

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 : 20150911

2. Purpose of Report : Sample test

3. Test Standard / Item : LED / HDV18 35K-24V -1 D1502 VER1.0 35S1A

4. Test Period : 20150911 ~ 20150911

5. Test Environment

Ambient Temp. : (24.34 +- 3) °C

Relative Humidity : (67.9 +- 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
20150911-0004			LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.3991, 0.3847	
Correlated Color Temperature	K	3605	
Ra	-	87.35	
Power Factor	%	1.000	
Input Voltage	V	23.930	
Input Current	A	0.700	
Input Watt	W	16.76	
Lamp Flux	lm	1406	
Efficient	lm/W	83.94	
Illuminance	lx	557	1 m
		139	2 m
		62	3 m

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

Sample photo

Click to load image

Luminaire

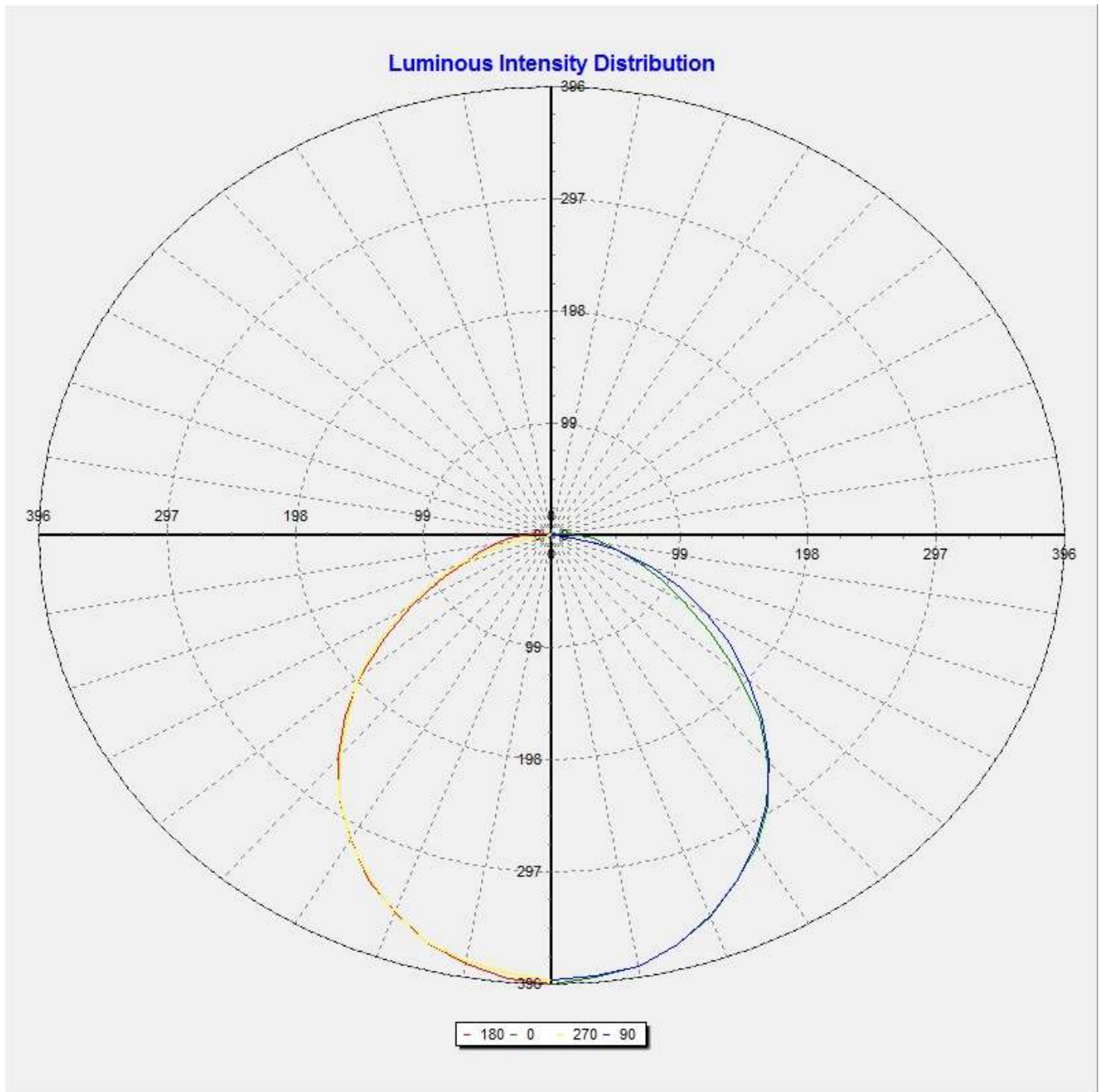
Lamp Report

20150911-0004

No. of lamp:Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lOperator1406 Current (A) 0.7

Total flux (lDate 1406 Power Factor 1 2015-09-11 오후 2:10:26



All luminous intensity values are in Cd/KLm unit.

Luminaire

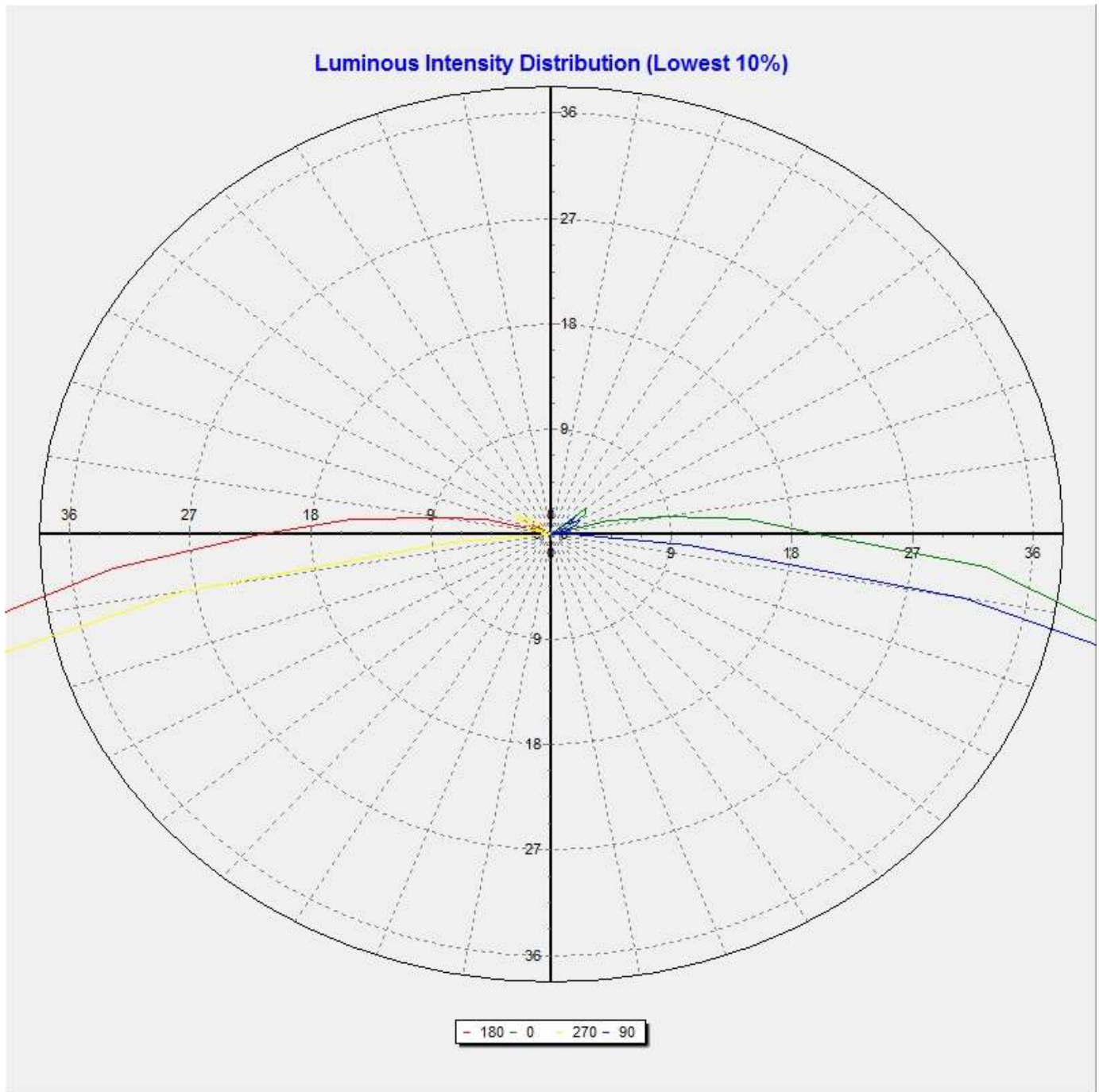
Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lOperator1406 Current (A) 0.7

Total flux (lDate 1406 Power Factor 1 2015-09-11 오후 2:10:26



All luminous intensity values are in Cd/Klm unit.

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lOperator:1406 Current (A) 0.7

Total flux (lDate: 1406 Power Factor 1 2015-09-11 오후 2:10:26

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120
0	557.13	555.10	554.75	552.86	552.51	550.62	550.34	552.44	552.37	551.53	553.14	553.14	550.90
5	550.97	550.62	550.90	551.32	549.15	549.01	549.57	550.90	548.87	549.57	548.59	552.16	551.95
10	543.54	545.15	539.55	539.13	540.95	541.51	540.18	538.22	541.09	543.54	540.95	542.21	542.28
15	526.59	523.23	522.88	524.70	525.47	525.12	525.54	523.37	524.49	526.03	523.16	524.35	523.65
20	505.02	502.29	504.04	501.24	502.22	501.73	503.48	500.26	505.58	503.41	503.41	503.90	504.95
25	474.69	473.43	475.53	476.51	476.16	474.34	476.65	475.39	476.58	475.04	478.33	476.02	476.02
30	444.71	442.40	441.49	444.64	444.43	440.93	442.96	441.70	443.80	442.68	444.36	441.70	447.23
35	409.83	406.11	407.16	404.85	405.06	405.34	404.64	405.34	407.73	407.52	410.11	407.59	403.59
40	365.42	364.51	365.42	362.90	369.20	365.42	370.04	365.70	368.57	368.43	370.32	365.14	367.31
45	318.49	317.51	321.64	321.36	322.62	324.86	326.26	322.83	323.95	324.30	323.53	324.09	325.00
50	261.82	266.16	268.33	274.78	276.04	280.17	278.91	281.01	277.93	280.10	279.54	281.43	281.99
55	209.70	212.86	216.08	221.40	232.12	236.74	235.97	236.67	238.28	236.74	238.98	236.18	237.58
60	163.90	167.12	169.15	172.65	183.93	190.58	191.70	194.65	193.73	193.66	197.66	197.24	196.12
65	132.37	130.69	129.78	136.23	142.18	145.47	152.20	151.99	155.28	153.67	156.33	155.35	156.12
70	101.62	98.89	102.89	104.36	107.86	111.08	112.76	114.79	113.88	116.75	113.81	118.09	117.53
75	77.67	79.07	77.74	79.28	80.68	81.80	78.79	79.84	78.09	74.94	79.42	82.08	85.93
80	57.08	56.30	57.71	57.01	55.46	55.11	53.71	47.62	45.52	44.12	46.22	53.43	55.53
85	45.80	42.37	43.56	41.53	40.19	35.29	33.54	24.43	21.00	14.49	19.18	29.55	32.63
90	28.08	32.14	31.65	27.52	25.69	23.66	16.24	11.13	4.82	2.16	1.67	12.32	17.08
95	20.79	21.98	18.83	15.96	14.70	12.04	8.11	4.89	3.84	1.67	3.42	1.53	9.23
100	12.39	11.41	11.83	8.67	8.67	4.96	-0.43	3.77	2.72	0.06	2.30	2.02	0.55
105	6.29	7.41	4.05	3.07	2.72	1.46	0.34	2.23	3.21	1.88	1.74	1.74	0.97
110	-0.01	2.86	2.37	1.46	3.21	3.21	4.19	0.27	1.39	1.67	-0.92	1.74	3.70
115	1.11	3.56	3.56	2.23	2.44	2.23	4.40	3.77	1.60	2.86	3.42	4.68	-0.36
120	3.14	1.46	2.37	6.71	2.37	1.39	0.48	3.35	3.28	3.42	2.44	2.02	4.54
125	4.40	1.39	4.05	3.28	5.80	2.72	5.03	2.93	3.35	2.16	4.19	3.49	4.54
130	4.75	4.26	4.96	6.64	4.61	5.03	3.70	6.64	5.80	3.14	3.07	3.42	4.75

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lOperator:1406 Current (A) 0.7

Total flux (lDate: 1406 Power Factor 1 2015-09-11 오후 2:10:26

Luminous Intensity Data (Continued)

GWC	130	140	150	160	170	180	190	200	210	220	230	240	250
0	553.70	551.95	553.70	552.58	554.40	557.13	555.10	554.75	552.86	552.51	550.62	550.34	552.44
5	551.04	551.39	549.78	550.13	548.31	552.79	546.84	549.36	551.11	548.73	546.84	548.24	550.34
10	539.55	542.07	540.88	542.98	538.01	539.90	539.55	538.08	541.09	536.61	540.18	538.22	536.54
15	524.84	526.59	524.00	523.16	520.57	524.07	522.95	521.20	521.41	522.60	519.80	522.67	523.86
20	504.81	505.23	499.21	503.41	501.80	497.80	498.22	495.56	497.38	498.92	502.36	497.17	498.78
25	475.74	477.14	469.72	473.57	472.45	471.40	466.77	471.75	468.87	469.08	468.81	469.79	468.66
30	441.63	437.00	444.22	438.48	439.74	436.16	438.19	434.27	435.11	433.64	433.29	437.35	438.05
35	405.20	406.53	404.92	405.62	401.77	401.70	399.81	399.25	399.46	399.95	394.84	397.50	400.58
40	365.49	368.57	366.47	366.19	368.85	359.95	364.23	356.66	358.27	359.04	359.53	357.99	361.77
45	324.93	328.85	323.88	324.30	322.06	316.24	318.91	315.82	314.84	314.56	316.74	313.16	314.28
50	281.22	280.38	282.55	280.87	280.10	272.12	268.68	275.90	272.82	274.43	274.85	272.47	273.52
55	237.58	240.60	235.83	231.70	227.92	221.40	219.86	223.43	229.95	230.86	230.09	229.95	229.74
60	196.19	196.19	188.06	183.16	180.36	176.15	172.09	179.80	181.97	186.66	190.23	186.59	187.78
65	157.24	151.01	146.66	141.83	140.50	134.34	135.25	136.79	140.99	145.26	149.89	148.84	149.05
70	117.74	116.82	113.95	111.57	111.29	103.24	107.30	101.97	107.79	108.77	109.82	115.07	109.05
75	85.51	85.93	86.42	86.00	84.53	82.64	79.21	83.55	80.54	80.75	78.37	75.92	73.89
80	61.63	61.63	61.42	64.43	63.94	61.14	60.58	60.51	61.49	57.15	52.52	52.80	44.61
85	39.63	42.86	45.03	44.96	44.96	46.29	42.16	43.49	40.75	41.53	34.87	31.30	22.96
90	24.85	29.13	29.27	30.88	36.55	30.53	31.51	29.62	28.85	27.24	20.51	16.10	9.93
95	13.09	15.82	20.58	19.53	19.60	21.07	20.65	19.04	16.87	14.21	11.06	4.68	3.70
100	5.10	9.37	11.06	14.63	14.00	11.76	11.41	12.60	9.86	8.25	3.98	2.51	4.26
105	1.11	4.96	5.52	3.70	9.30	7.06	6.85	6.57	2.65	0.97	0.83	3.98	-0.78
110	4.05	4.12	1.46	2.86	3.98	1.11	4.26	2.72	2.79	2.02	5.17	1.81	2.30
115	1.18	3.14	3.35	2.93	3.21	2.51	1.11	0.76	1.39	1.95	2.44	2.65	3.98
120	3.07	4.96	5.52	1.53	1.95	1.60	4.12	2.30	2.72	3.35	4.12	1.88	0.27
125	4.26	2.79	1.11	4.33	2.23	0.76	3.77	2.93	2.51	-0.22	4.75	2.51	2.37
130	1.81	4.05	4.61	3.42	2.93	2.65	5.17	3.98	4.89	1.88	2.93	3.35	1.18

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lOperator1406 Current (A) 0.7

Total flux (lDate 1406 Power Factor 1 2015-09-11 오후 2:10:26

Luminous Intensity Data (Continued)

GWC	260	270	280	290	300	310	320	330	340	350	360
0	552.37	551.53	553.14	553.14	550.90	553.70	551.95	553.70	552.58	554.40	557.13
5	551.04	545.51	549.22	548.31	548.38	547.96	551.46	548.17	548.31	548.17	550.97
10	537.87	535.56	537.94	536.96	536.75	539.06	540.46	537.52	539.13	535.84	543.54
15	522.74	523.51	523.16	520.50	523.79	521.62	522.04	522.46	522.25	520.22	526.59
20	499.91	499.56	499.14	498.36	498.93	498.08	501.38	496.75	499.77	498.22	505.02
25	469.23	469.37	468.87	473.85	469.51	472.59	469.09	469.72	466.14	467.47	474.69
30	437.56	437.14	436.58	435.88	433.92	436.44	433.08	437.28	435.18	435.74	444.71
35	395.89	400.65	398.48	403.24	398.34	398.48	400.09	399.18	400.02	399.74	409.83
40	355.26	358.41	356.80	358.41	358.76	359.67	358.97	356.17	357.57	356.66	365.42
45	318.21	314.00	314.00	317.51	316.67	319.05	316.60	312.95	309.94	306.09	318.49
50	269.80	274.22	271.77	273.45	274.36	272.12	273.10	265.67	257.55	254.68	261.82
55	228.69	229.39	229.46	226.94	226.66	228.27	220.21	214.54	206.90	202.49	209.70
60	184.49	185.89	188.06	184.70	184.42	181.97	175.73	169.99	159.20	156.68	163.90
65	144.07	143.44	143.65	147.08	144.28	136.79	133.29	129.92	126.56	121.52	132.37
70	109.54	108.42	106.46	108.14	106.46	103.24	103.45	99.38	97.91	94.41	101.62
75	72.35	69.19	72.70	75.57	74.10	73.40	76.62	72.98	74.03	74.45	77.67
80	39.00	39.35	39.35	42.86	47.90	50.77	54.48	53.01	55.32	54.76	57.08
85	14.49	10.56	15.19	24.29	27.87	34.17	36.34	42.37	40.26	38.86	45.80
90	2.58	0.27	4.68	6.08	17.36	21.84	22.68	23.59	25.62	28.92	28.08
95	2.79	0.13	0.06	1.88	4.12	10.78	13.51	15.68	17.50	16.87	20.79
100	0.55	1.46	0.69	2.51	3.28	4.12	9.16	9.30	11.76	9.23	12.39
105	0.55	2.65	1.11	-1.83	1.95	2.30	-0.29	3.00	3.70	3.91	6.29
110	2.86	1.11	2.51	-0.15	2.23	0.83	-0.08	0.62	4.05	3.77	-0.01
115	3.70	2.44	2.30	3.35	2.65	3.14	0.83	4.05	3.28	1.32	1.11
120	4.40	4.26	7.27	1.60	3.63	2.79	4.75	2.65	5.45	6.29	3.14
125	-2.11	3.42	3.14	3.42	1.46	2.23	4.05	5.10	3.00	1.60	4.40
130	4.12	2.86	0.20	3.14	2.86	3.28	3.70	3.84	3.98	3.84	4.75

Luminaire

Lamp Report

20150911-0004

No. of lamp: 1
Filename: C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lm): 1406
Operator: 1406
Current (A): 0.7

Total flux (lm): 1406
Date: 1406
Power Factor: 1
2015-09-11 오후 2:10:26

Luminous Flux Table

Total Lamp Lumens: 1406
Luminaire Efficiency (lm/W): 1405.99
CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	3.31	3.31	0.24	0.24
5	26.26	29.56	2.10	2.10
10	51.37	80.93	5.76	5.76
15	74.24	155.17	11.04	11.04
20	93.90	249.08	17.72	17.72
25	109.42	358.50	25.50	25.50
30	120.35	478.85	34.06	34.06
35	126.60	605.45	43.06	43.06
40	127.80	733.25	52.15	52.15
45	123.71	856.96	60.95	60.95
50	115.06	972.02	69.13	69.13
55	102.17	1074.19	76.40	76.40
60	86.88	1161.06	82.58	82.58
65	71.01	1232.08	87.63	87.63
70	55.89	1287.96	91.60	91.61
75	41.68	1329.64	94.57	94.57
80	28.87	1358.52	96.62	96.62
85	18.64	1377.15	97.95	97.95
90	11.16	1388.31	98.74	98.74
95	6.37	1394.68	99.20	99.20
100	3.60	1398.28	99.45	99.45
105	1.57	1399.85	99.56	99.56
110	1.17	1401.02	99.65	99.65
115	1.29	1402.30	99.74	99.74
120	1.55	1403.85	99.85	99.85
125	1.33	1405.18	99.94	99.94
130	0.80	1405.99	100.00	100.00

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lDate 1406

Current (A)

0.7

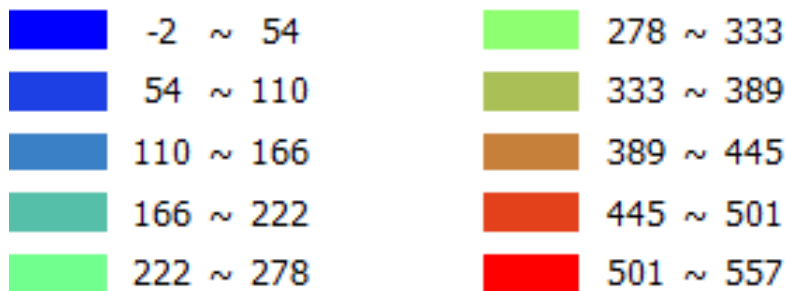
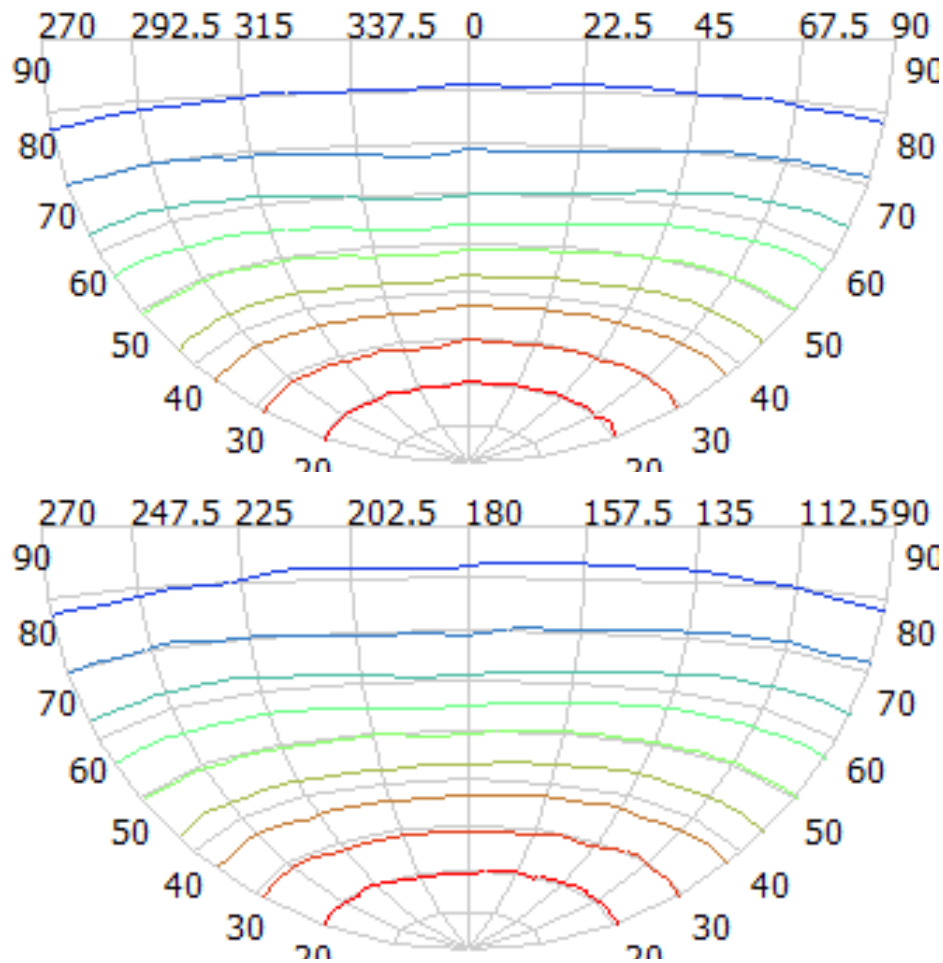
Total flux (lDate 1406

Power Factor

1

2015-09-11 오후 2:10:26

IsoCandela (Type C)



Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lumen) 1406

Current (A)

0.7

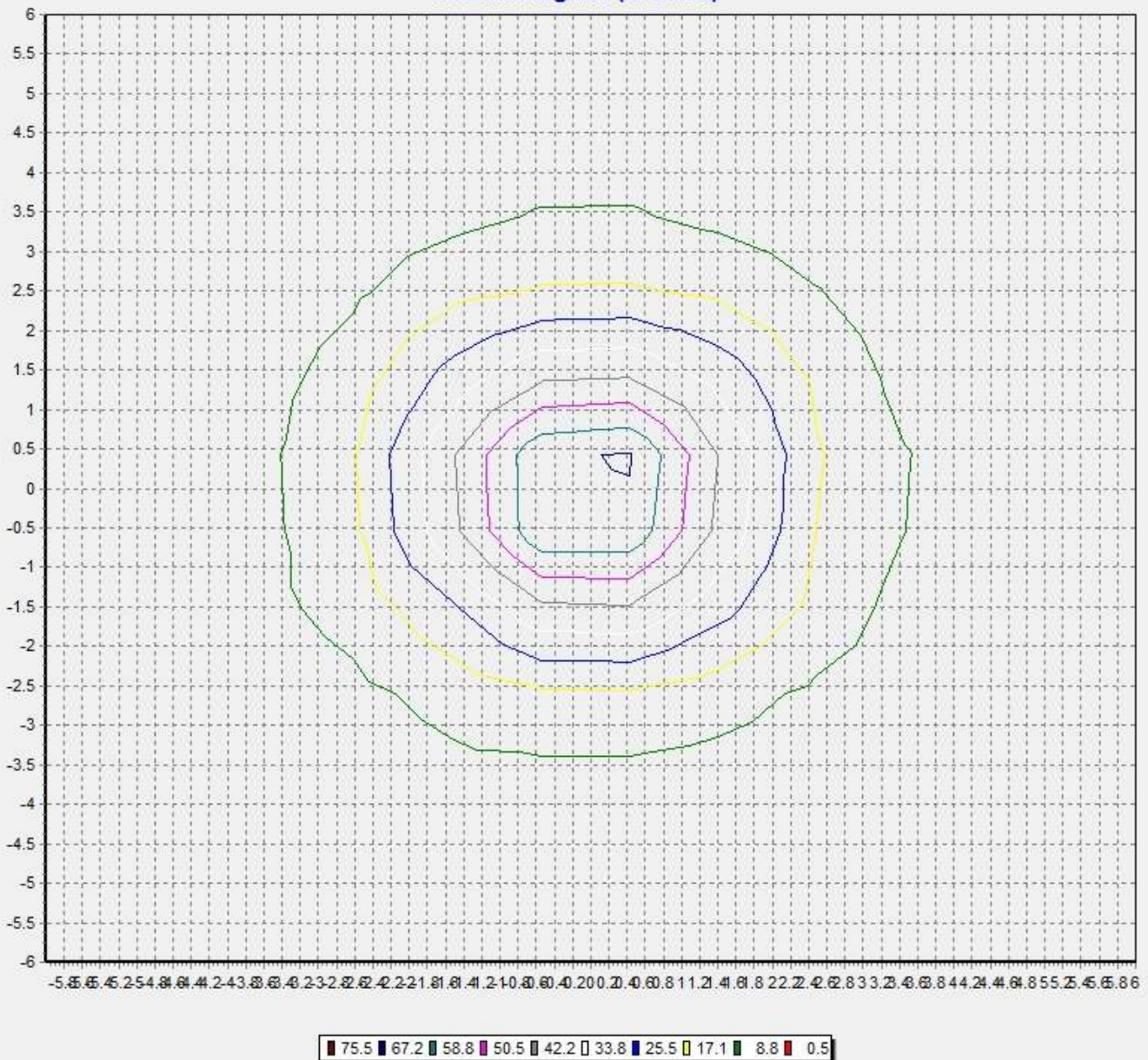
Total flux (lm) 1406

Power Factor

1

2015-09-11 오후 2:10:26

IsoLux Diagram (Ground)



Pole Height (m): 2.7

Area Width (m): 12

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lumen) 1406

Current (A)

0.7

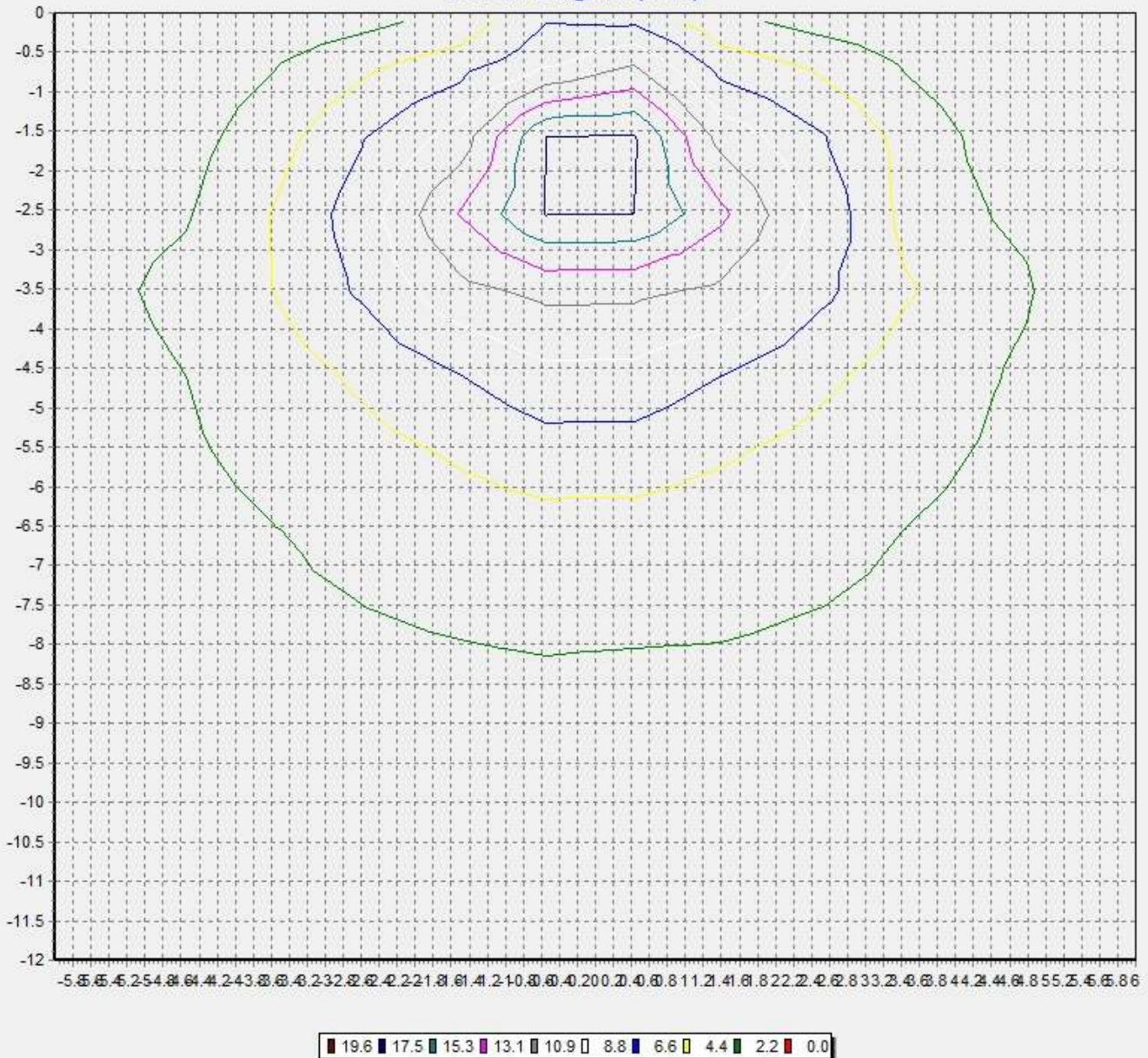
Total flux (lm) 1406

Power Factor

1

2015-09-11 오후 2:10:26

IsoLux Diagram (Wall)



Pole Height (m): 2.7

Wall Distance (m): 2.7

Aiming Plane: 0

Wall Height (m): 12

Luminaire

Lamp				Report	20150911-0004
No. of lamps	1	Voltage (V)	23.93	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 35K-24V -1 D1502 VER1.0 35S1A.jdt	
Lamp flux (lm)	1406	Current (A)	0.7	Operator	
Total flux (lm)	1406	Power Factor	1	Date	2015-09-11 오후 2:10:26

Illuminance Levels (Ground)

6.00	0.53	0.72	0.72	0.95	1.51	1.73	1.78	1.70	1.47	0.90	0.69	0.65	0.47
5.00	0.72	0.78	1.44	1.99	2.10	3.08	3.28	3.09	2.05	1.94	1.34	0.70	0.65
4.00	0.70	1.44	1.76	3.30	3.89	5.97	6.52	5.96	3.81	3.21	1.57	1.33	0.63
3.00	0.92	1.91	3.31	4.60	7.48	10.72	12.22	10.66	7.45	4.29	3.13	1.71	0.82
2.00	1.43	1.93	3.86	7.50	16.05	23.15	30.74	23.18	16.00	7.01	3.45	1.76	1.28
1.00	1.60	2.93	5.91	10.76	23.23	43.79	59.34	43.82	22.99	10.26	5.52	2.68	1.46
0.00	1.61	3.04	6.30	11.89	30.29	59.09	76.42	59.41	30.89	11.68	6.04	2.87	1.51
-1.00	1.51	2.84	5.70	10.47	22.61	42.97	59.04	43.11	22.63	10.11	5.36	2.58	1.39
-2.00	1.35	1.83	3.63	7.20	15.67	22.67	30.32	22.67	15.73	6.96	3.48	1.71	1.28
-3.00	0.85	1.82	3.18	4.40	7.26	10.39	11.91	10.42	7.21	4.35	3.10	1.72	0.81
-4.00	0.64	1.35	1.62	3.19	3.75	5.78	6.38	5.81	3.67	3.14	1.59	1.30	0.62
-5.00	0.66	0.71	1.36	1.89	2.00	2.96	3.17	2.97	1.96	1.87	1.31	0.69	0.62
-6.00	0.48	0.66	0.69	0.90	1.43	1.64	1.70	1.64	1.42	0.87	0.66	0.63	0.47
-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.): 76.4
 All illuminance level values are in lux.
 Illum. (Min.): 0.47
 Illum. Avg.: 7.84

Total Optical Solution Provider

Luminaire

Lamp Report

20150911-0004

No. of lamp: Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\WHDV18 35K-24V -1 D1502 VER1.0 35S1A.jdt

Lamp flux (lDate 1406

Current (A)

0.7

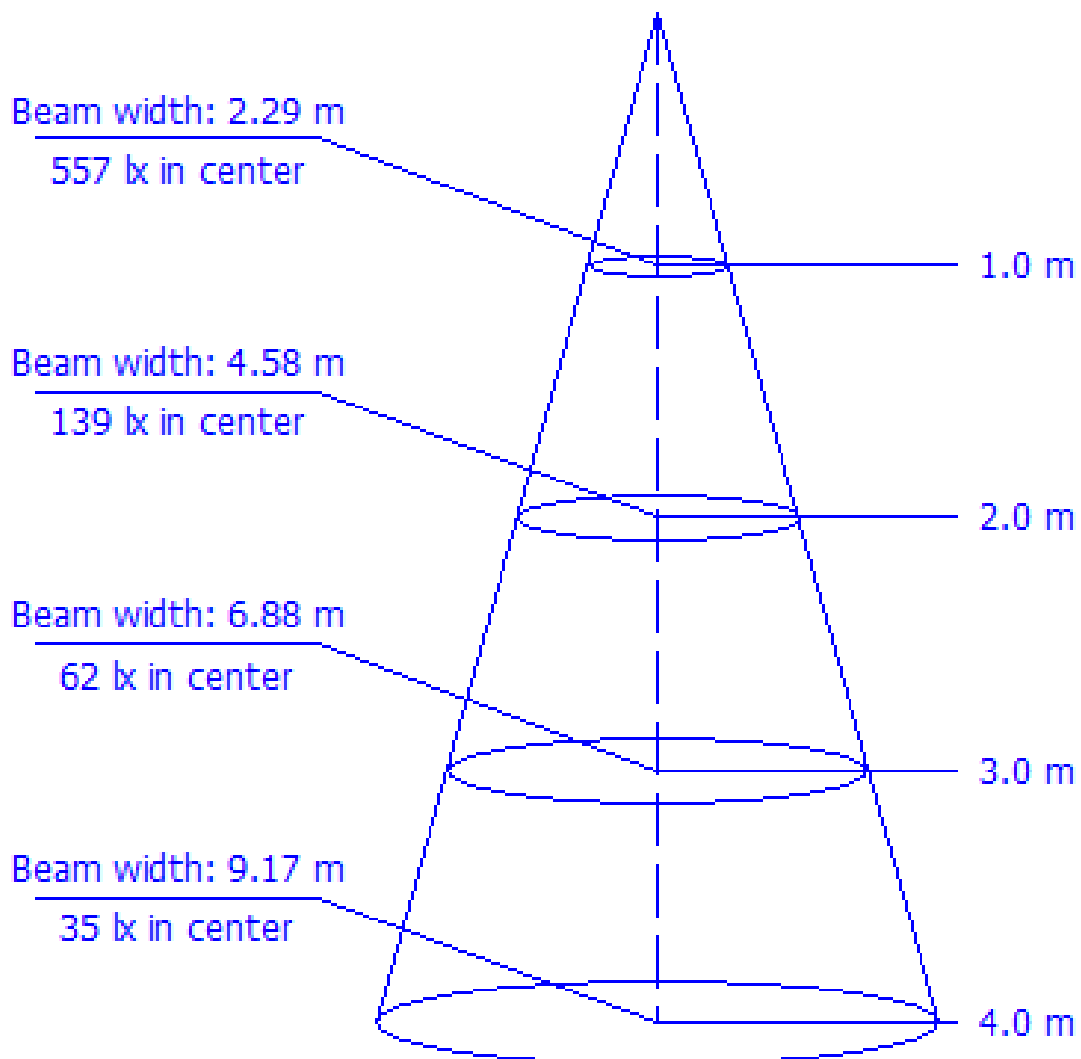
Total flux (lDate 1406

Power Factor

1

2015-09-11 오후 2:10:26

Illuminance Cone Diagram



Beam Angle = 98 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp				Report	20150911-0004
No. of lamps	1	Voltage (V)	23.93	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 35K-24V -1 D1502 VER1.0 35S1A.jdt	
Lamp flux (lm)	1406	Current (A)	0.7	Operator	
Total flux (lm)	1406	Power Factor	1	Date	2015-09-11 오후 2:10:26

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	0.98
Room CR	1	1.04	1.00	0.96	1.02	0.98	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
Room CR	2	0.91	0.85	0.79	0.89	0.83	0.78	0.85	0.80	0.76	0.82	0.78	0.74	0.79	0.75	0.72	0.70
Room CR	3	0.81	0.73	0.66	0.79	0.72	0.66	0.76	0.69	0.64	0.73	0.67	0.63	0.70	0.65	0.62	0.59
Room CR	4	0.72	0.63	0.57	0.70	0.62	0.56	0.68	0.61	0.55	0.65	0.59	0.54	0.63	0.58	0.53	0.51
Room CR	5	0.64	0.56	0.49	0.63	0.55	0.49	0.61	0.54	0.48	0.59	0.52	0.48	0.57	0.51	0.47	0.45
Room CR	6	0.58	0.50	0.43	0.57	0.49	0.43	0.55	0.48	0.43	0.53	0.47	0.42	0.52	0.46	0.41	0.39
Room CR	7	0.53	0.44	0.38	0.52	0.44	0.38	0.50	0.43	0.38	0.49	0.42	0.37	0.47	0.42	0.37	0.35
Room CR	8	0.49	0.40	0.34	0.48	0.40	0.34	0.46	0.39	0.34	0.45	0.38	0.34	0.44	0.38	0.33	0.31
Room CR	9	0.45	0.37	0.31	0.44	0.36	0.31	0.43	0.36	0.31	0.41	0.35	0.30	0.40	0.35	0.30	0.28
Room CR	10	0.41	0.33	0.28	0.41	0.33	0.28	0.40	0.33	0.28	0.39	0.32	0.28	0.38	0.32	0.28	0.26