

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. : (23.9 +- 3) °C

Relative Humidity : (59.29 +- 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
20150914-0001			LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.4572, 0.4074	
Correlated Color Temperature	K	2728	
Ra	-	83.31	
Power Factor	%	1.000	
Input Voltage	V	23.920	
Input Current	A	0.718	
Input Watt	W	17.17	
Lamp Flux	lm	1435.6	
Efficient	lm/W	83.59	
Illuminance	lx	616	1 m
		154	2 m
		68	3 m

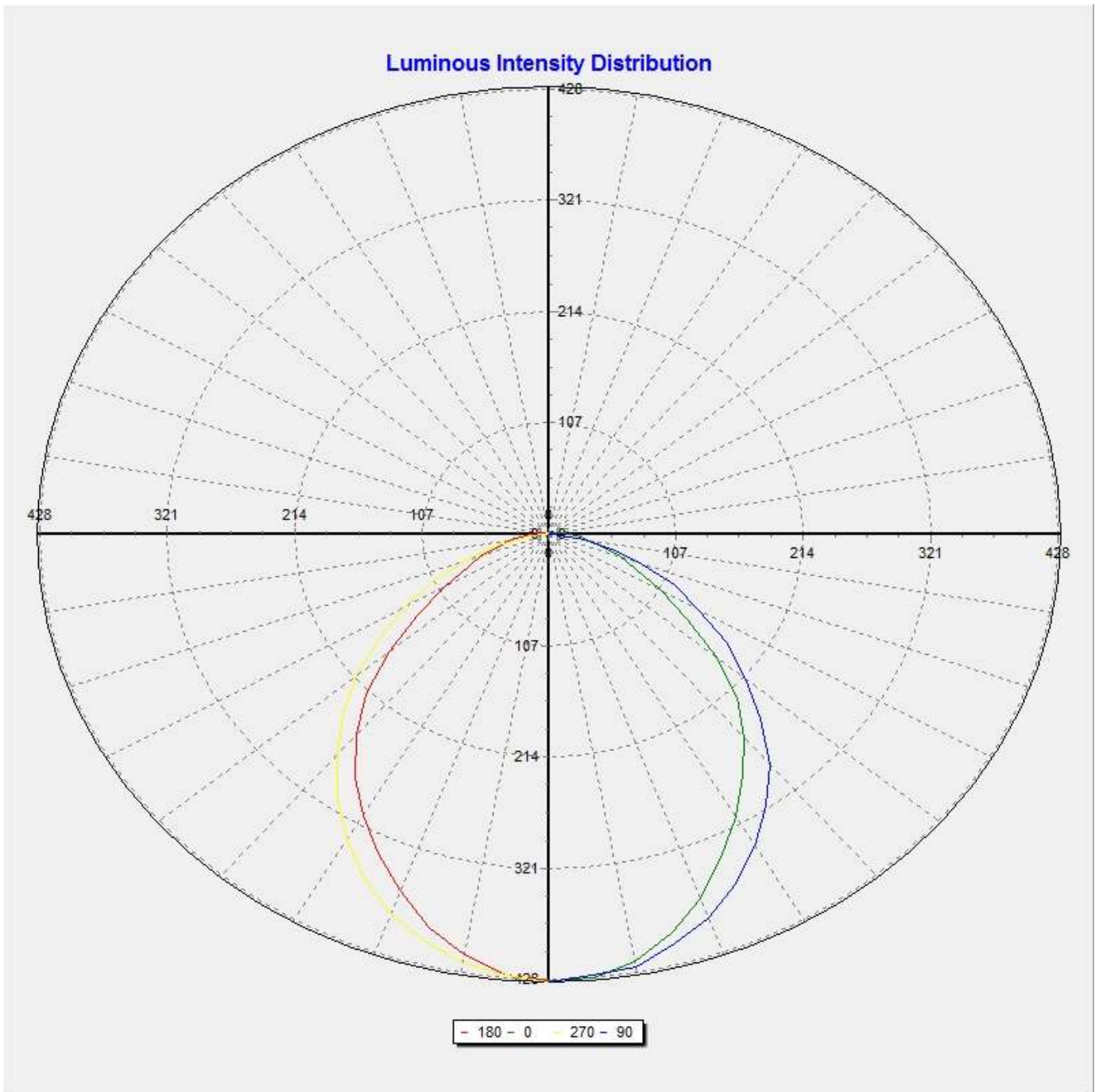
* This test result is for the sample provided by the client.

Sample photo

Click to load image

Luminaire

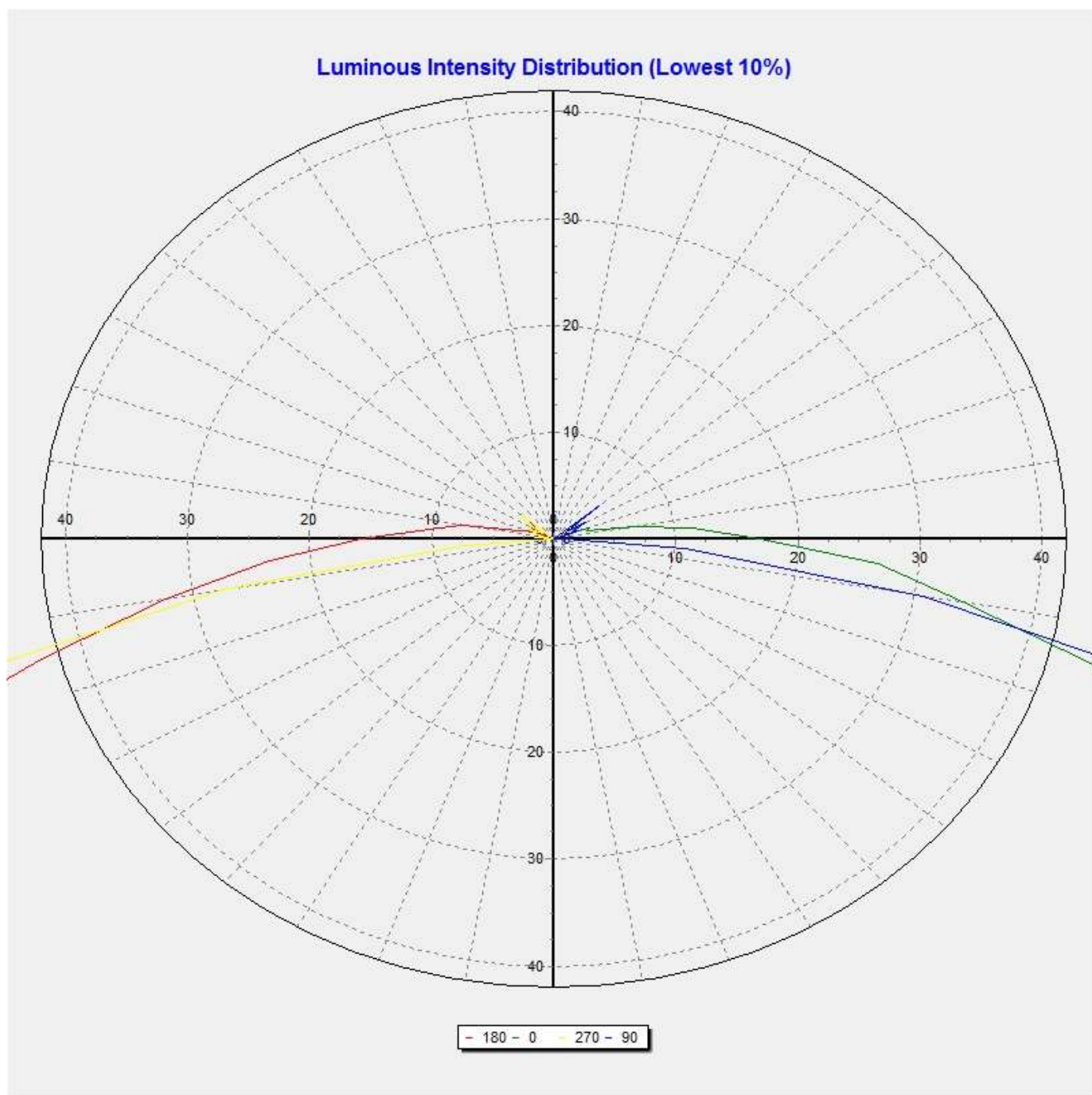
Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDTV18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18



All luminous intensity values are in Cd/KLm unit.

Luminaire

Lamp	Report	20150914-0001		
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDTV18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	
			2015-09-14 오후 12:47:18	



All luminous intensity values are in Cd/KLm unit.

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120
0	615.84	614.16	613.74	615.77	614.93	615.70	613.52	615.63	615.21	618.08	615.91	615.42	617.03
5	614.79	612.47	611.84	611.63	617.24	608.90	613.88	612.26	613.60	611.84	613.52	610.09	613.10
10	599.73	597.13	597.62	598.39	600.64	599.73	599.31	602.11	604.42	607.29	601.13	600.43	598.88
15	570.17	571.01	572.48	573.04	580.67	581.72	584.88	586.98	586.70	584.32	585.02	586.00	583.55
20	535.14	537.31	541.10	539.77	545.09	548.17	557.21	559.31	562.95	564.42	562.32	557.35	554.83
25	493.26	491.36	496.62	500.61	506.98	513.15	523.09	530.38	532.97	532.76	533.60	525.27	520.57
30	450.74	451.37	457.46	456.69	463.28	471.40	482.26	492.20	496.90	496.69	498.02	489.19	478.55
35	406.96	405.42	413.96	414.52	417.61	423.14	436.38	444.92	451.72	458.02	455.08	443.31	434.21
40	366.61	364.37	369.06	367.66	371.09	376.00	385.45	401.63	409.20	415.01	411.09	397.85	386.15
45	320.52	321.01	323.25	324.58	328.09	329.84	335.86	347.49	359.12	360.66	357.44	346.65	340.41
50	264.34	266.94	272.47	278.21	278.63	282.84	289.00	293.06	307.70	310.01	304.20	296.14	287.32
55	203.96	207.40	216.99	221.62	233.45	237.10	240.25	248.16	252.30	262.66	253.63	244.73	241.16
60	155.56	152.83	161.52	168.52	184.21	191.57	196.68	199.41	209.43	210.27	204.94	196.68	196.47
65	116.83	117.18	122.50	126.28	135.46	146.74	153.60	155.91	158.92	166.63	159.06	155.28	152.83
70	90.84	87.76	91.26	95.60	99.94	106.04	109.89	112.62	115.07	118.86	114.16	111.57	112.34
75	66.04	63.31	69.26	68.07	72.70	75.57	77.88	80.05	78.23	78.37	76.48	80.82	74.10
80	48.88	48.60	50.77	49.51	51.05	50.21	49.93	46.50	48.11	44.05	44.75	48.46	49.58
85	38.30	33.89	38.23	34.24	35.15	33.82	29.27	25.69	21.63	15.54	21.00	26.19	29.76
90	24.29	23.87	26.12	21.56	22.89	18.06	14.21	11.27	3.14	1.25	3.63	8.67	18.20
95	16.31	16.52	15.33	13.09	12.53	9.58	4.40	3.63	0.27	-0.50	1.18	3.42	6.15
100	9.79	10.42	9.58	6.08	5.03	2.44	-0.08	1.60	2.72	-1.90	0.48	2.72	1.53
105	4.05	3.77	4.26	3.77	3.14	1.25	0.13	-0.15	2.58	-0.36	-0.22	2.44	-0.01
110	4.40	4.54	1.32	0.41	2.37	1.32	3.21	1.53	1.11	3.00	4.05	2.86	3.35
115	2.30	3.84	4.61	1.32	1.32	1.95	1.60	-0.36	0.76	2.72	2.37	0.06	2.72
120	3.14	2.72	3.21	3.70	1.39	3.28	0.06	0.97	4.33	4.26	3.28	0.06	2.02
125	3.14	3.28	2.37	3.21	5.10	3.84	3.63	4.12	2.23	1.67	4.82	3.70	2.44
130	4.68	2.72	5.59	2.02	3.49	4.75	4.61	4.75	2.16	6.99	4.05	2.51	1.74

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

Luminous Intensity Data (Continued)

GWC	130	140	150	160	170	180	190	200	210	220	230	240	250
0	615.49	615.98	619.90	615.00	614.29	615.84	614.16	613.74	615.77	614.93	615.70	613.52	615.63
5	612.75	611.70	611.28	609.60	608.55	610.16	610.37	606.31	610.72	605.75	608.48	608.34	612.05
10	599.87	600.08	596.78	594.19	592.44	589.78	589.57	588.87	591.60	591.04	592.44	598.47	596.99
15	575.98	574.93	573.46	564.98	563.86	561.34	558.12	562.81	561.90	565.61	569.47	574.37	577.66
20	548.10	542.22	534.93	535.49	533.81	523.66	524.85	525.83	526.88	532.48	538.86	543.83	551.88
25	510.56	507.89	501.10	497.95	493.39	486.39	488.63	485.76	490.87	493.75	498.65	508.03	519.80
30	471.47	463.41	460.05	458.79	452.49	447.87	446.67	449.34	450.11	453.68	457.53	469.93	479.39
35	425.73	422.58	416.48	416.48	415.08	409.27	407.17	405.91	405.28	410.74	413.68	423.56	433.16
40	379.92	377.19	370.67	373.69	370.67	361.64	365.77	359.47	363.46	362.34	368.43	374.60	385.10
45	331.17	331.66	327.03	327.31	319.61	311.27	309.80	316.81	320.66	320.45	318.91	323.88	333.62
50	286.20	286.13	277.79	270.16	264.06	251.88	252.44	257.06	263.57	272.26	274.15	276.04	281.36
55	238.85	231.42	223.65	213.14	204.52	192.55	195.49	199.48	212.23	222.25	224.77	228.69	232.05
60	190.72	182.74	168.52	158.85	153.88	146.04	149.19	149.68	160.18	171.88	178.47	184.56	189.39
65	146.95	135.32	123.76	121.38	116.12	107.58	109.96	111.36	119.07	124.74	136.09	144.28	146.67
70	105.34	100.01	95.39	89.51	89.93	85.23	82.08	85.44	87.83	91.68	96.93	103.59	107.65
75	76.34	73.75	69.75	66.32	62.89	62.12	63.59	63.87	61.98	68.98	71.65	72.21	73.61
80	48.11	49.30	52.80	51.33	51.33	46.29	48.67	46.43	44.26	47.55	46.50	45.24	44.61
85	33.68	34.17	35.99	34.66	37.32	33.54	35.15	34.10	33.12	32.49	28.71	24.92	24.43
90	19.67	21.28	24.15	27.38	25.20	22.61	24.36	21.49	24.57	20.44	18.62	13.51	8.53
95	9.51	12.25	11.13	18.69	17.57	14.70	15.89	14.42	12.04	11.97	8.25	8.18	0.27
100	2.37	6.01	9.86	10.42	11.34	10.99	10.78	8.46	6.78	5.73	1.95	0.34	2.37
105	0.97	1.60	3.21	8.18	3.28	4.12	3.14	4.96	4.05	0.27	1.67	0.27	0.69
110	1.11	1.25	-0.57	0.69	3.63	3.35	2.09	1.95	1.32	1.74	0.06	2.58	2.93
115	1.67	3.63	4.26	4.40	2.93	0.83	2.23	3.98	0.62	4.54	3.07	1.60	-0.22
120	2.72	5.31	2.58	1.46	3.49	3.00	1.81	2.23	2.86	2.65	1.46	2.23	1.46
125	1.67	1.95	2.09	3.98	2.86	2.79	1.60	0.27	3.77	3.91	3.56	1.67	1.74
130	4.05	7.55	3.98	3.00	0.41	3.91	1.67	4.12	3.70	0.90	3.28	4.12	4.12

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVD18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

Luminous Intensity Data (Continued)

GWC	260	270	280	290	300	310	320	330	340	350	360
0	615.21	618.08	615.91	615.42	617.03	615.49	615.98	619.90	615.00	614.29	615.84
5	612.75	611.14	611.35	611.98	609.67	609.39	611.98	611.56	611.00	610.65	614.79
10	597.55	601.55	599.31	600.57	598.39	599.10	598.11	595.45	595.94	595.03	599.73
15	583.83	580.39	582.42	580.53	578.99	576.82	574.58	571.08	569.33	569.26	570.17
20	554.69	558.33	558.33	554.13	549.64	547.12	536.75	536.96	530.38	528.14	535.14
25	525.06	525.41	527.23	520.78	515.18	506.98	498.30	494.38	486.11	488.35	493.26
30	484.43	486.74	485.13	481.91	470.56	460.68	454.94	450.46	446.53	443.52	450.74
35	442.40	445.20	443.66	437.15	423.07	413.19	407.66	403.31	401.28	400.58	406.96
40	396.66	398.69	397.85	386.92	374.04	364.16	364.23	361.99	359.47	359.68	366.61
45	343.36	352.46	344.55	336.91	325.84	321.01	316.95	316.81	314.50	313.73	320.52
50	294.95	302.52	292.99	281.43	272.19	274.99	267.50	269.60	260.84	258.04	264.34
55	242.98	247.11	241.09	237.03	229.11	228.83	223.51	213.98	202.70	196.96	203.96
60	193.74	200.74	191.21	188.06	183.86	183.86	169.71	159.41	151.99	152.97	155.56
65	148.63	155.77	147.09	145.82	143.09	135.95	125.72	122.08	115.07	113.60	116.83
70	109.33	108.00	107.44	107.79	101.21	100.01	91.61	92.10	84.39	85.65	90.84
75	70.59	73.33	71.30	71.09	68.49	70.24	66.04	62.40	66.74	61.70	66.04
80	37.88	39.56	36.97	40.05	43.63	45.31	46.50	48.67	47.27	47.62	48.88
85	14.28	10.64	12.25	22.33	26.05	28.01	31.86	31.86	33.12	31.65	38.30
90	2.58	-1.34	3.91	9.23	14.28	18.20	17.99	22.26	24.08	24.15	24.29
95	1.53	2.23	1.74	2.86	4.40	7.06	8.53	13.37	15.12	15.89	16.31
100	3.28	0.34	1.81	0.62	0.76	0.69	7.48	5.59	7.97	10.63	9.79
105	1.04	1.04	1.18	0.97	3.49	1.74	1.25	1.25	6.22	4.19	4.05
110	-0.01	2.37	1.46	2.51	1.60	2.16	-0.43	2.79	1.04	1.95	4.40
115	2.37	3.14	0.41	0.27	0.90	3.14	2.02	5.66	2.02	3.70	2.30
120	4.54	1.46	2.02	0.83	3.21	4.75	2.58	-0.57	3.84	4.47	3.14
125	4.26	4.12	3.35	2.58	2.44	1.39	1.88	4.05	2.02	4.19	3.14
130	0.69	4.75	2.16	3.28	5.94	3.77	4.82	5.03	2.72	3.63	4.68

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDX18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

Luminous Flux Table

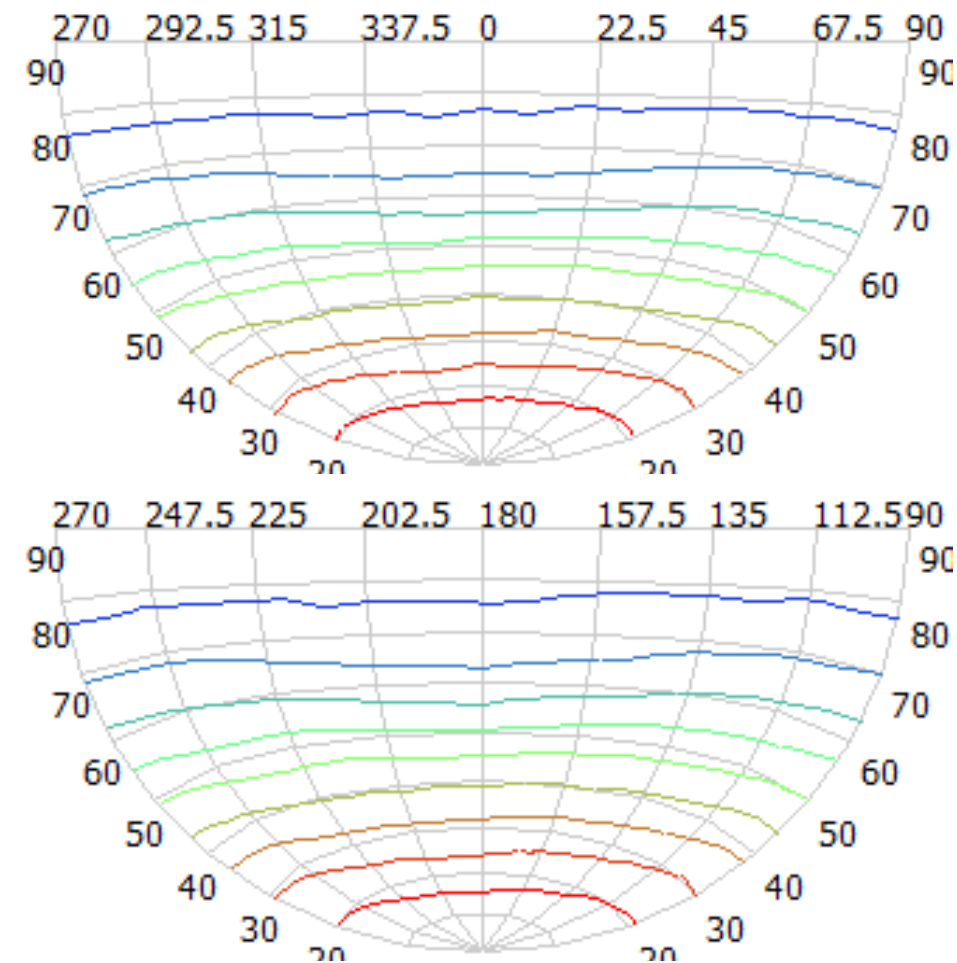
Total Lamp Lumens: 1436
 Luminaire Efficiency (lm/W)1435.62
 CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	3.68	3.68	0.26	0.26
5	29.20	32.88	2.29	2.29
10	56.87	89.75	6.25	6.25
15	81.57	171.32	11.93	11.93
20	101.98	273.30	19.04	19.04
25	117.57	390.87	27.23	27.23
30	127.98	518.85	36.14	36.14
35	132.99	651.83	45.41	45.40
40	133.08	784.92	54.68	54.67
45	127.83	912.75	63.58	63.58
50	116.86	1029.61	71.72	71.72
55	101.60	1131.21	78.80	78.80
60	84.23	1215.44	84.66	84.66
65	67.11	1282.55	89.34	89.34
70	51.14	1333.69	92.90	92.90
75	37.21	1370.89	95.49	95.49
80	25.29	1396.18	97.25	97.25
85	15.88	1412.06	98.36	98.36
90	9.20	1421.26	99.00	99.00
95	5.00	1426.26	99.35	99.35
100	2.65	1428.91	99.53	99.53
105	1.23	1430.14	99.62	99.62
110	1.02	1431.16	99.69	99.69
115	1.14	1432.29	99.77	99.77
120	1.22	1433.52	99.85	99.85
125	1.32	1434.83	99.95	99.95
130	0.78	1435.62	100.00	100.00

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDTV18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

IsoCandela (Type C)

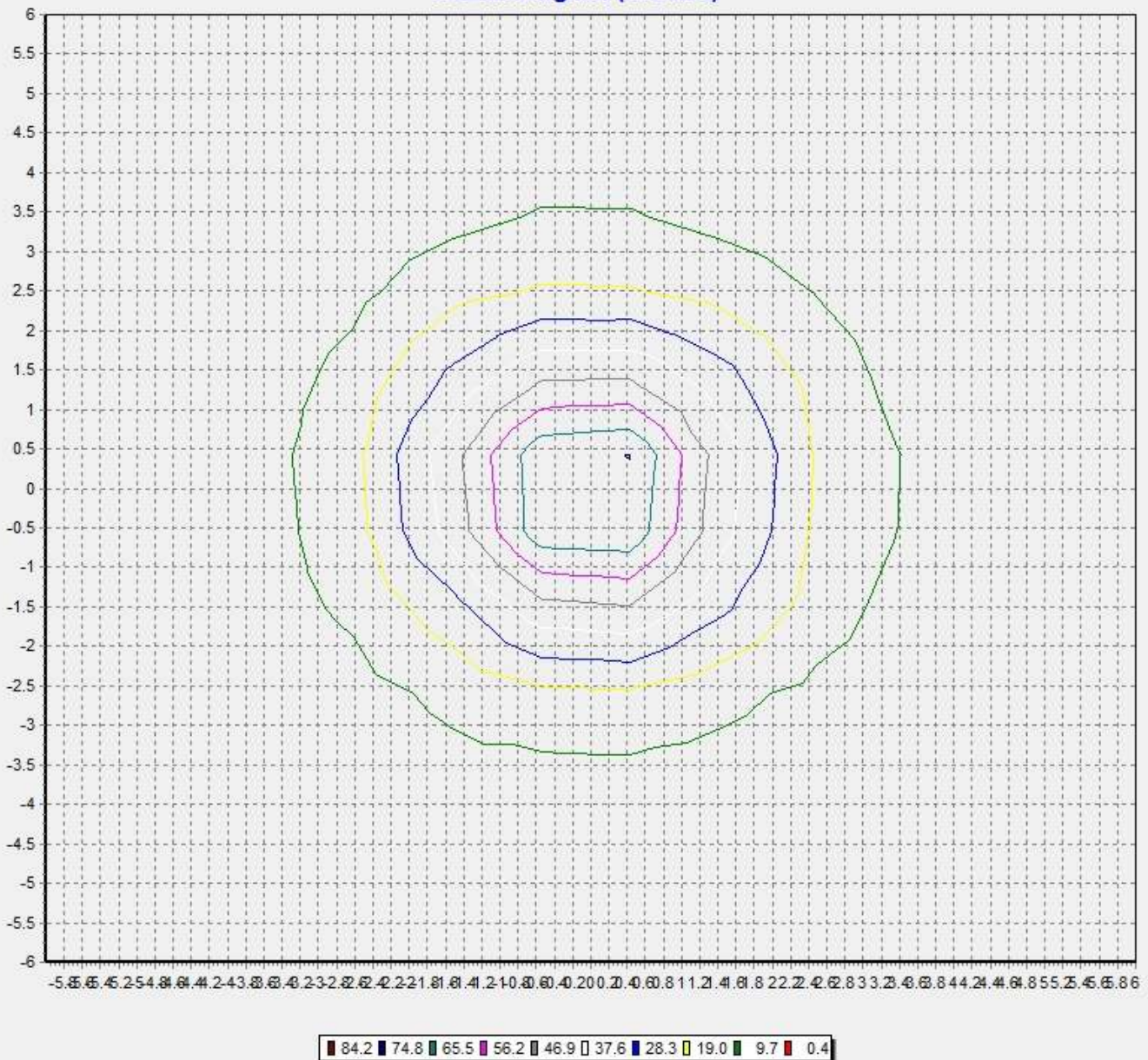


 -2 ~ 60	 309 ~ 371
 60 ~ 122	 371 ~ 433
 122 ~ 185	 433 ~ 496
 185 ~ 247	 496 ~ 558
 247 ~ 309	 558 ~ 620

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\H18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

IsoLux Diagram (Ground)



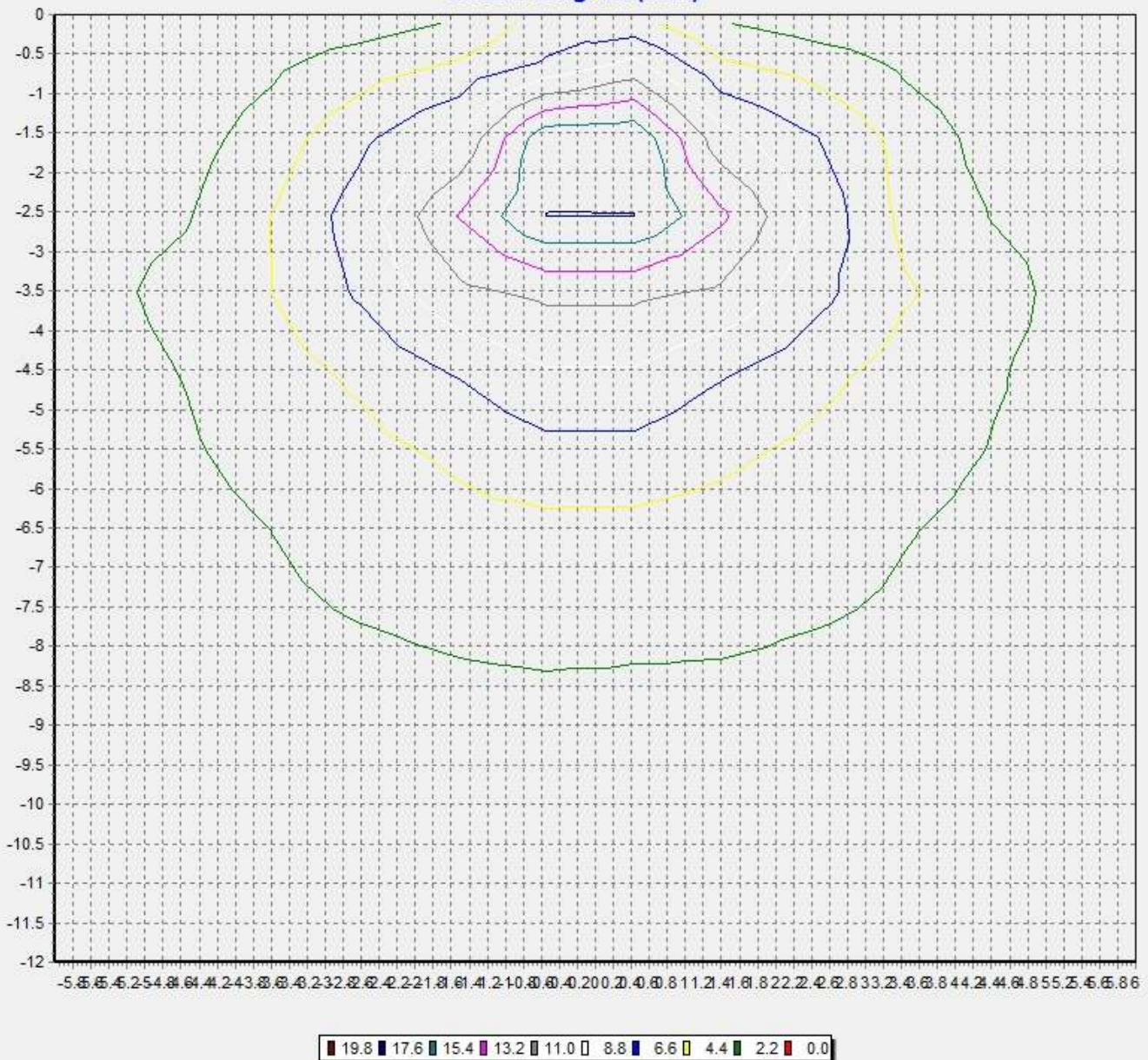
Pole Height (m): 2.7

Area Width (m): 12

Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDTV18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

IsoLux Diagram (Wall)



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

Luminaire

Lamp

Report

20150914-0001

No. of lamps	1	Voltage (V)	23.92	Filename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 27K-24V -1 DJ1507 VER1.0.jdt
Lamp flux (lm)	1436	Current (A)	0.718	Operator	
Total flux (lm)	1436	Power Factor	1	Date	2015-09-14 오후 12:47:18

Illuminance Levels (Ground)

6.00	0.50	0.67	0.69	0.91	1.51	1.79	1.93	1.75	1.50	0.88	0.67	0.62	0.44
5.00	0.67	0.72	1.39	1.99	2.14	3.37	3.61	3.28	2.10	1.98	1.32	0.65	0.62
4.00	0.59	1.37	1.69	3.30	3.92	6.55	7.22	6.40	3.85	3.22	1.49	1.30	0.57
3.00	0.79	1.71	3.25	4.60	7.73	11.36	13.56	11.05	7.58	4.28	3.14	1.64	0.76
2.00	1.25	1.66	3.58	7.28	16.73	24.67	34.51	23.99	16.16	7.06	3.37	1.60	1.21
1.00	1.38	2.59	5.54	10.57	23.71	47.12	65.95	45.83	23.28	10.39	5.50	2.58	1.33
0.00	1.33	2.61	5.77	11.31	31.04	63.22	84.48	64.24	31.13	11.77	6.07	2.77	1.42
-1.00	1.29	2.44	5.22	9.85	22.89	44.91	65.49	46.44	22.97	10.25	5.36	2.51	1.32
-2.00	1.12	1.52	3.18	6.63	15.88	23.44	33.74	23.95	16.12	6.98	3.38	1.59	1.20
-3.00	0.70	1.52	2.98	4.06	7.23	10.58	13.24	10.84	7.39	4.38	3.11	1.62	0.75
-4.00	0.53	1.21	1.39	3.05	3.61	6.12	7.01	6.30	3.71	3.15	1.58	1.30	0.56
-5.00	0.57	0.59	1.23	1.86	1.98	3.11	3.41	3.19	1.99	1.90	1.32	0.67	0.62
-6.00	0.41	0.57	0.62	0.82	1.41	1.65	1.84	1.67	1.43	0.85	0.65	0.62	0.46
-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.): 84.5

All illuminance level values are in lux.

Illum. (Min.): 0.41

Illum. Avg.: 8.16

Total Optical Solution Provider

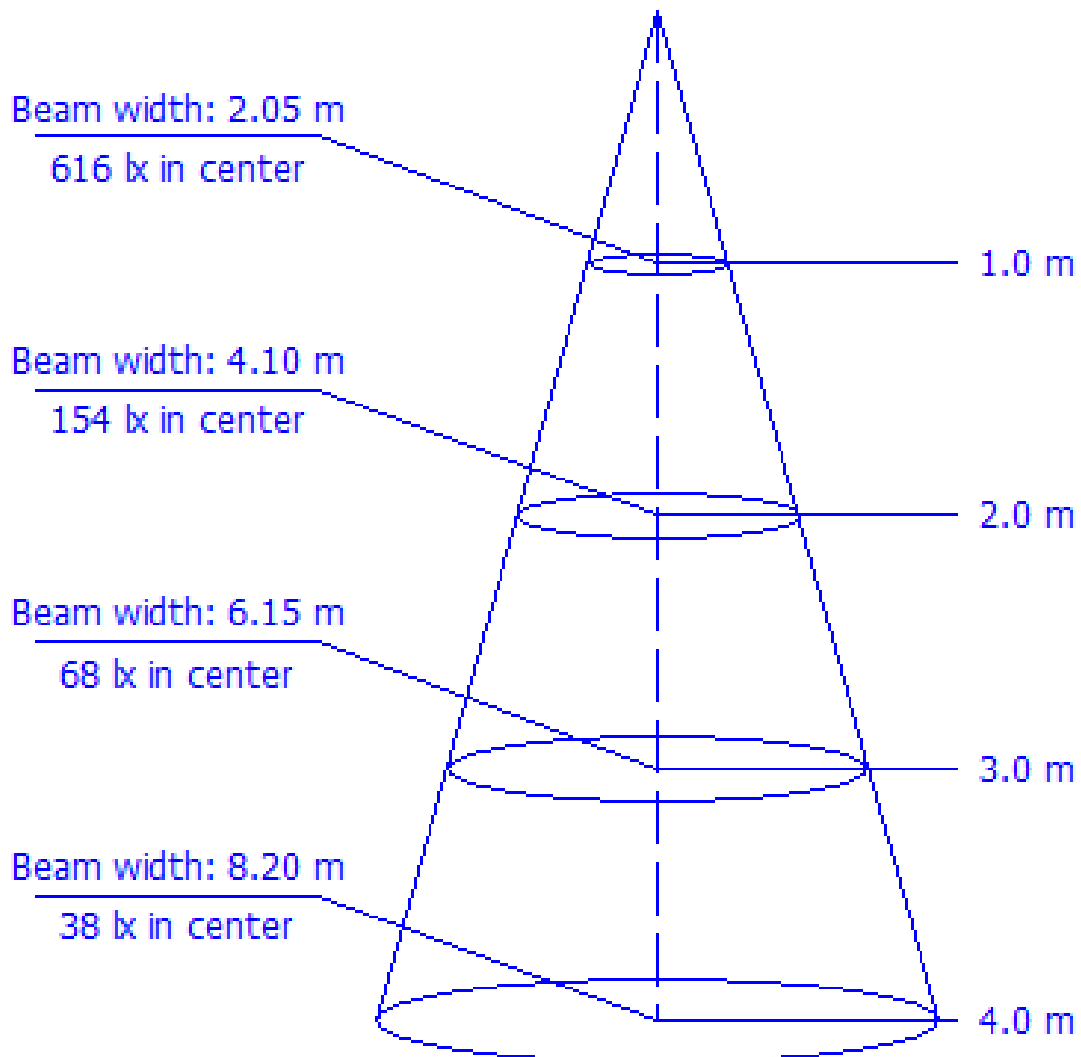


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Luminaire

Lamp	Report			20150914-0001
No. of lamps	Filename C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HDTV18 27K-24V -1 DJ1507 VER1.0.jdt			
Lamp flux (lm)	Operator	Current (A)	0.718	
Total flux (lm)	Date136	Power Factor	1	2015-09-14 오후 12:47:18

Illuminance Cone Diagram



Beam Angle = 91 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp				Report				20150914-0001			
No. of lamps	1	Voltage (V)	23.92	Filename	C:\Users\WFEELUX\Desktop\완료 리포트\Data\150911\HVDV18 27K-24V -1 DJ1507 VER1.0.jdt						
Lamp flux (lm)	1436	Current (A)	0.718	Operator							
Total flux (lm)	1436	Power Factor	1	Date	2015-09-14 오후 12:47:18						

Coefficient of Utilization

Refl. Ceiling (%)	80%	80%	80%	70%	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%	50%	30%
Eff. Floor Cavity Refl.	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Room CR 0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.98	
Room CR 1	1.04	1.00	0.96	1.01	0.98	0.95	0.97	0.94	0.91	0.93	0.91	0.88	0.89	0.87	0.85	0.83	
Room CR 2	0.92	0.85	0.80	0.90	0.84	0.79	0.86	0.81	0.77	0.82	0.78	0.75	0.79	0.76	0.73	0.71	
Room CR 3	0.81	0.74	0.67	0.80	0.72	0.67	0.76	0.70	0.65	0.74	0.68	0.64	0.71	0.67	0.63	0.61	
Room CR 4	0.73	0.64	0.58	0.71	0.63	0.57	0.69	0.62	0.57	0.66	0.60	0.56	0.64	0.59	0.55	0.53	
Room CR 5	0.65	0.57	0.51	0.64	0.56	0.50	0.62	0.55	0.50	0.60	0.54	0.49	0.58	0.53	0.48	0.46	
Room CR 6	0.59	0.51	0.45	0.58	0.50	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.53	0.47	0.43	0.41	
Room CR 7	0.54	0.46	0.40	0.53	0.45	0.39	0.51	0.44	0.39	0.50	0.44	0.39	0.48	0.43	0.38	0.36	
Room CR 8	0.49	0.41	0.36	0.49	0.41	0.35	0.47	0.40	0.35	0.46	0.40	0.35	0.45	0.39	0.35	0.33	
Room CR 9	0.45	0.38	0.32	0.45	0.37	0.32	0.44	0.37	0.32	0.42	0.36	0.32	0.41	0.36	0.31	0.30	
Room CR 10	0.42	0.34	0.29	0.42	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.29	0.39	0.33	0.29	0.27	