

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 : 20150421

2. Purpose of Report : Test

3. Test Standard / Item : LED / HDV24 40K-24V -1

4. Test Period : 20150421 ~ 20150421

5. Test Environment

Ambient Temp. : (15.42 +- 3) °C

Relative Humidity : (43.85 +- 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
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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
20150422-0001	FEELUX		LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.3770, 0.3800	
Correlated Color Temperature	K	4122	
Ra	-	89.17	
Power Factor	%	1.000	
Input Voltage	V	23.910	
Input Current	A	0.947	
Input Watt	W	22.64	
Lamp Flux	lm	2145.3	
Efficient	lm/W	94.75	
Illuminance	lx	879	1 m
		220	2 m
		98	3 m

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

Sample photo

Click to load image

Luminaire

Lamp		Report	20150422-0001	
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\WHDV 24W 40K -1.jdt	
Lamp flux (lm)	2145	Operator	Current (A)	0.947
Total flux (lm)	2145	Date	Power Factor	1
				2015-04-22 오전 11:04:17

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120
0	878.92	877.94	877.50	876.54	876.12	876.56	876.70	877.15	876.97	877.15	877.27	878.03	878.17
5	876.25	874.95	873.34	872.73	872.96	873.78	873.44	872.67	873.83	873.78	873.70	874.60	874.99
10	861.54	859.43	858.91	858.63	859.15	859.13	859.77	859.41	860.44	860.32	861.02	860.68	860.87
15	833.92	831.17	833.83	833.10	835.13	835.08	836.31	836.37	838.07	837.68	838.37	836.77	837.54
20	794.31	792.15	796.76	796.84	800.00	800.55	802.95	802.80	805.47	804.65	805.40	803.52	803.88
25	744.09	742.49	749.74	750.83	754.04	756.69	761.11	761.07	764.02	762.58	763.71	761.03	760.14
30	688.04	686.89	694.51	695.33	700.20	702.50	708.19	710.42	714.45	712.95	714.37	709.36	705.94
35	626.79	624.79	633.58	634.43	639.63	641.40	649.24	652.00	657.19	655.79	656.98	650.54	644.80
40	561.30	559.31	565.84	566.89	572.43	575.00	581.69	585.47	593.09	591.93	593.57	585.01	578.40
45	489.32	487.81	493.96	495.94	503.21	504.71	511.76	515.99	525.16	525.10	524.88	514.97	508.46
50	404.08	403.28	410.28	418.78	429.79	432.65	440.61	443.63	453.29	455.34	453.62	442.94	438.08
55	317.06	317.12	324.06	334.43	353.66	362.41	369.43	372.62	381.36	383.14	381.42	372.24	367.98
60	243.47	243.04	249.85	258.93	276.14	289.14	301.17	303.44	311.07	314.43	310.90	303.69	300.93
65	184.62	183.48	189.42	196.81	210.15	220.74	234.72	237.69	243.97	247.14	244.56	238.19	238.09
70	141.04	139.99	143.92	147.90	156.64	163.29	173.57	177.13	181.05	181.79	181.71	178.26	177.48
75	106.92	106.87	109.18	110.66	115.36	116.47	122.17	122.24	123.77	122.80	124.31	123.62	124.31
80	80.67	79.89	81.52	81.16	82.70	80.54	79.37	74.59	72.47	68.77	72.77	75.96	82.14
85	59.58	58.41	58.60	57.25	56.49	52.42	47.51	39.69	31.60	26.72	32.29	40.49	49.59
90	41.71	40.80	41.14	38.46	36.33	31.18	25.73	17.09	8.00	2.44	8.46	17.56	25.98
95	27.82	27.13	26.34	23.98	21.10	16.18	10.36	4.76	2.70	3.24	2.55	5.08	11.02
100	16.93	16.54	15.37	13.13	10.48	6.28	2.93	2.77	2.95	2.68	3.15	2.54	3.51
105	8.57	8.33	7.50	5.49	3.96	3.13	3.33	2.79	3.24	3.43	3.28	3.67	3.05
110	3.39	3.65	3.17	3.56	3.92	3.70	3.98	3.51	3.92	3.98	3.78	3.51	4.26
115	3.75	4.05	4.17	3.99	3.99	4.32	3.73	4.30	4.16	5.03	4.50	4.63	4.09
120	4.12	4.25	4.64	4.80	3.83	4.94	4.33	4.54	4.75	4.66	5.14	5.15	4.47
125	5.32	5.62	4.54	4.87	5.02	5.07	4.68	5.30	4.59	5.51	5.36	4.74	5.62
130	6.08	6.23	5.20	5.36	5.18	5.77	5.88	5.62	5.81	5.53	6.25	5.73	6.79

Luminaire

Lamp	Report				20150422-0001
No. of lamps	1	Filename C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDDV 24W 40K -1.jdt			
Lamp flux (lm)	2145	Operator	Current (A)	0.947	
Total flux (lm)	2145	Date	Power Factor	1	2015-04-22 오전 11:04:17

Luminous Intensity Data (Continued)

GWC	130	140	150	160	170	180	190	200	210	220	230	240	250
0	878.79	878.21	878.91	878.95	878.32	878.92	877.94	877.50	876.54	876.12	876.56	876.70	877.15
5	875.41	875.04	875.29	875.11	873.56	871.19	870.55	869.45	870.28	869.38	869.85	869.11	870.44
10	860.20	860.98	859.85	860.46	858.31	852.89	853.72	851.05	852.36	851.80	852.91	852.60	853.72
15	835.56	835.05	832.58	833.93	831.43	822.04	823.00	820.65	821.66	821.99	824.35	824.84	827.72
20	799.54	798.01	794.46	794.18	791.23	778.61	780.39	776.14	780.75	782.07	786.85	787.73	791.52
25	753.38	750.67	744.62	743.49	740.42	725.93	727.25	722.55	728.36	730.90	737.93	741.15	745.86
30	697.18	693.28	686.40	685.47	682.83	667.15	669.12	664.63	668.88	671.60	680.16	685.13	692.33
35	633.96	630.71	624.23	624.68	621.33	602.61	605.41	601.59	606.18	607.84	615.64	621.74	630.75
40	567.93	564.97	558.75	558.76	554.71	534.66	537.15	533.89	539.09	541.29	547.97	552.92	564.98
45	498.73	496.74	490.33	489.96	485.48	462.66	466.41	464.51	470.89	471.32	478.71	482.77	493.58
50	429.58	426.74	420.77	417.76	410.26	380.89	386.81	390.24	400.85	402.85	409.30	412.49	421.38
55	361.19	358.77	346.11	337.35	326.12	297.58	303.33	308.94	324.22	333.25	341.35	342.94	350.81
60	294.30	286.28	270.45	260.85	251.00	227.67	233.25	237.71	250.89	261.60	275.77	277.01	283.30
65	228.35	218.51	205.72	199.29	192.10	173.91	177.45	180.61	190.18	197.79	209.97	215.17	220.06
70	168.91	163.21	154.68	150.94	145.91	132.69	134.91	136.52	142.48	146.61	153.60	156.91	161.01
75	121.48	120.30	116.15	113.43	110.25	100.02	101.26	101.98	105.98	106.27	108.48	107.33	107.79
80	82.77	84.75	84.61	84.65	83.03	73.84	74.61	75.34	75.94	74.00	73.56	68.18	63.24
85	55.21	58.60	59.35	60.96	60.48	53.78	53.62	53.48	52.43	49.18	45.85	38.91	31.07
90	31.91	37.59	39.06	41.71	41.93	36.51	36.66	35.50	34.58	30.28	24.95	18.84	11.13
95	16.67	21.94	24.57	26.57	27.63	23.19	22.81	21.99	20.61	16.42	12.42	7.16	2.62
100	6.05	10.08	13.20	15.21	15.90	11.69	12.71	12.08	9.35	7.09	3.04	2.35	2.59
105	3.20	3.99	5.63	6.79	7.47	4.59	4.59	4.06	4.08	3.19	2.84	2.62	3.29
110	3.78	3.62	4.01	4.53	3.50	2.93	3.15	3.44	2.92	4.03	3.89	3.26	3.71
115	3.99	3.92	4.66	3.55	3.82	4.06	3.65	4.23	3.73	3.82	3.98	4.45	3.89
120	4.85	5.05	5.28	4.19	5.01	4.57	4.20	4.95	3.70	5.16	4.74	4.34	4.80
125	5.52	4.73	4.96	4.72	5.74	5.49	5.22	4.52	5.02	4.91	5.17	5.26	4.85
130	5.73	5.86	5.68	6.04	5.78	5.50	6.66	5.81	5.57	5.66	5.37	5.43	5.43

Luminaire

Lamp		Report	20150422-0001			
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDTV 24W 40K -1.jdt			
Lamp flux (lm)	2145	Operator	Current (A)	0.947		
Total flux (lm)	2145	Date	Power Factor	1	2015-04-22 오전 11:04:17	

Luminous Intensity Data (Continued)

GWC	260	270	280	290	300	310	320	330	340	350	360
0	876.97	877.15	877.27	878.03	878.17	878.79	878.21	878.91	878.95	878.32	878.92
5	870.89	870.41	871.12	872.13	871.93	872.06	871.87	871.61	870.67	870.91	876.25
10	853.58	853.96	854.83	855.08	854.74	855.11	854.29	854.61	852.82	852.56	861.54
15	827.33	829.52	827.85	829.36	827.98	827.73	825.33	825.92	823.05	822.62	833.92
20	791.70	793.49	792.35	793.43	791.03	790.76	787.10	785.83	781.31	781.00	794.31
25	745.85	749.68	747.75	747.81	744.96	742.24	738.19	737.43	731.50	730.44	744.09
30	694.44	697.20	694.64	694.44	689.31	686.64	681.41	680.69	674.96	673.40	688.04
35	633.93	637.50	634.55	633.16	625.63	623.95	617.99	616.27	610.50	610.45	626.79
40	568.25	572.54	568.04	565.10	557.57	554.96	548.88	547.82	541.39	540.62	561.30
45	499.06	503.21	497.51	493.36	484.82	483.70	477.06	474.36	465.22	462.94	489.32
50	427.97	432.53	425.26	421.46	414.05	412.28	402.55	392.55	378.45	373.25	404.08
55	356.00	361.23	353.41	350.38	344.16	339.71	322.43	309.49	294.65	291.21	317.06
60	286.25	292.67	284.52	282.20	276.02	266.44	249.73	238.34	226.05	221.28	243.47
65	220.47	226.47	219.29	218.36	210.37	201.98	187.23	179.47	171.55	168.51	184.62
70	159.28	162.91	159.03	159.52	152.77	147.61	138.79	135.33	130.23	129.50	141.04
75	104.21	105.33	103.78	106.00	104.01	104.42	101.59	100.37	98.13	97.59	106.92
80	55.51	54.58	56.16	62.92	66.74	71.55	71.92	73.32	72.31	72.76	80.67
85	20.02	16.19	21.07	31.98	39.29	45.39	48.90	50.77	51.52	52.28	59.58
90	3.30	1.71	4.28	12.13	19.89	26.41	30.44	34.14	35.08	36.65	41.71
95	1.79	1.74	2.50	2.63	7.23	12.70	16.64	20.62	21.83	23.95	27.82
100	2.78	2.83	2.27	2.82	2.41	4.24	7.17	10.21	11.65	13.19	16.93
105	3.42	3.72	3.48	3.27	3.08	2.93	2.51	3.73	4.41	5.47	8.57
110	3.98	3.68	3.46	3.33	3.90	4.04	3.61	3.41	2.99	3.18	3.39
115	4.33	4.61	4.12	4.13	4.07	3.71	4.34	3.95	4.00	4.12	3.75
120	4.01	4.99	4.35	4.77	4.65	4.24	4.94	4.10	4.46	4.60	4.12
125	5.23	4.94	5.14	5.19	5.00	5.06	4.98	4.48	5.14	4.92	5.32
130	5.73	5.79	5.47	5.82	5.98	5.56	5.59	5.43	5.61	5.68	6.08

Luminaire

Lamp		Report			20150422-0001
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDTV 24W 40K -1.jdt		
Lamp flux (lm)	2145	Operator	Current (A)	0.947	
Total flux (lm)	2145	Date	Power Factor	1	2015-04-22 오전 11:04:17

Luminous Flux Table

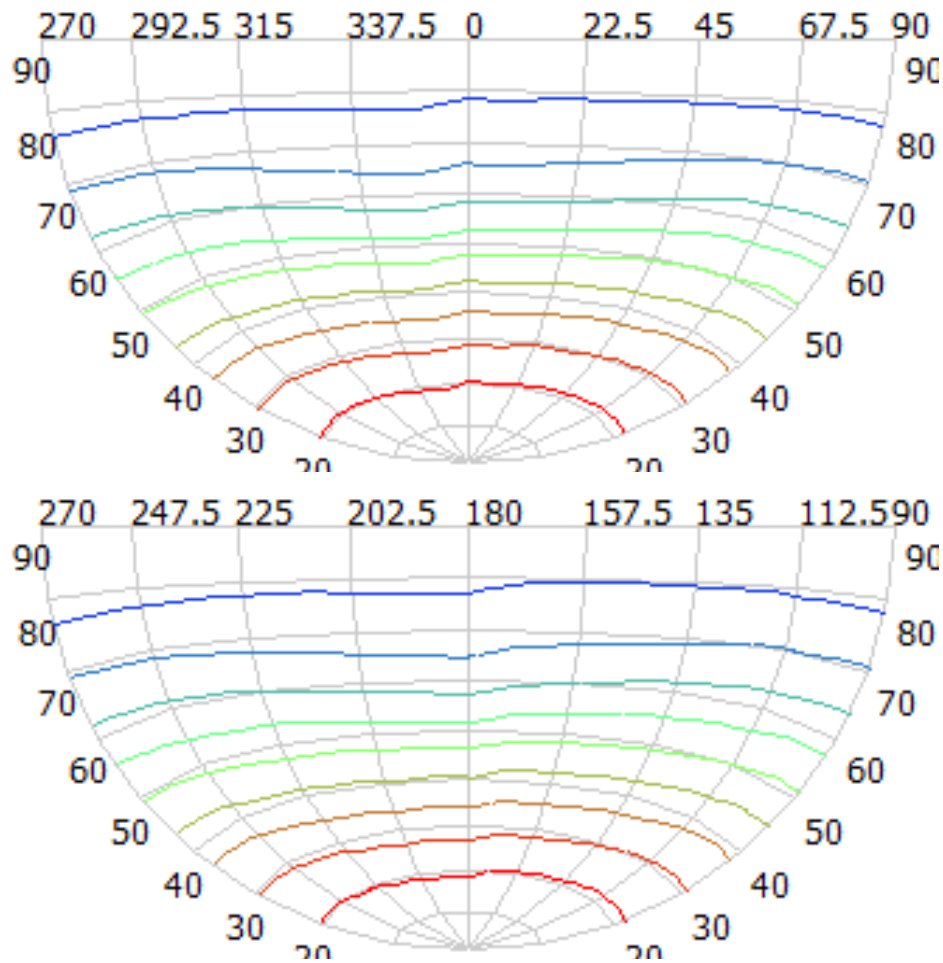
Total Lamp Lumens: 2145
 Luminaire Efficiency (lm/W) 2145.29
 CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	5.25	5.25	0.24	0.24
5	41.68	46.93	2.19	2.19
10	81.54	128.47	5.99	5.99
15	117.77	246.24	11.48	11.48
20	148.62	394.86	18.41	18.41
25	172.71	567.57	26.46	26.46
30	189.22	756.79	35.28	35.28
35	197.70	954.49	44.49	44.49
40	198.01	1152.51	53.72	53.72
45	190.51	1343.01	62.60	62.60
50	175.15	1518.17	70.77	70.77
55	153.31	1671.47	77.91	77.91
60	128.43	1799.90	83.90	83.90
65	103.25	1903.15	88.71	88.71
70	79.65	1982.81	92.43	92.43
75	58.46	2041.27	95.15	95.15
80	40.02	2081.28	97.02	97.02
85	25.19	2106.48	98.19	98.19
90	14.61	2121.09	98.87	98.87
95	8.17	2129.26	99.25	99.25
100	4.20	2133.46	99.45	99.45
105	2.24	2135.69	99.55	99.55
110	1.87	2137.56	99.64	99.64
115	2.04	2139.61	99.73	99.73
120	2.18	2141.79	99.84	99.84
125	2.28	2144.06	99.94	99.94
130	1.23	2145.29	100.00	100.00

Luminaire

Lamp		Report	20150422-0001		
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDTV 24W 40K -1.jdt		
Lamp flux (lm)	2145	Operator	Current (A)	0.947	
Total flux (lm)	2145	Date	Power Factor	1	2015-04-22 오전 11:04:17

IsoCandela (Type C)



 2 ~ 89	 440 ~ 528
 89 ~ 177	 528 ~ 616
 177 ~ 265	 616 ~ 704
 265 ~ 353	 704 ~ 791
 353 ~ 440	 791 ~ 879

Luminaire

Lamp		Report	20150422-0001			
No. of lamps	1	Filename C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\W150420\HDDV 24W 40K -1.jdt				
Lamp flux (lm)	2145	Operator	Current (A)	0.947		
Total flux (lm)	2145	Date	Power Factor	1		
				2015-04-22 오전 11:04:17		

Illuminance Levels (Ground)

6.00	0.78	1.04	1.09	1.44	2.33	2.72	2.88	2.65	2.30	1.35	1.04	0.96	0.69
5.00	1.04	1.15	2.15	3.07	3.27	4.98	5.31	4.93	3.19	3.03	2.01	1.01	0.96
4.00	0.97	2.13	2.63	5.02	6.00	9.67	10.60	9.56	5.86	4.88	2.30	1.98	0.89
3.00	1.29	2.75	4.97	7.02	11.71	16.96	19.84	16.83	11.60	6.48	4.75	2.53	1.18
2.00	2.03	2.73	5.63	11.14	25.05	36.69	49.50	36.49	24.88	10.61	5.16	2.52	1.88
1.00	2.26	4.16	8.66	16.04	35.57	69.38	94.52	68.99	35.82	15.68	8.41	4.02	2.11
0.00	2.08	4.04	8.76	16.98	46.08	92.67	120.56	94.04	47.64	17.99	9.30	4.31	2.22
-1.00	2.03	3.78	7.97	14.91	33.98	66.58	93.57	68.10	34.69	14.96	7.80	3.69	1.96
-2.00	1.79	2.42	4.97	10.15	23.56	34.76	48.32	35.42	24.26	10.17	4.96	2.36	1.78
-3.00	1.13	2.41	4.52	6.20	10.86	15.80	18.92	16.12	11.05	6.50	4.57	2.42	1.11
-4.00	0.85	1.88	2.20	4.61	5.51	9.02	10.05	9.11	5.56	4.68	2.33	1.91	0.84
-5.00	0.90	0.96	1.90	2.80	2.96	4.58	4.99	4.66	2.97	2.85	1.93	1.00	0.92
-6.00	0.65	0.90	0.96	1.26	2.11	2.47	2.68	2.48	2.15	1.27	0.97	0.92	0.69
	-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.): 121

Illum. (Min.): 0.65

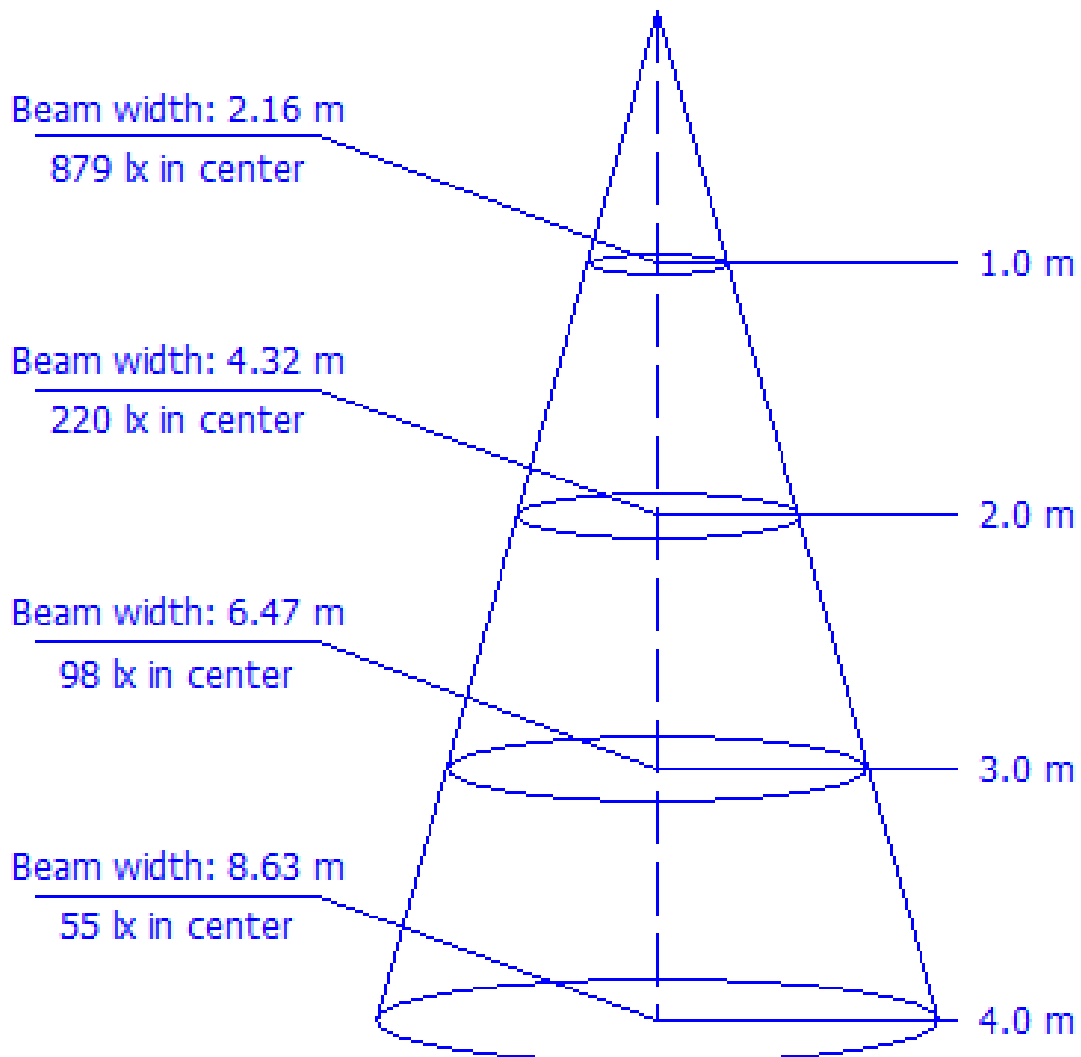
Illum. Avg.: 12.1

All illuminance level values are in lux.

Luminaire

Lamp		Report			20150422-0001
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\Startup\Data\150420\HDTV 24W 40K -1.jdt		
Lamp flux (lm)	2145	Operator	Current (A)	0.947	
Total flux (lm)	2145	Date	Power Factor	1	2015-04-22 오전 11:04:17

Illuminance Cone Diagram



Beam Angle = 94 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp

Report

20150422-0001

No. of lamps 1 Voltage (V) 23.91
Lamp flux (lm) 2145 Current (A) 0.947
Total flux (lm) 2145 Power Factor 1

Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150420\HDV 24W 40K -1.jdt
Operator
Date 2015-04-22 오전 11:04:17

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	1.18	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	1.02	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	0.80	0.89	0.83	0.78	0.86	0.81	0.76	0.82	0.78	0.74	0.79	0.76	0.73	0.70
Room CR 3	0.81	0.73	0.67	0.79	0.72	0.66	0.76	0.70	0.65	0.73	0.68	0.64	0.71	0.66	0.62	0.60
Room CR 4	0.72	0.64	0.57	0.71	0.63	0.57	0.68	0.61	0.56	0.66	0.60	0.55	0.63	0.58	0.54	0.52
Room CR 5	0.65	0.56	0.50	0.64	0.56	0.50	0.62	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	0.42	0.40
Room CR 7	0.54	0.45	0.39	0.53	0.45	0.39	0.51	0.44	0.39	0.49	0.43	0.38	0.48	0.42	0.38	0.36
Room CR 8	0.49	0.41	0.35	0.48	0.40	0.35	0.47	0.40	0.35	0.45	0.39	0.34	0.44	0.38	0.34	0.32
Room CR 9	0.45	0.37	0.32	0.44	0.37	0.32	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.29
Room CR 10	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.29	0.39	0.33	0.28	0.38	0.32	0.28	0.27