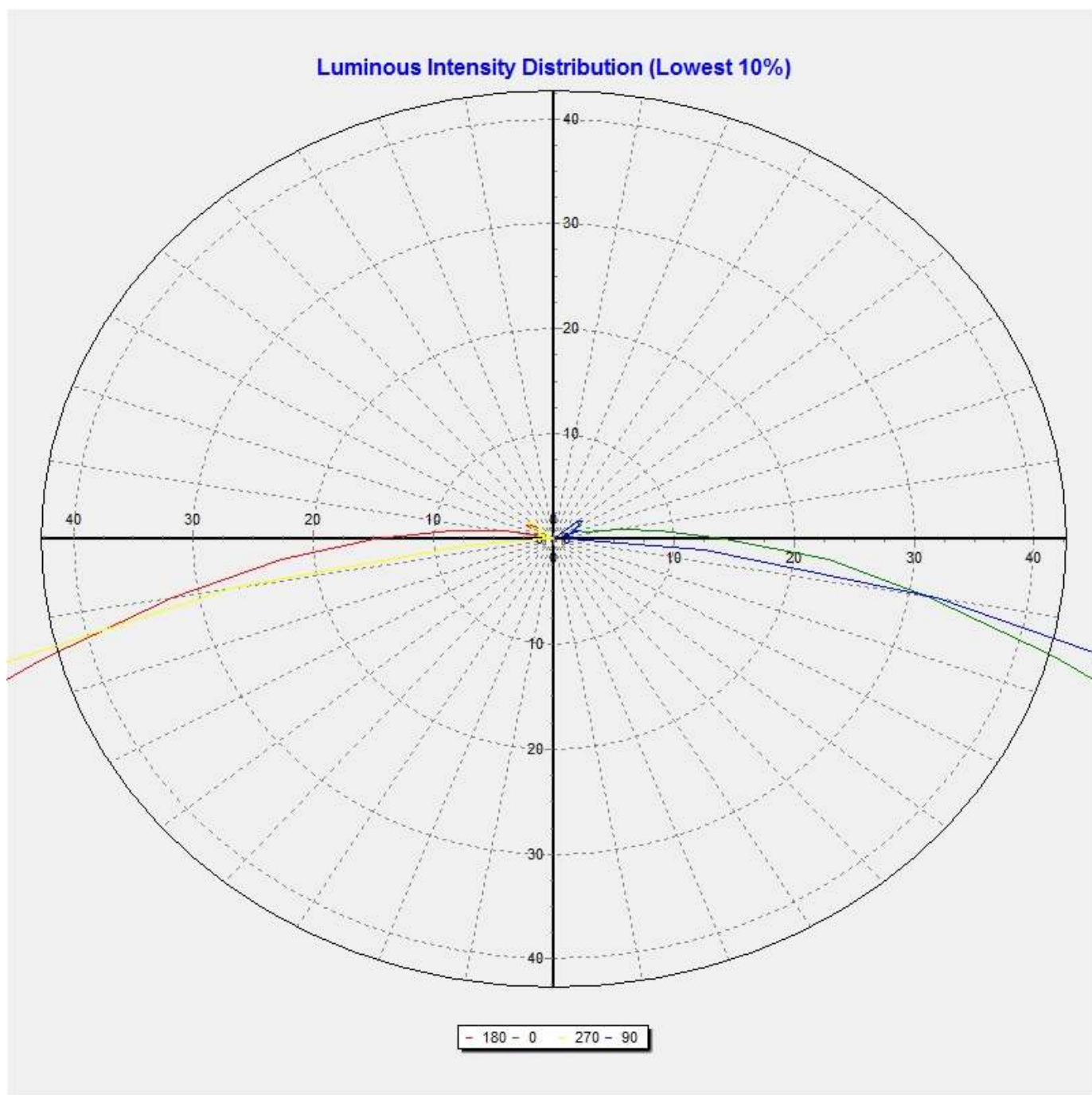
Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21



All luminous intensity values are in Cd/Klm unit.

Luminaire

Lamp	Report	20150820-0009		
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
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Luminaire

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Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120
0	376.67	377.11	376.76	375.82	376.78	377.01	377.66	378.43	378.86	378.53	378.76	379.84	380.74
5	374.86	374.39	375.19	374.40	375.47	375.62	375.67	375.84	376.34	376.89	377.81	378.44	377.73
10	367.89	367.50	367.24	367.60	367.93	368.45	368.88	369.28	370.56	370.69	371.02	371.32	372.11
15	355.02	354.46	355.25	355.14	356.81	357.14	358.33	358.50	359.72	359.66	360.58	360.45	362.31
20	335.48	335.39	335.94	337.19	338.96	341.28	343.03	343.98	345.18	345.79	346.60	346.60	348.86
25	311.99	310.87	313.53	313.66	317.41	320.23	322.45	324.08	326.99	327.62	328.38	328.52	329.90
30	283.21	281.49	284.24	285.64	290.84	294.03	299.33	301.47	304.15	305.24	306.54	306.07	307.96
35	251.19	250.91	252.62	254.89	261.09	265.32	272.32	276.12	279.74	280.24	281.92	282.39	280.84
40	218.64	218.40	220.96	223.55	229.35	234.30	242.17	246.95	252.04	253.28	254.38	253.37	250.78
45	184.39	183.58	188.33	191.75	197.81	202.31	210.14	215.81	221.79	223.21	225.10	221.88	218.25
50	148.31	148.40	153.04	158.20	165.24	170.48	178.10	184.89	191.29	192.99	194.11	189.97	185.80
55	117.17	116.02	120.44	125.71	134.10	140.43	147.30	153.72	161.13	161.36	162.81	158.40	153.21
60	89.24	89.28	93.51	97.41	104.30	111.66	118.46	123.39	130.13	132.43	133.04	127.32	124.20
65	68.40	68.59	71.55	75.09	80.47	85.09	92.70	95.31	101.73	103.60	103.95	100.03	97.71
70	51.68	51.43	53.58	55.59	59.13	63.52	69.33	71.05	74.62	76.62	76.62	74.78	73.23
75	38.42	38.62	39.96	40.82	43.07	45.28	48.10	49.13	50.81	50.60	52.87	51.14	51.40
80	28.18	28.76	28.70	28.93	30.50	30.34	30.42	30.18	28.83	28.87	30.55	31.37	33.39
85	20.46	20.31	20.20	19.42	19.49	17.84	17.70	14.34	12.08	11.19	12.28	15.53	18.75
90	12.73	13.10	13.05	12.47	11.24	9.39	8.34	4.95	2.42	1.12	2.45	5.46	9.03
95	7.93	8.52	7.47	7.30	6.32	4.80	3.02	1.66	0.26	1.32	1.06	1.54	4.14
100	4.92	4.44	4.64	3.64	2.89	2.06	1.29	1.20	1.08	1.06	0.59	1.51	1.02
105	2.31	2.08	2.01	1.94	1.41	1.22	1.03	1.41	1.46	0.71	1.33	1.42	1.26
110	2.00	2.11	1.07	1.32	1.12	1.22	2.03	1.74	1.51	2.02	0.73	1.69	1.65
115	1.56	1.63	1.43	1.33	1.54	2.01	1.94	2.03	2.16	1.42	1.96	1.82	1.92
120	2.37	2.04	1.78	1.46	1.77	1.71	2.22	1.88	2.01	1.72	2.66	1.88	1.48
125	2.18	2.05	2.35	1.38	2.60	1.88	2.13	1.76	2.18	2.57	2.92	2.13	2.13
130	2.36	3.18	2.44	2.15	2.11	2.53	1.72	1.66	2.18	2.27	2.72	2.24	1.85

Luminaire

Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

Luminous Intensity Data (Continued)

GWC	130	140	150	160	170	180	190	200	210	220	230	240	250
0	380.56	380.28	380.21	380.75	380.46	376.67	377.11	376.76	375.82	376.78	377.01	377.66	378.43
5	378.12	379.17	378.81	379.22	379.53	374.58	374.01	374.60	374.63	374.42	375.35	375.94	376.06
10	372.00	373.52	373.83	374.86	374.79	368.75	368.99	368.55	368.90	369.29	370.09	369.05	369.37
15	362.55	363.65	364.10	364.85	365.72	356.77	357.77	357.53	357.91	358.38	359.56	359.14	358.94
20	348.42	349.32	349.03	350.13	349.06	339.11	339.61	341.22	341.55	343.33	344.46	344.56	344.47
25	328.88	329.76	327.82	327.77	326.22	313.93	315.74	317.49	319.48	322.29	324.82	325.28	326.54
30	305.15	303.88	301.66	299.99	298.29	284.11	286.33	287.59	292.06	295.24	299.71	302.18	303.45
35	277.50	273.83	269.90	268.03	264.60	250.06	252.76	254.66	261.03	264.54	270.43	274.32	277.64
40	245.48	241.38	235.60	232.76	230.37	215.71	218.44	220.01	226.23	231.32	238.52	243.34	247.61
45	211.94	207.03	201.06	198.81	196.34	183.70	186.15	187.27	192.25	196.86	204.70	210.62	217.50
50	178.29	175.08	169.04	167.80	164.72	152.53	154.80	156.84	161.41	164.31	172.11	178.16	184.45
55	147.49	143.99	139.75	136.99	133.42	121.10	124.07	126.13	131.90	135.28	140.83	145.55	152.65
60	120.18	116.38	110.18	107.43	103.33	93.22	95.97	97.66	103.35	108.16	113.99	116.12	122.71
65	93.19	90.20	85.16	81.87	78.75	70.80	72.47	74.51	78.76	83.03	88.14	90.65	93.77
70	69.94	67.08	64.02	61.59	59.78	53.36	54.88	55.66	58.84	60.74	65.18	67.12	68.94
75	49.24	49.13	46.77	46.16	44.38	39.33	40.34	40.62	42.52	43.66	45.53	45.55	46.36
80	33.76	34.00	33.41	33.40	32.33	28.73	28.70	29.61	29.53	29.98	29.74	28.00	26.69
85	20.64	21.67	22.42	23.07	22.71	20.28	20.08	19.86	19.79	18.85	17.31	15.55	10.73
90	10.96	12.76	14.13	15.27	15.27	13.33	13.21	12.73	12.26	10.41	8.90	6.18	3.71
95	4.92	7.15	7.87	8.81	9.41	7.61	7.76	7.02	6.40	4.88	4.03	1.55	0.48
100	1.88	3.14	3.98	4.61	4.63	3.76	3.51	3.72	2.65	2.53	1.00	1.56	1.18
105	2.02	1.55	1.42	2.27	2.55	1.52	1.96	1.78	1.37	1.30	1.41	0.35	1.67
110	1.01	1.33	1.60	1.38	0.95	1.01	1.58	1.84	1.76	1.16	0.75	1.76	1.79
115	1.32	0.92	1.86	1.29	1.49	1.46	2.11	2.17	1.65	1.63	1.59	1.69	1.26
120	1.64	1.68	1.58	1.66	1.66	2.36	1.47	1.84	1.86	1.46	1.03	1.80	1.76
125	2.18	2.10	2.01	1.55	2.46	2.05	2.35	1.90	1.69	1.91	1.91	2.18	2.18
130	2.62	2.96	2.09	2.13	2.48	1.49	2.94	2.10	2.24	2.02	2.20	2.61	2.20

Luminaire

Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

Luminous Intensity Data (Continued)

GWC	260	270	280	290	300	310	320	330	340	350	360
0	378.86	378.53	378.76	379.84	380.74	380.56	380.28	380.21	380.75	380.46	376.67
5	376.46	376.48	377.51	378.03	377.36	377.86	376.96	377.61	377.99	377.29	374.86
10	369.93	370.59	370.66	371.41	369.60	369.44	369.17	369.02	368.79	368.03	367.89
15	358.53	360.21	359.19	360.37	357.77	357.59	355.48	355.40	354.04	353.75	355.02
20	343.97	345.15	344.63	343.84	342.75	340.96	337.71	336.14	333.69	332.71	335.48
25	324.83	325.89	325.33	323.67	321.24	318.97	313.99	311.54	307.69	307.50	311.99
30	302.83	303.69	302.59	300.20	296.24	292.71	286.69	283.04	277.91	276.95	283.21
35	277.39	277.96	275.99	273.90	267.91	262.46	255.39	251.02	246.32	244.02	251.19
40	248.87	249.22	247.06	243.72	237.19	230.42	222.72	218.22	213.25	212.03	218.64
45	218.70	220.19	216.90	212.14	204.16	197.86	189.31	185.28	178.60	176.57	184.39
50	187.62	188.42	185.01	180.04	171.98	165.97	157.29	151.47	143.38	140.98	148.31
55	156.53	157.21	153.99	148.21	140.87	135.77	126.02	119.34	112.95	108.87	117.17
60	125.64	127.80	123.37	118.77	112.60	106.32	98.10	91.86	86.55	84.07	89.24
65	96.08	98.41	94.56	91.33	85.96	80.87	74.39	68.96	65.13	64.02	68.40
70	68.72	71.50	68.45	66.31	62.15	59.12	54.43	52.34	49.24	47.80	51.68
75	45.93	46.49	44.01	43.99	42.85	41.16	38.67	37.75	36.66	35.87	38.42
80	24.21	24.36	24.30	25.94	26.54	26.71	26.90	26.61	25.80	25.63	28.18
85	8.82	6.62	8.50	12.01	13.74	16.32	16.68	17.66	17.23	18.29	20.46
90	1.05	0.99	1.06	4.04	6.64	7.98	9.13	10.77	11.59	12.31	12.73
95	0.86	-0.01	1.13	1.05	2.20	3.79	5.14	6.61	7.10	6.93	7.93
100	0.49	1.24	1.19	1.21	0.74	1.69	2.48	2.41	2.90	4.36	4.92
105	1.47	1.17	1.46	1.04	1.14	0.63	1.13	1.76	1.57	1.76	2.31
110	0.65	0.74	1.34	1.41	1.84	2.11	1.26	1.84	0.50	1.22	2.00
115	1.59	1.82	1.46	2.33	1.03	1.88	1.39	1.50	1.26	1.51	1.56
120	1.73	1.83	1.87	1.48	2.41	1.36	1.91	1.35	0.77	1.31	2.37
125	2.24	2.39	2.10	2.70	1.32	1.99	1.34	2.07	1.68	2.34	2.18
130	2.46	1.99	1.51	1.79	2.34	2.52	1.83	2.46	1.88	2.06	2.36

Luminaire

Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

Luminous Flux Table

Total Lamp Lumens: 892

Luminaire Efficiency (lm/W):892.32

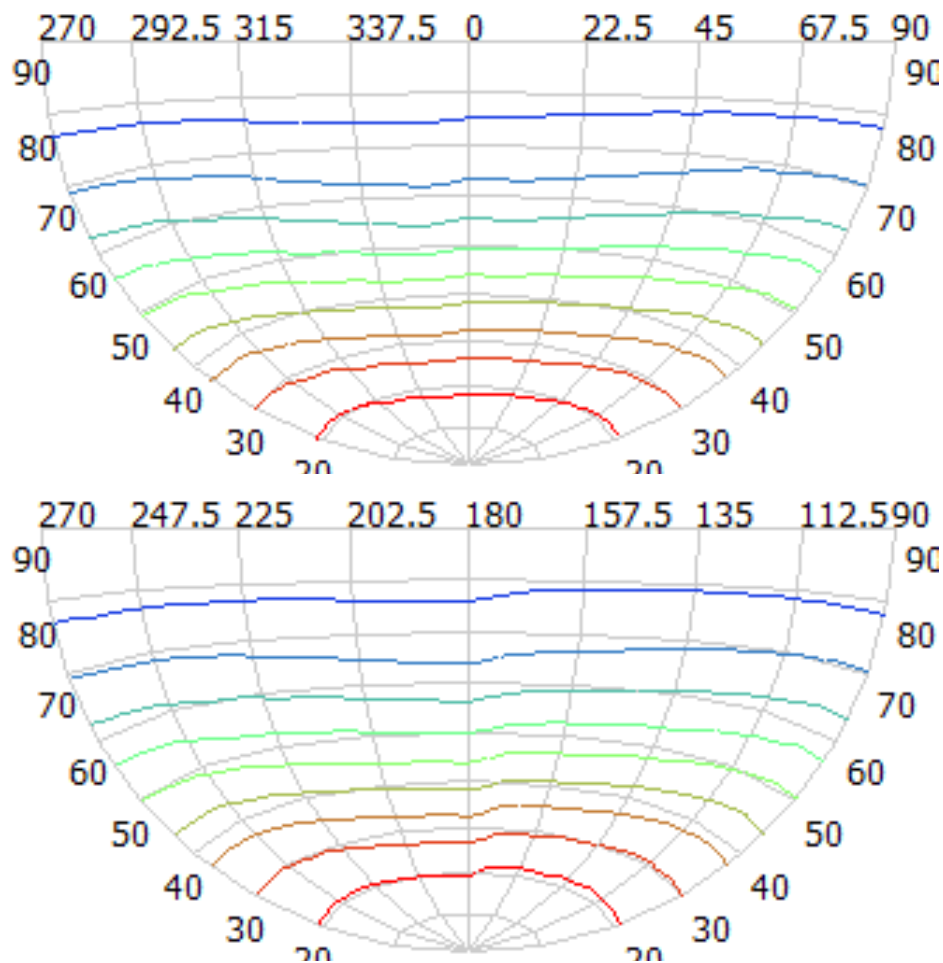
CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	2.26	2.26	0.25	0.25
5	17.99	20.25	2.27	2.27
10	35.22	55.47	6.22	6.22
15	50.89	106.36	11.92	11.92
20	64.21	170.57	19.12	19.11
25	74.40	244.97	27.45	27.45
30	80.95	325.91	36.53	36.52
35	83.68	409.59	45.90	45.90
40	82.68	492.27	55.17	55.17
45	78.36	570.63	63.95	63.95
50	71.30	641.92	71.94	71.94
55	62.25	704.17	78.92	78.91
60	52.19	756.36	84.77	84.76
65	42.02	798.39	89.48	89.47
70	32.31	830.70	93.10	93.09
75	23.43	854.13	95.72	95.72
80	15.65	869.78	97.48	97.47
85	9.23	879.01	98.51	98.51
90	4.88	883.89	99.06	99.05
95	2.55	886.44	99.34	99.34
100	1.31	887.75	99.49	99.49
105	0.79	888.54	99.58	99.58
110	0.73	889.27	99.66	99.66
115	0.81	890.08	99.75	99.75
120	0.83	890.91	99.84	99.84
125	0.93	891.85	99.95	99.95
130	0.48	892.32	100.00	100.00

Luminaire

Lamp	Report			20150820-0009
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Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

IsoCandela (Type C)

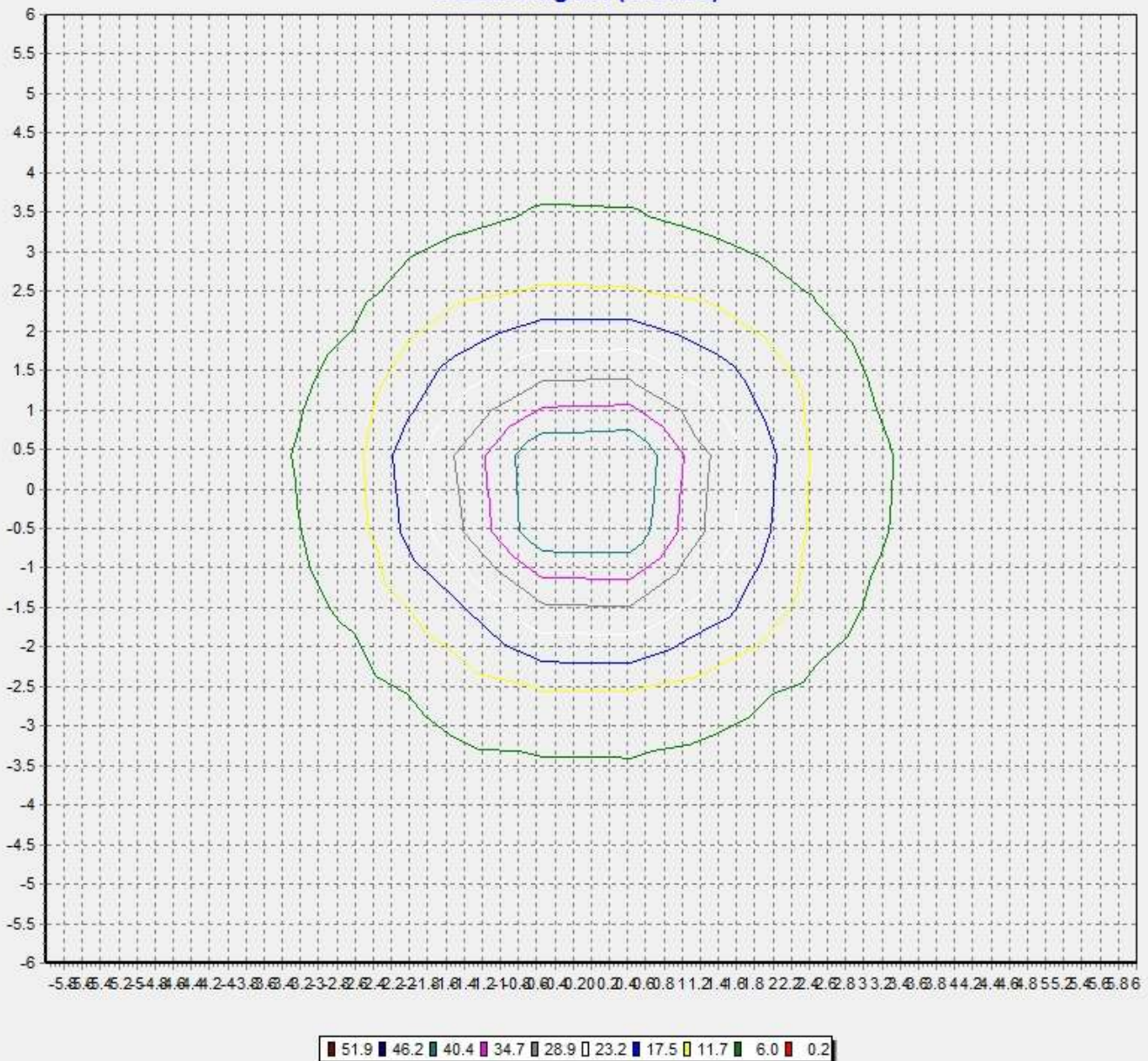


 0 ~ 38	 190 ~ 228
 38 ~ 76	 228 ~ 267
 76 ~ 114	 267 ~ 305
 114 ~ 152	 305 ~ 343
 152 ~ 190	 343 ~ 381

Luminaire

Lamp	Report	20150820-0009		
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	
			2015-08-20 오후 5:31:21	

IsoLux Diagram (Ground)



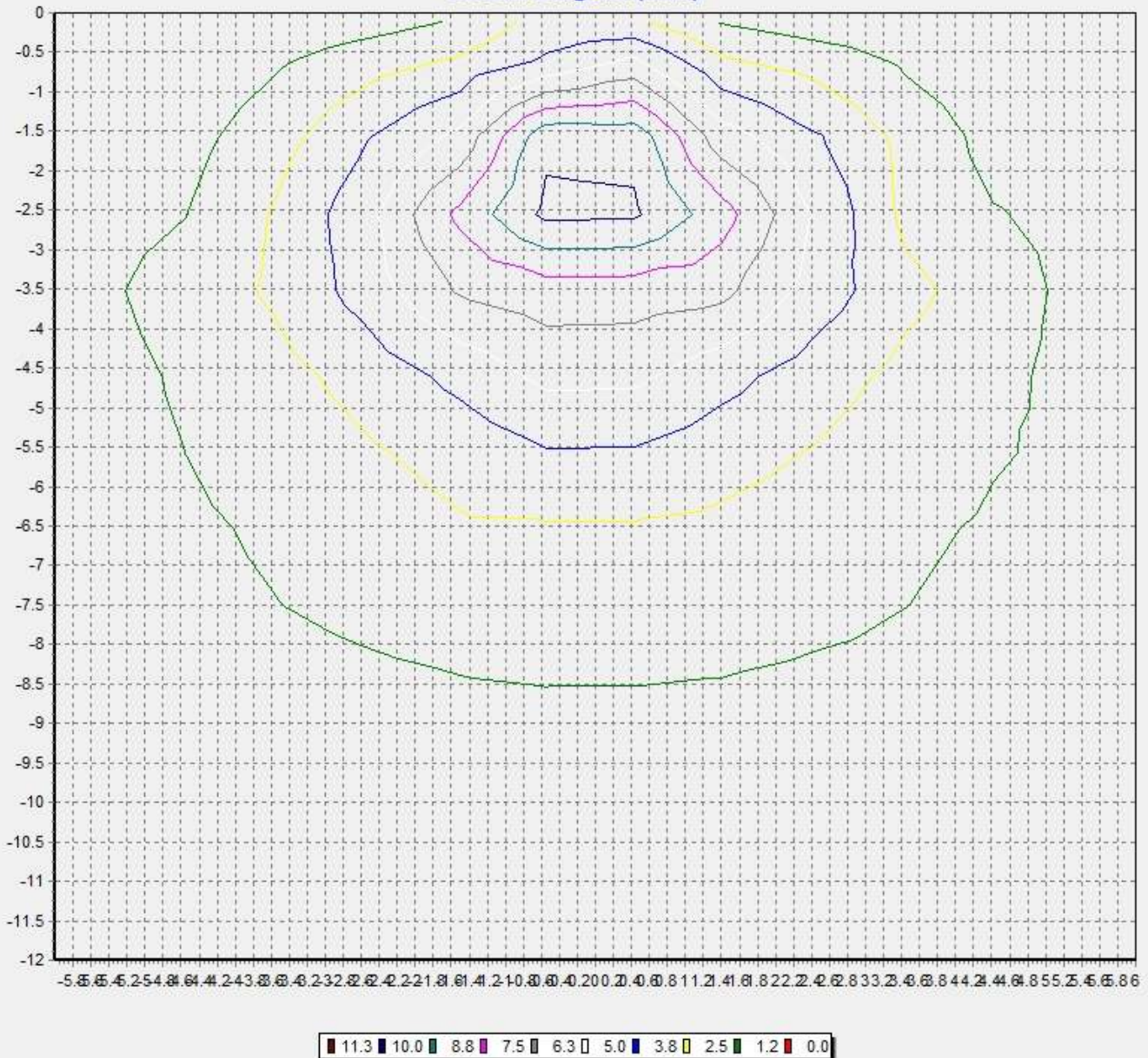
Pole Height (m): 2.7

Area Width (m): 12

Luminaire

Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

IsoLux Diagram (Wall)



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

Luminaire

Lamp

Report

20150820-0009

No. of lamps	1	Voltage (V)	23.95	Filename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt
Lamp flux (lm)	892	Current (A)	0.463	Operator	
Total flux (lm)	892	Power Factor	1	Date	2015-08-20 오후 5:31:21

Illuminance Levels (Ground)

6.00	0.32	0.43	0.45	0.59	0.98	1.16	1.21	1.08	0.91	0.53	0.41	0.37	0.26
5.00	0.42	0.47	0.88	1.28	1.39	2.10	2.24	2.07	1.28	1.19	0.76	0.38	0.37
4.00	0.40	0.87	1.08	2.06	2.50	4.11	4.49	4.01	2.28	1.86	0.88	0.75	0.33
3.00	0.53	1.12	2.02	2.89	4.97	7.28	8.42	6.85	4.61	2.45	1.79	0.95	0.44
2.00	0.83	1.12	2.28	4.50	10.81	15.91	21.18	14.99	9.85	3.97	1.94	0.94	0.70
1.00	0.93	1.71	3.49	6.46	15.16	30.26	40.58	28.71	14.10	5.85	3.09	1.48	0.78
0.00	0.85	1.65	3.52	6.77	19.48	40.23	51.67	40.02	19.46	6.68	3.42	1.59	0.82
-1.00	0.83	1.54	3.21	5.99	14.20	29.22	40.64	29.23	14.01	5.77	2.95	1.39	0.75
-2.00	0.74	0.99	2.04	4.12	9.92	15.20	21.05	15.15	10.16	3.94	1.94	0.90	0.68
-3.00	0.47	0.99	1.84	2.54	4.60	6.85	8.26	6.91	4.64	2.63	1.81	0.93	0.44
-4.00	0.35	0.78	0.91	1.89	2.29	3.95	4.38	3.97	2.29	1.88	0.94	0.76	0.33
-5.00	0.38	0.40	0.79	1.17	1.27	2.01	2.17	2.03	1.28	1.19	0.77	0.40	0.37
-6.00	0.27	0.38	0.41	0.53	0.89	1.07	1.17	1.08	0.91	0.52	0.40	0.37	0.28
-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.): 51.7

All illuminance level values are in lux.

Illum. (Min.): 0.26

Illum. Avg.: 5.08

Total Optical Solution Provider

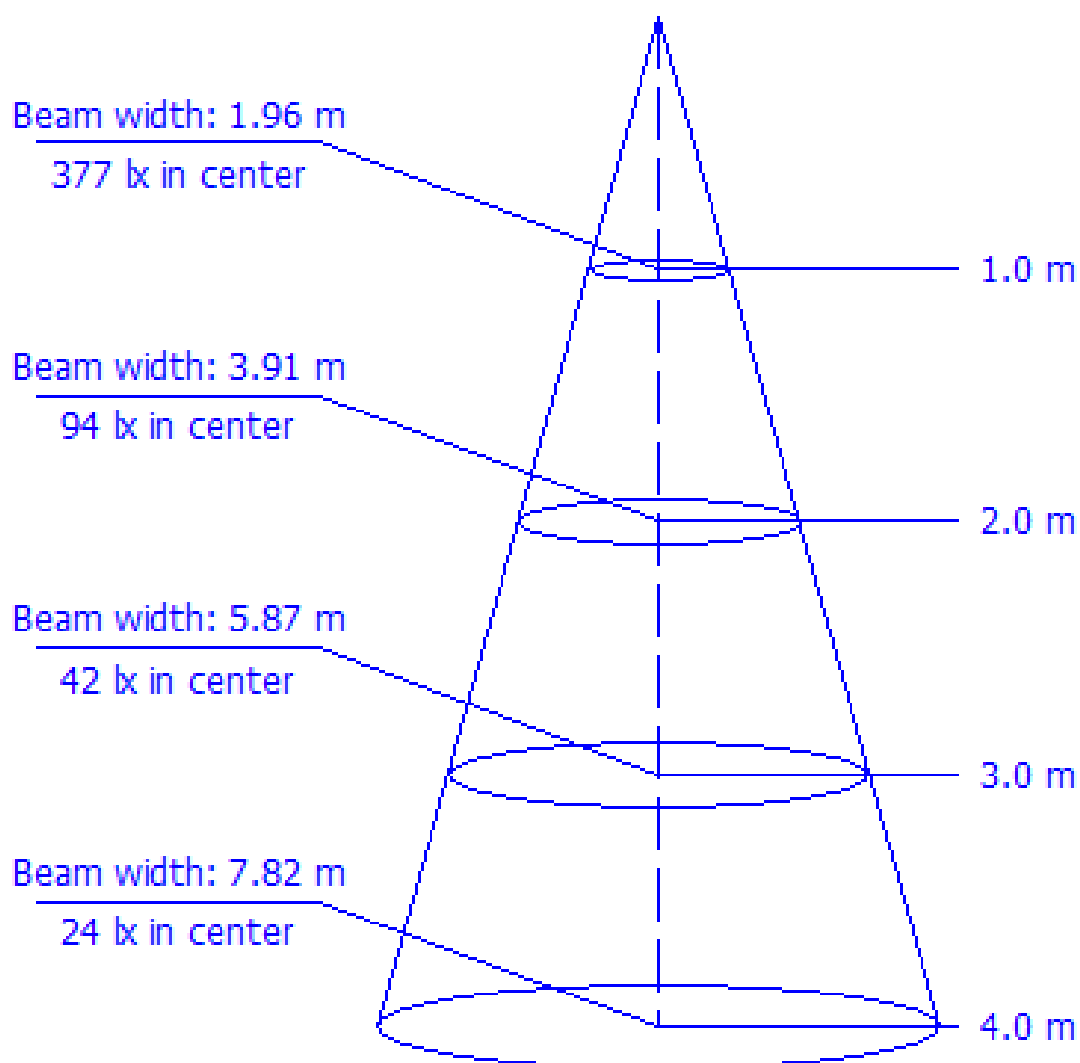


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Luminaire

Lamp	Report			20150820-0009
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.463	
Total flux (lm)	Date)2	Power Factor	1	2015-08-20 오후 5:31:21

Illuminance Cone Diagram



Beam Angle = 89 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp				Report		20150820-0009	
No. of lamps	1	Voltage (V)	23.95	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150820\NDV11 30K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	892	Current (A)	0.463	Operator			
Total flux (lm)	892	Power Factor	1	Date		2015-08-20 오후 5:31:21	

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	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.97
Room CR 1	1.03	0.99	0.95	1.00	0.97	0.93	0.96	0.93	0.90	0.92	0.90	0.87	0.88	0.86	0.84	0.82
Room CR 2	0.90	0.84	0.79	0.89	0.83	0.78	0.85	0.80	0.76	0.82	0.78	0.74	0.78	0.75	0.72	0.70
Room CR 3	0.80	0.73	0.67	0.79	0.72	0.66	0.76	0.70	0.65	0.73	0.68	0.64	0.70	0.66	0.62	0.60
Room CR 4	0.72	0.64	0.57	0.70	0.63	0.57	0.68	0.61	0.56	0.65	0.60	0.55	0.63	0.58	0.54	0.52
Room CR 5	0.65	0.56	0.50	0.63	0.56	0.50	0.61	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.48	0.46
Room CR 6	0.59	0.50	0.44	0.58	0.50	0.44	0.56	0.49	0.43	0.54	0.48	0.43	0.52	0.47	0.43	0.41
Room CR 7	0.53	0.45	0.39	0.53	0.45	0.39	0.51	0.44	0.39	0.49	0.43	0.39	0.48	0.42	0.38	0.36
Room CR 8	0.49	0.41	0.35	0.48	0.41	0.35	0.47	0.40	0.35	0.46	0.39	0.35	0.44	0.39	0.34	0.33
Room CR 9	0.45	0.37	0.32	0.44	0.37	0.32	0.43	0.37	0.32	0.42	0.36	0.32	0.41	0.35	0.31	0.30
Room CR 10	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.29	0.38	0.33	0.29	0.27