

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 / HDV12 40K-24V-1

4. Test Period : 20150421 ~ 20150421

5. Test Environment

Ambient Temp. : (18.86 +- 3) °C

Relative Humidity : (27.19 +- 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
20150421-0007	FEELUX		LED

Test Item	Unit	Result	Memo
Beam Distribution Test	-	See attachment	
ATHD	%	0.0	
CIE 1931 Cxy		0.3768, 0.3696	
Correlated Color Temperature	K	4059	
Ra	-	86	
Power Factor	%	1.000	
Input Voltage	V	23.950	
Input Current	A	0.470	
Input Watt	W	11.26	
Lamp Flux	lm	1069.4	
Efficient	lm/W	95.00	
Illuminance	lx	435	1 m
		109	2 m
		48	3 m

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

Sample photo

Click to load image

Luminaire

Lamp		Report	20150421-0007											
No. of lamps	1	Filename C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\WHDV 12W 40K -1.jdt												
Lamp flux (lm)	1069	Operator	Current (A)	0.47										
Total flux (lm)	1069	Date	Power Factor	1										
2015-04-21 오후 7:09:54														

Luminous Intensity Data

GWC	0	10	20	30	40	50	60	70	80	90	100	110	120
0	435.44	434.69	435.11	435.17	434.61	435.33	434.55	435.95	434.90	435.14	435.00	435.08	435.44
5	432.77	432.39	431.77	432.19	432.01	433.10	433.10	433.01	433.42	433.91	434.25	434.51	434.40
10	423.68	423.96	423.38	424.00	424.16	425.30	425.20	426.07	426.58	426.81	428.30	428.25	428.38
15	407.91	408.02	409.10	408.81	410.81	412.20	413.62	413.50	415.14	415.26	415.98	416.69	417.60
20	386.71	385.94	387.57	387.96	391.46	393.46	396.79	397.14	398.62	399.09	400.26	400.08	399.78
25	362.74	361.16	362.53	363.47	366.95	369.76	373.47	375.24	378.12	378.29	380.52	379.27	378.29
30	336.29	335.82	337.35	337.34	339.57	341.59	347.13	349.34	353.00	354.01	355.04	352.86	351.72
35	308.23	307.63	308.72	308.35	310.62	312.45	316.90	320.58	324.05	324.92	326.27	323.61	321.51
40	277.22	275.61	277.67	278.38	279.86	279.94	284.90	287.47	292.57	292.95	294.29	290.50	288.42
45	242.71	241.74	244.19	244.32	247.10	247.22	250.13	253.12	258.92	259.75	260.07	256.10	254.53
50	204.68	204.76	207.58	210.04	212.49	214.22	216.09	217.47	223.23	224.26	225.01	220.47	219.89
55	161.68	162.27	167.86	171.83	178.80	179.96	182.26	182.96	188.11	190.04	188.76	185.80	185.68
60	124.70	125.87	130.39	134.43	143.02	147.15	149.34	149.71	153.30	154.79	154.53	152.20	152.25
65	96.02	96.79	99.94	103.63	109.31	114.47	117.95	118.30	121.01	122.69	121.18	120.61	119.82
70	73.65	74.20	76.32	77.86	82.19	84.67	88.43	88.56	89.06	90.37	89.91	89.70	89.34
75	55.85	55.64	57.49	58.53	59.92	60.98	62.10	61.20	61.05	60.10	62.25	61.78	62.98
80	41.34	42.22	42.91	42.21	42.79	42.22	41.74	37.66	36.06	33.80	36.58	38.05	41.76
85	31.35	29.50	30.28	29.94	29.46	27.29	24.57	19.83	15.52	13.19	16.22	20.67	25.21
90	22.23	21.46	21.38	19.98	18.46	16.13	13.21	8.32	4.32	1.91	4.47	8.88	13.79
95	15.29	13.98	13.76	13.12	11.40	8.99	5.48	2.50	1.62	2.18	1.74	3.14	6.14
100	9.53	9.05	8.10	6.97	5.55	3.57	1.26	1.24	1.67	2.18	1.17	0.80	1.88
105	4.98	4.84	3.93	3.17	1.58	1.55	1.30	1.10	1.54	1.58	1.55	1.71	1.92
110	1.70	1.32	1.54	2.01	2.09	1.66	2.03	2.34	1.75	2.00	1.34	2.03	2.08
115	2.24	2.29	1.79	2.30	2.24	2.20	2.28	1.80	2.20	1.84	1.79	3.08	1.55
120	2.20	2.71	2.11	2.61	2.00	2.42	2.20	2.15	2.31	2.07	2.56	2.17	2.18
125	2.85	2.18	2.63	2.64	2.92	2.74	2.32	2.00	2.59	3.02	2.56	2.21	3.02
130	2.71	3.29	2.81	2.62	2.90	2.60	2.59	2.24	3.27	2.25	2.82	2.88	3.18

Luminaire

Lamp		Report		20150421-0007
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\WHDV 12W 40K -1.jdt	
Lamp flux (lm)	1069	Operator	Current (A)	0.47
Total flux (lm)	1069	Date	Power Factor	1
				2015-04-21 오후 7:09:54

Luminous Intensity Data (Continued)

GWC	130	140	150	160	170	180	190	200	210	220	230	240	250
0	435.51	435.60	435.23	435.40	434.57	435.44	434.69	435.11	435.17	434.61	435.33	434.55	435.95
5	434.22	435.31	434.24	434.58	434.08	432.65	432.86	432.01	432.01	431.54	432.13	431.60	431.65
10	428.00	428.07	427.96	427.88	426.70	423.43	422.92	422.96	423.40	423.24	423.28	422.78	423.74
15	415.85	416.78	414.55	415.00	412.87	407.17	407.29	407.09	408.21	408.58	409.50	409.90	411.12
20	397.99	397.62	395.24	394.65	392.78	385.09	385.90	385.00	386.88	387.43	390.57	391.44	392.61
25	374.74	373.45	370.20	369.78	367.62	359.13	359.74	358.97	361.38	362.85	365.12	367.52	369.89
30	347.15	345.74	343.31	342.46	340.12	331.68	332.34	331.33	333.64	333.89	337.12	339.55	343.07
35	316.87	315.64	313.49	313.93	312.32	303.14	303.78	302.44	304.22	303.81	306.90	307.12	312.36
40	284.36	284.65	282.73	282.67	281.51	270.73	271.47	270.42	271.83	271.47	273.59	273.60	278.40
45	251.79	251.39	248.88	249.37	247.22	234.72	236.45	235.50	238.11	237.88	239.40	239.62	243.18
50	217.93	217.31	213.75	212.48	207.82	191.89	195.25	197.18	202.35	203.96	205.67	204.62	208.02
55	182.65	181.78	174.29	170.29	164.36	150.51	153.29	155.44	163.21	167.59	171.41	170.71	172.92
60	149.42	144.06	136.04	132.62	127.65	116.25	117.86	119.32	125.82	131.34	137.43	138.73	140.11
65	115.04	110.37	104.10	100.73	97.18	89.15	90.64	91.51	95.49	98.77	104.83	107.01	108.35
70	84.73	82.57	78.84	77.52	74.48	68.07	69.13	69.66	72.73	73.52	76.51	78.38	80.33
75	61.56	60.81	59.04	58.94	56.63	51.91	52.71	51.89	53.27	53.95	54.62	53.58	53.18
80	42.97	44.06	43.26	43.60	43.20	38.98	39.46	38.77	38.77	38.10	37.60	34.75	31.70
85	28.44	30.52	30.96	31.60	31.74	28.71	28.21	27.81	27.87	25.65	23.59	19.65	15.23
90	17.69	20.03	21.15	23.00	22.45	20.05	20.98	19.25	17.69	16.02	13.49	10.51	6.57
95	9.34	12.62	13.38	14.63	15.66	12.96	13.19	12.32	10.73	9.22	6.24	3.47	1.48
100	4.22	6.28	7.24	9.35	9.07	8.07	8.04	6.62	6.22	4.74	2.73	0.92	1.27
105	1.32	2.28	3.19	5.19	5.50	3.70	4.24	3.99	2.45	1.35	1.24	1.14	2.24
110	1.99	1.60	1.38	2.53	2.34	1.97	1.39	1.87	1.36	1.68	1.70	0.98	1.43
115	2.08	2.51	1.82	2.30	1.76	1.58	1.87	2.50	2.21	2.04	1.76	1.29	2.32
120	2.52	2.83	2.78	2.19	2.49	2.29	2.60	2.21	2.30	2.97	2.30	2.03	2.23
125	1.64	2.38	2.35	2.38	2.45	2.28	2.50	2.21	2.71	2.42	2.90	2.84	2.12
130	2.83	1.95	3.34	2.67	3.25	2.11	2.46	3.08	3.20	3.39	2.37	2.30	2.71

Luminaire

Lamp		Report		20150421-0007
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDTV 12W 40K -1.jdt	
Lamp flux (lm)	1069	Operator	Current (A)	0.47
Total flux (lm)	1069	Date	Power Factor	1
				2015-04-21 오후 7:09:54

Luminous Intensity Data (Continued)

GWC	260	270	280	290	300	310	320	330	340	350	360
0	434.90	435.14	435.00	435.08	435.44	435.51	435.60	435.23	435.40	434.57	435.44
5	431.57	431.99	431.95	432.22	431.58	430.57	431.24	430.98	430.65	429.87	432.77
10	423.26	423.21	422.28	422.94	422.13	421.94	420.95	420.44	420.27	419.42	423.68
15	410.05	409.93	409.12	408.86	407.73	406.58	405.26	404.60	402.39	401.70	407.91
20	392.30	391.83	390.75	390.61	388.24	386.76	382.79	381.59	379.19	379.07	386.71
25	369.73	370.26	367.74	366.82	363.65	360.73	357.45	356.75	354.42	353.94	362.74
30	342.86	343.26	340.74	339.06	335.03	332.28	329.06	328.55	326.90	327.76	336.29
35	312.50	313.61	310.67	309.22	303.09	301.01	299.41	298.78	297.40	298.71	308.23
40	280.07	280.21	277.90	275.14	270.79	269.01	267.38	268.02	265.88	266.11	277.22
45	245.01	246.64	242.81	240.09	235.92	235.53	233.67	233.76	230.45	231.59	242.71
50	210.37	212.42	207.92	204.84	201.80	202.40	199.39	198.50	193.32	191.10	204.68
55	174.27	176.01	172.40	170.44	168.71	168.52	163.77	159.98	152.12	149.99	161.68
60	140.34	142.52	138.95	137.56	136.43	135.19	128.11	123.95	117.50	115.70	124.70
65	107.79	109.97	107.44	107.55	104.97	103.62	97.40	94.06	89.83	88.93	96.02
70	78.23	79.33	77.59	78.98	77.51	75.93	73.01	70.37	67.78	68.07	73.65
75	51.01	50.92	51.23	53.67	53.31	54.55	53.68	52.67	51.71	51.18	55.85
80	27.48	26.26	27.77	31.72	34.55	37.32	37.69	39.19	37.67	38.04	41.34
85	9.66	8.13	10.84	16.23	20.29	23.64	25.04	26.69	27.25	27.80	31.35
90	2.87	0.41	1.33	6.06	10.43	13.84	15.82	17.97	18.41	19.47	22.23
95	1.15	1.14	0.55	1.47	4.74	6.94	8.79	10.96	12.02	13.31	15.29
100	1.22	1.12	0.90	1.05	0.78	3.11	4.23	5.76	6.74	7.03	9.53
105	1.68	1.45	1.57	1.41	1.52	1.85	1.19	2.58	3.29	3.15	4.98
110	2.50	1.72	1.89	1.53	2.17	2.00	1.60	2.10	1.23	1.10	1.70
115	2.14	2.33	2.11	1.07	2.14	1.60	2.26	2.29	2.40	1.82	2.24
120	2.32	2.45	2.40	2.01	1.61	2.34	2.33	2.00	2.15	2.29	2.20
125	2.49	2.72	2.62	2.65	2.26	2.22	2.11	2.96	2.33	2.57	2.85
130	2.58	3.11	2.93	2.78	2.58	3.06	2.81	2.56	2.80	3.47	2.71

Luminaire

Lamp		Report		20150421-0007
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\HDDV 12W 40K -1.jdt	
Lamp flux (lm)	1069	Operator	Current (A)	0.47
Total flux (lm)	1069	Date	Power Factor	1
				2015-04-21 오후 7:09:54

Luminous Flux Table

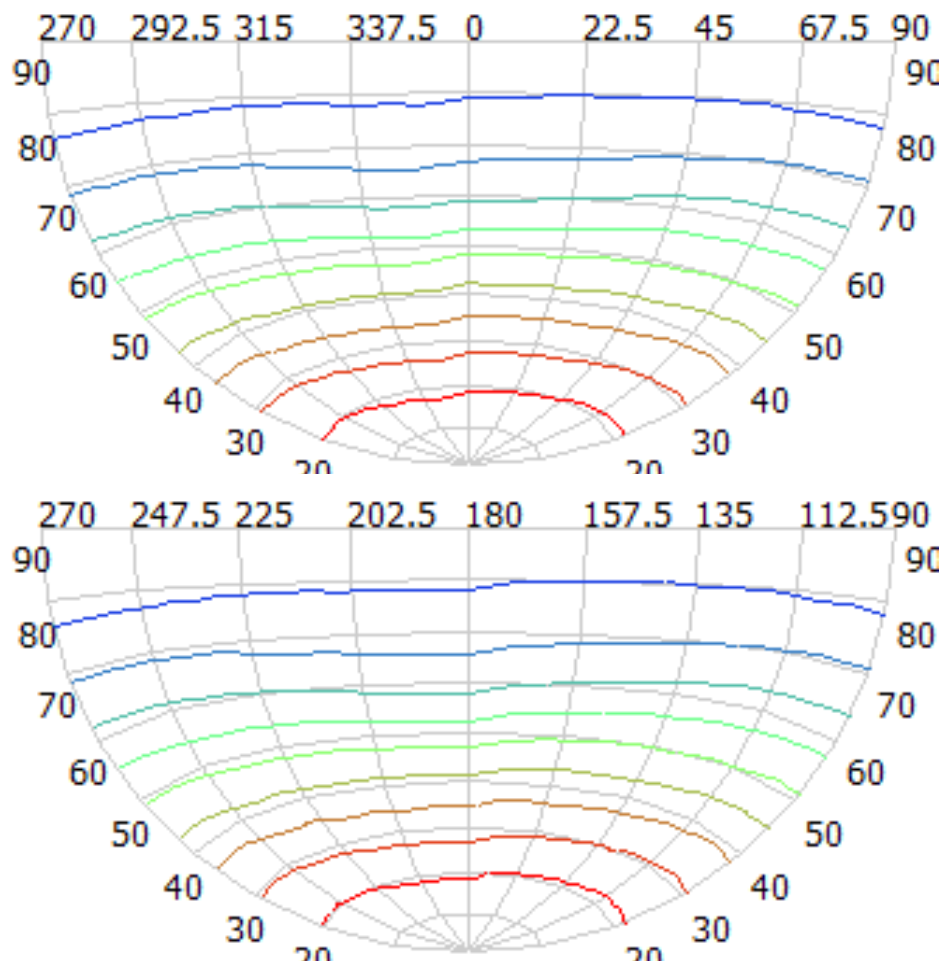
Total Lamp Lumens: 1069
 Luminaire Efficiency (lm/W): 1069.39
 CIE Classification: Direct

Elevation	Lumens	Cumulative	Lamp %	Luminaire %
0	2.60	2.60	0.24	0.24
5	20.66	23.27	2.18	2.18
10	40.39	63.65	5.95	5.95
15	58.22	121.88	11.40	11.40
20	73.28	195.16	18.25	18.25
25	85.01	280.17	26.20	26.20
30	93.17	373.34	34.91	34.91
35	97.59	470.93	44.04	44.04
40	98.04	568.97	53.20	53.21
45	94.62	663.60	62.05	62.05
50	87.48	751.08	70.23	70.23
55	76.84	827.92	77.42	77.42
60	64.67	892.59	83.47	83.47
65	52.25	944.84	88.35	88.35
70	40.46	985.30	92.14	92.14
75	29.80	1015.09	94.92	94.92
80	20.58	1035.67	96.85	96.85
85	13.02	1048.69	98.06	98.06
90	7.77	1056.46	98.79	98.79
95	4.48	1060.94	99.21	99.21
100	2.39	1063.34	99.43	99.43
105	1.30	1064.64	99.55	99.56
110	0.91	1065.55	99.64	99.64
115	1.02	1066.57	99.74	99.74
120	1.10	1067.67	99.84	99.84
125	1.12	1068.79	99.94	99.94
130	0.60	1069.39	100.00	100.00

Luminaire

Lamp		Report		20150421-0007
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\StartUp\Data\150420\WHDV 12W 40K -1.jdt	
Lamp flux (lm)	1069	Operator	Current (A)	0.47
Total flux (lm)	1069	Date	Power Factor	1
				2015-04-21 오후 7:09:54

IsoCandela (Type C)



0 ~ 44	218 ~ 262
44 ~ 88	262 ~ 305
88 ~ 131	305 ~ 349
131 ~ 175	349 ~ 392
175 ~ 218	392 ~ 436

Luminaire

Lamp		Report	20150421-0007			
No. of lamps	1	Filename C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150420\HDDV 12W 40K -1.jdt				
Lamp flux (lm)	1069	Operator	Current (A)	0.47		
Total flux (lm)	1069	Date	Power Factor	1		
				2015-04-21 오후 7:09:54		

2015-04-21 오후 7:09:54

Illuminance Levels (Ground)

6.00	0.39	0.52	0.55	0.72	1.17	1.35	1.42	1.31	1.14	0.70	0.53	0.50	0.36
5.00	0.52	0.58	1.09	1.54	1.63	2.46	2.63	2.43	1.59	1.51	1.04	0.53	0.50
4.00	0.49	1.08	1.33	2.54	3.03	4.78	5.23	4.70	2.94	2.47	1.20	1.03	0.47
3.00	0.65	1.38	2.52	3.55	5.86	8.44	9.79	8.25	5.73	3.33	2.42	1.32	0.62
2.00	1.03	1.38	2.84	5.64	12.53	18.27	24.56	17.80	12.20	5.43	2.68	1.32	0.98
1.00	1.15	2.10	4.38	8.15	17.94	34.54	46.86	33.47	17.57	7.91	4.27	2.06	1.10
0.00	1.06	2.05	4.41	8.58	22.99	45.90	59.73	45.99	23.32	9.03	4.71	2.20	1.14
-1.00	1.03	1.92	4.02	7.54	17.15	33.10	46.24	33.10	16.92	7.56	4.00	1.91	1.02
-2.00	0.90	1.23	2.50	5.12	11.86	17.30	23.79	17.22	11.78	5.17	2.55	1.23	0.93
-3.00	0.57	1.21	2.27	3.12	5.42	7.83	9.28	7.84	5.38	3.23	2.29	1.26	0.58
-4.00	0.43	0.94	1.10	2.31	2.75	4.44	4.93	4.46	2.73	2.32	1.18	0.97	0.44
-5.00	0.45	0.48	0.95	1.40	1.46	2.25	2.43	2.27	1.45	1.39	0.98	0.51	0.47
-6.00	0.33	0.45	0.48	0.63	1.05	1.22	1.30	1.21	1.05	0.63	0.48	0.47	0.35
-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.): 59.7

Illum. (Min.): 0.33

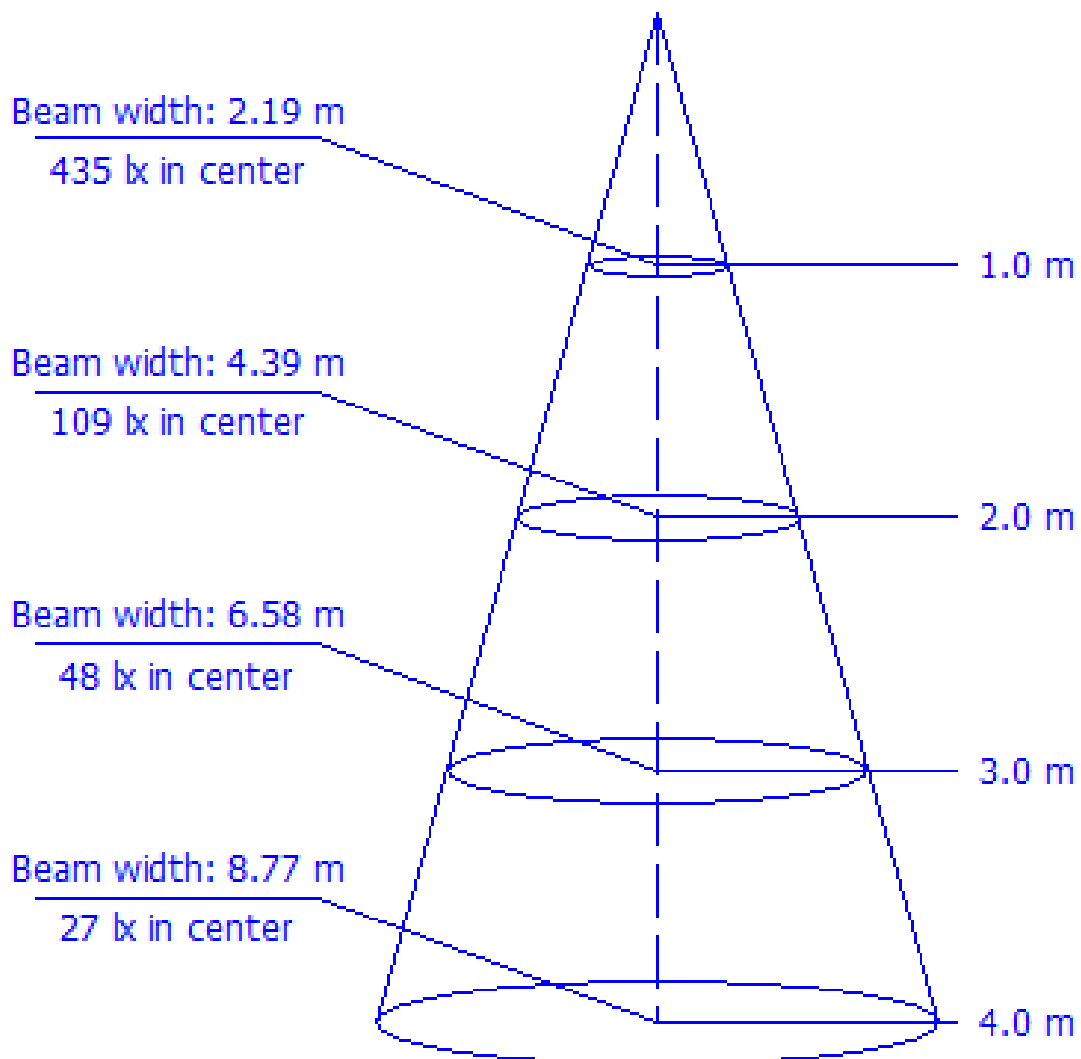
Illum. Avg.: 6.01

All illuminance level values are in lux.

Luminaire

Lamp		Report			20150421-0007
No. of lamps	1	Filename	C:\Program Files\WJNCTECH\GoniLED\Startup\Data\150420\HDTV 12W 40K -1.jdt		
Lamp flux (lm)	1069	Operator	Current (A)	0.47	
Total flux (lm)	1069	Date	Power Factor	1	2015-04-21 오후 7:09:54

Illuminance Cone Diagram



Beam Angle = 95 deg.

Based on 50% of maximum illuminance.

Luminaire

Lamp				Report	20150421-0007
No. of lamps	1	Voltage (V)	23.95	Filename	C:\Program Files\JNCTECH\GoniLED\StartUp\Data\150420\HVDV 12W 40K -1.jdt
Lamp flux (lm)	1069	Current (A)	0.47	Operator	
Total flux (lm)	1069	Power Factor	1	Date	2015-04-21 오후 7:09:54

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	0.95	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
Room CR 2	0.92	0.85	0.80	0.90	0.84	0.78	0.86	0.81	0.76	0.82	0.78	0.74	0.79	0.76	0.72	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	0.70	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	0.61	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.47	0.45
Room CR 6	0.59	0.50	0.44	0.58	0.50	0.44	0.56	0.48	0.43	0.54	0.47	0.43	0.52	0.47	0.42	0.40
Room CR 7	0.53	0.45	0.39	0.53	0.45	0.39	0.51	0.44	0.38	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	0.28	0.39	0.33	0.28	0.38	0.32	0.28	0.26