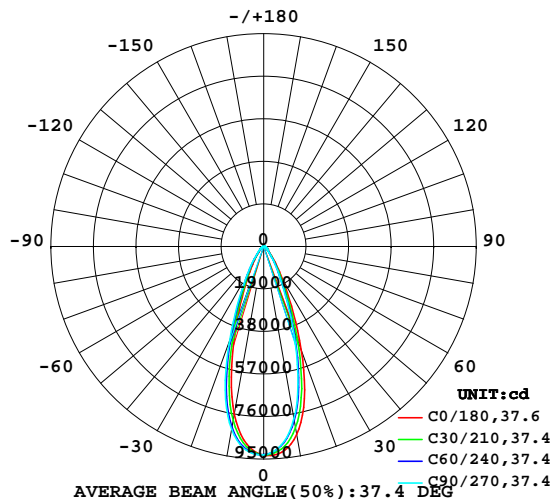


LUMINAIRE PHOTOMETRIC TEST REPORT

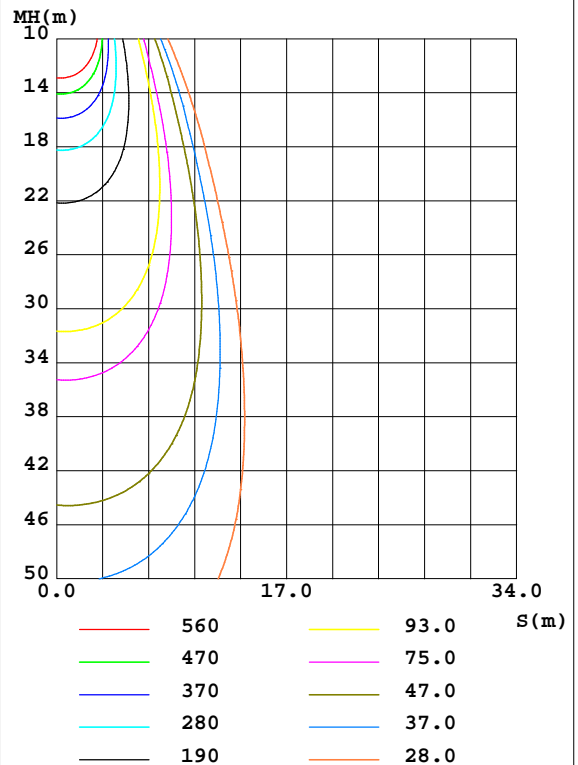
Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 123.16 lm/W			
MODEL:CD4010-400W-HLG480-5700K		Imax(cd)	93826	S/MH(C0/180)	0.56
NOMINAL POWER(W)	400	LOR(%)	100.0	S/MH(C90/270)	0.62
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	48320	η UP,DN(C0-180)	0.7,46.6
NOMINAL FLUX(lm)	48319.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.8,52.0
LAMPS INSIDE	1	η up(%)	1.5	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	98.5	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	8528	8053	7813	7464	7604	8041	8287	8659	0- 10	8310	8310	17.2,17.2
20	4915	4156	3777	3296	3451	4048	4461	5141	10- 20	17056	25367	52.5,52.5
30	1665	1397	1262	1106	1167	1354	1525	1759	20- 30	11461	36828	76.2,76.2
40	570.0	477.3	434.8	383.7	406.4	472.0	523.2	607.8	30- 40	5333	42161	87.3,87.3
50	242.3	221.2	210.7	197.2	201.9	219.5	232.0	250.2	40- 50	2467	44628	92.4,92.4
60	146.5	135.0	128.2	117.8	121.1	133.6	141.0	150.4	50- 60	1559	46187	95.6,95.6
70	75.48	64.98	58.86	50.90	54.32	64.44	70.59	78.88	60- 70	972.7	47160	97.6,97.6
80	20.36	14.41	11.61	8.416	10.08	14.56	17.82	22.63	70- 80	391.1	47551	98.4,98.4
90	0.9615	0.9136	0.9489	1.010	1.468	1.350	1.331	1.446	80- 90	57.55	47608	98.5,98.5
100	1.302	1.403	1.481	1.604	2.497	2.225	2.108	1.961	90-100	15.61	47624	98.6,98.6
110	2.272	2.537	2.724	3.021	5.095	4.432	4.123	3.731	100-110	26.52	47650	98.6,98.6
120	4.684	5.370	5.821	6.532	10.56	9.348	8.736	7.908	110-120	50.93	47701	98.7,98.7
130	9.968	11.18	11.92	13.03	18.06	16.69	15.84	14.84	120-130	93.14	47794	98.9,98.9
140	17.54	18.83	19.68	20.70	25.32	24.18	23.44	22.53	130-140	136.7	47931	99.2,99.2
150	24.66	25.50	26.08	26.61	29.41	28.89	28.61	28.18	140-150	154.4	48086	99.5,99.5
160	27.86	27.87	27.89	27.74	29.06	29.15	29.27	29.44	150-160	130.9	48216	99.8,99.8
170	26.50	26.24	26.03	25.81	26.23	26.45	26.71	27.07	160-170	78.56	48295	99.9,99.9
180	25.47	25.46	25.42	25.51	25.47	25.46	25.42	25.54	170-180	24.67	48320	100,100
DEG	LUMINOUS INTENSITY:≠10cd									UNIT:lm		

Conical surface Flux(90deg): 43583 lm

%lum = 90.2%

%lamp = 90.2%

Conical surface Flux(120deg): 46187 lm

%lum = 95.6%

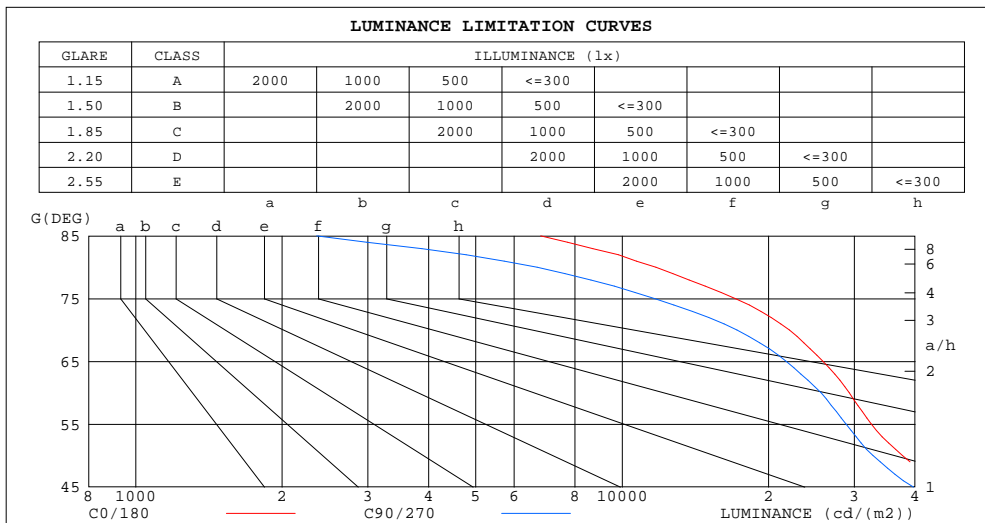
%lamp = 95.6%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

LUMINANCE LIMITATION CURVES

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



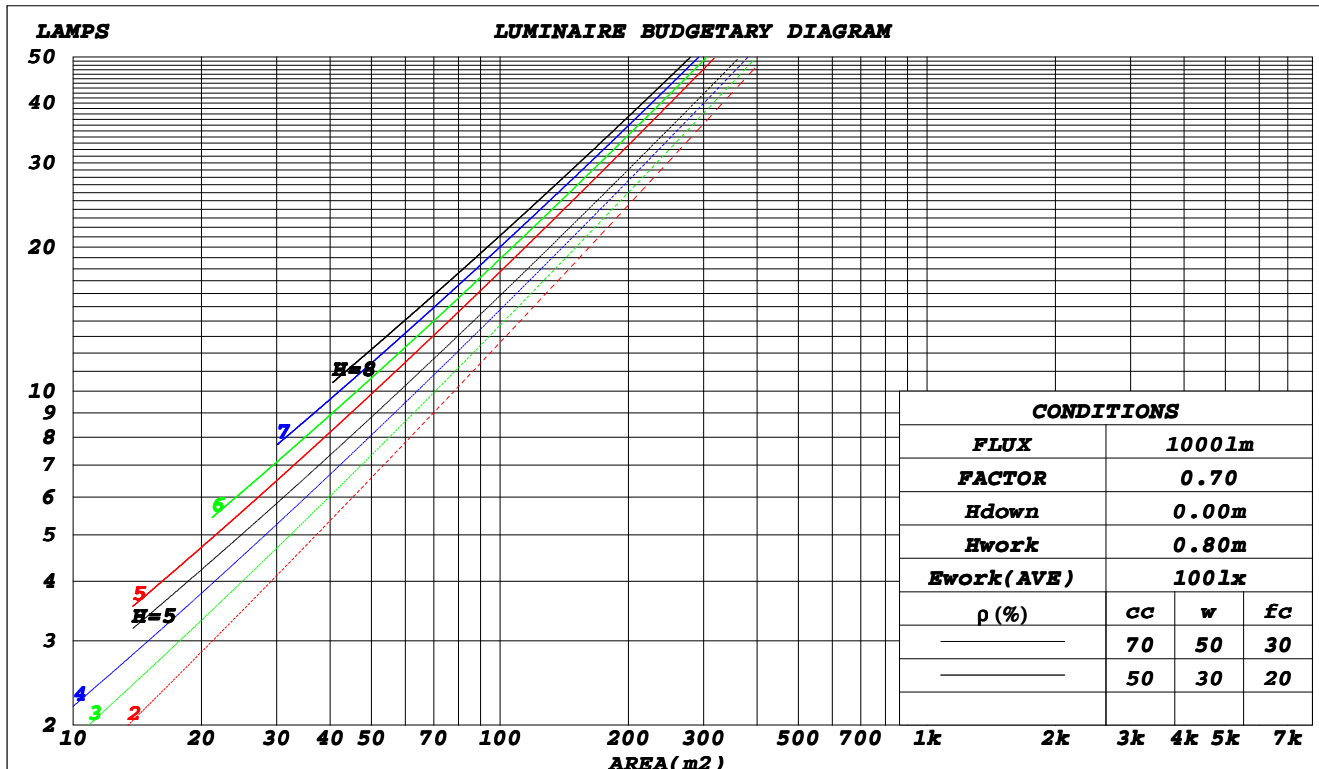
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
0.0	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	.99
1.0	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.00	.90	.98	.97	.96	.95	.94	.92
2.0	1.03	.99	.96	1.01	.97	.94	.98	.95	.92	.94	.92	.90	.91	.90	.88	.86
3.0	.96	.91	.88	.95	.90	.87	.92	.88	.85	.89	.86	.84	.87	.84	.82	.81
4.0	.90	.85	.81	.89	.84	.81	.87	.83	.79	.85	.81	.78	.83	.80	.77	.76
5.0	.85	.80	.76	.84	.79	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.71
6.0	.81	.75	.71	.80	.75	.71	.78	.74	.70	.77	.73	.70	.75	.72	.69	.68
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.66	.73	.69	.66	.72	.68	.66	.64
8.0	.73	.67	.64	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.61
9.0	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.59	.58
10.0	.67	.61	.58	.66	.61	.58	.65	.61	.57	.64	.60	.57	.64	.60	.57	.56



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

WEC AND CCEC

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.178	.101	.032	.171	.097	.031	.157	.090	.029	.145	.084	.027	.134	.078	.025		
2.0	.169	.093	.028	.163	.090	.028	.151	.084	.026	.141	.079	.025	.131	.074	.023		
3.0	.159	.085	.025	.154	.082	.025	.144	.078	.024	.135	.074	.023	.127	.070	.022		
4.0	.150	.078	.023	.146	.076	.023	.137	.073	.022	.129	.069	.021	.122	.066	.020		
5.0	.142	.072	.021	.138	.071	.021	.130	.068	.020	.124	.065	.019	.117	.063	.019		
6.0	.134	.067	.019	.131	.066	.019	.124	.064	.019	.118	.061	.018	.113	.059	.018		
7.0	.127	.063	.018	.124	.062	.018	.119	.060	.017	.113	.058	.017	.108	.056	.017		
8.0	.121	.059	.017	.118	.058	.016	.113	.057	.016	.109	.055	.016	.104	.053	.016		
9.0	.116	.056	.016	.113	.055	.015	.108	.054	.015	.104	.052	.015	.100	.051	.015		
10.0	.110	.053	.015	.108	.052	.015	.104	.051	.014	.100	.050	.014	.096	.049	.014		

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)										
0.0	.202	.202	.202	.172	.172	.172	.118	.118	.118	.068	.068	.068	.022	.022	.022		
1.0	.183	.169	.156	.156	.145	.134	.107	.100	.093	.061	.058	.054	.020	.019	.017		
2.0	.167	.144	.124	.143	.124	.107	.098	.086	.075	.057	.050	.044	.018	.016	.014		
3.0	.155	.125	.101	.133	.108	.088	.091	.075	.062	.053	.044	.036	.017	.014	.012		
4.0	.144	.110	.085	.123	.095	.073	.085	.066	.052	.049	.039	.031	.016	.013	.010		
5.0	.135	.099	.072	.116	.085	.063	.080	.060	.044	.046	.035	.026	.015	.011	.009		
6.0	.127	.089	.062	.109	.077	.054	.075	.054	.038	.044	.032	.023	.014	.010	.008		
7.0	.120	.082	.055	.103	.071	.048	.071	.050	.034	.041	.029	.020	.013	.010	.007		
8.0	.114	.075	.049	.098	.065	.042	.068	.046	.030	.039	.027	.018	.013	.009	.006		
9.0	.109	.070	.044	.094	.061	.038	.065	.043	.027	.038	.025	.016	.012	.008	.005		
10.0	.104	.065	.040	.089	.057	.035	.062	.040	.025	.036	.024	.015	.012	.008	.005		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

UGR(Unified Glare Rating) Table

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm											
NAME: CD4010-400W-HLG480-54A-5700K-P20					TYPE:LED			WEIGHT:			
SPEC.:3535chip 유산 P20					DIM.:			SERIAL No.:1			
MFR.: ICEPIPE					SUR.:			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H	21.1	22.0	21.4	22.2	22.4	20.2	21.1	20.4	21.3	21.5	
	3H	21.7	22.6	22.0	22.8	23.0	20.7	21.6	21.0	21.8	22.0
	4H	21.9	22.7	22.2	23.0	23.2	20.9	21.6	21.2	21.9	22.1
	6H	22.0	22.7	22.3	23.0	23.3	20.9	21.6	21.2	21.9	22.1
	8H	22.0	22.7	22.3	23.0	23.3	20.8	21.5	21.1	21.8	22.1
12H	22.0	22.6	22.3	22.9	23.2	20.8	21.5	21.1	21.7	22.1	
4H	2H	21.3	22.1	21.6	22.3	22.6	20.5	21.3	20.8	21.5	21.7
	3H	22.0	22.7	22.4	23.0	23.3	21.2	21.8	21.5	22.1	22.4
	4H	22.3	22.9	22.7	23.2	23.6	21.3	21.9	21.7	22.3	22.6
	6H	22.4	22.9	22.8	23.3	23.7	21.3	21.9	21.7	22.2	22.6
	8H	22.4	22.9	22.8	23.3	23.7	21.3	21.8	21.7	22.2	22.6
12H	22.4	22.8	22.8	23.2	23.7	21.3	21.7	21.7	22.1	22.5	
8H	4H	22.3	22.8	22.7	23.2	23.5	21.3	21.8	21.8	22.2	22.6
	6H	22.4	22.8	22.9	23.2	23.7	21.4	21.8	21.8	22.2	22.7
	8H	22.4	22.8	22.9	23.2	23.7	21.4	21.7	21.8	22.2	22.6
	12H	22.4	22.7	22.9	23.2	23.7	21.3	21.6	21.8	22.1	22.6
	12H	4H	22.2	22.7	22.7	23.1	23.5	21.3	21.8	21.7	22.2
6H	22.4	22.7	22.8	23.2	23.6	21.3	21.7	21.8	22.2	22.6	
8H	22.4	22.7	22.9	23.2	23.7	21.3	21.6	21.8	22.1	22.6	
Variations with the observer position at spacings:											
S = 1.0H	+ 1.1 / - 1.1					+ 0.8 / - 1.0					
1.5H	+ 2.1 / - 0.8					+ 1.4 / - 0.7					
2.0H	+ 1.3 / - 0.7					+ 0.9 / - 0.7					

CIE Pub.117 Corrected 48320 lm Total Lamp Luminous Flux.(8log(F/F0) = 13.5)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

UTILIZATION FACTORS TABLE

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

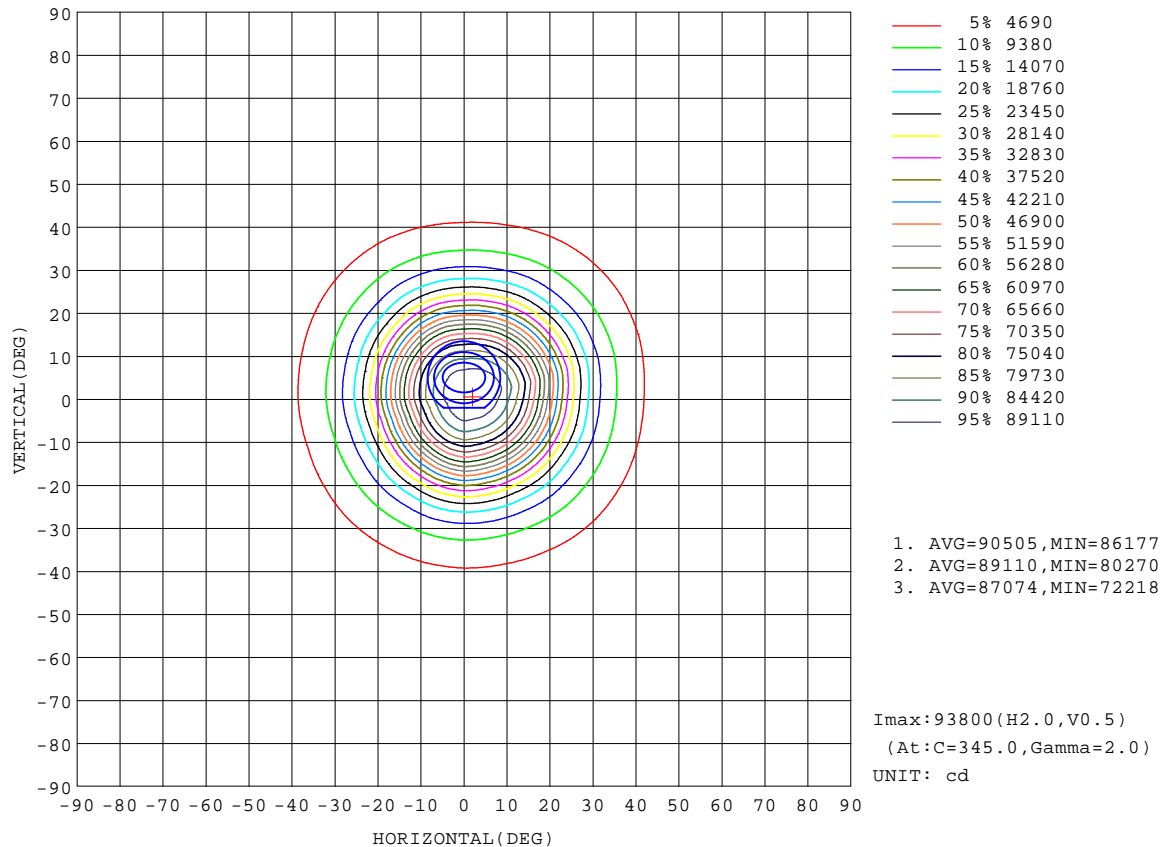
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	83	77	72	82	76	72	68
0.80	91	85	81	91	84	81	89	84	80	76
1.00	96	90	86	95	89	86	93	89	85	81
1.25	101	95	91	99	94	90	97	93	90	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	98	105	101	98	102	99	96	90
2.50	109	104	101	107	103	100	103	100	98	91
3.00	110	107	104	108	105	102	105	102	100	93
4.00	113	110	107	110	108	106	106	104	103	95
5.00	114	111	109	112	110	108	107	106	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

ISOCANDELA DIAGRAM

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

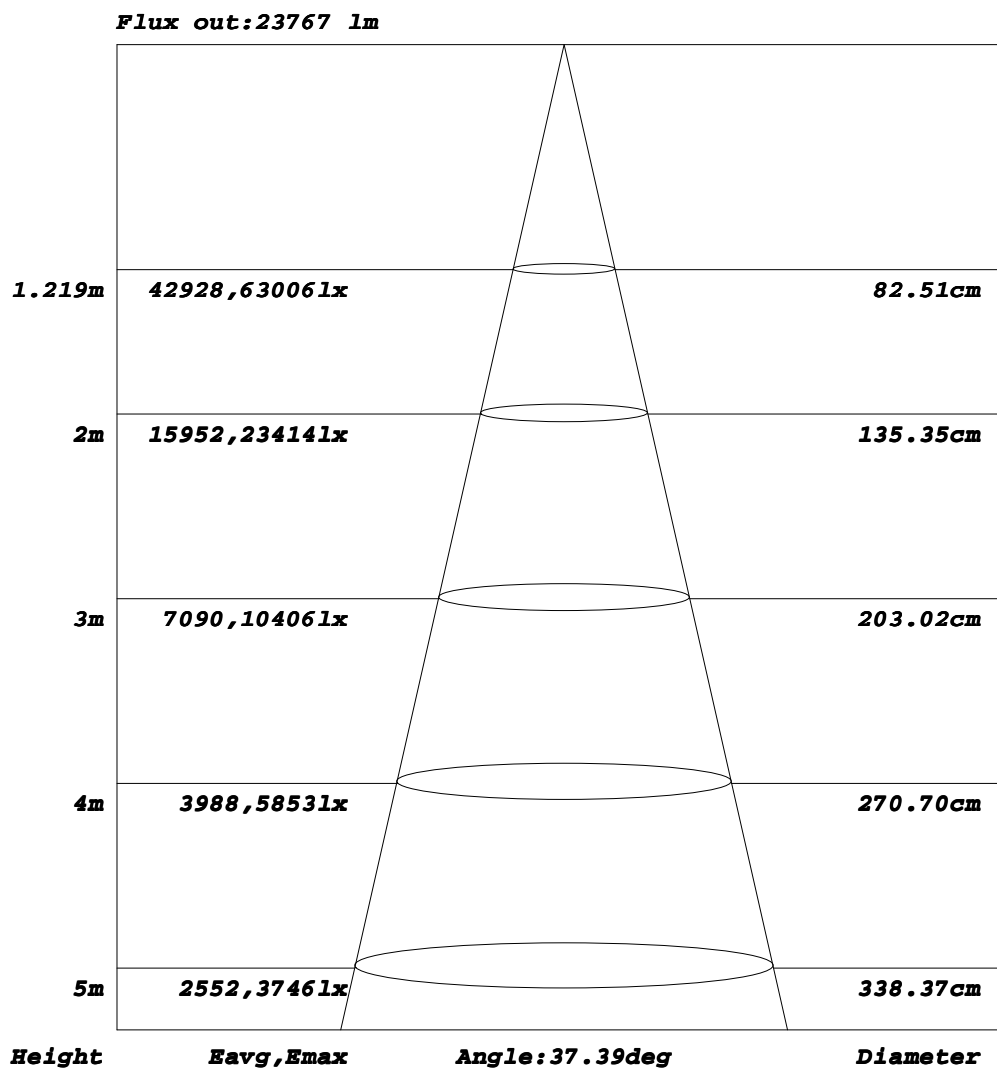


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

AAI Figure

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



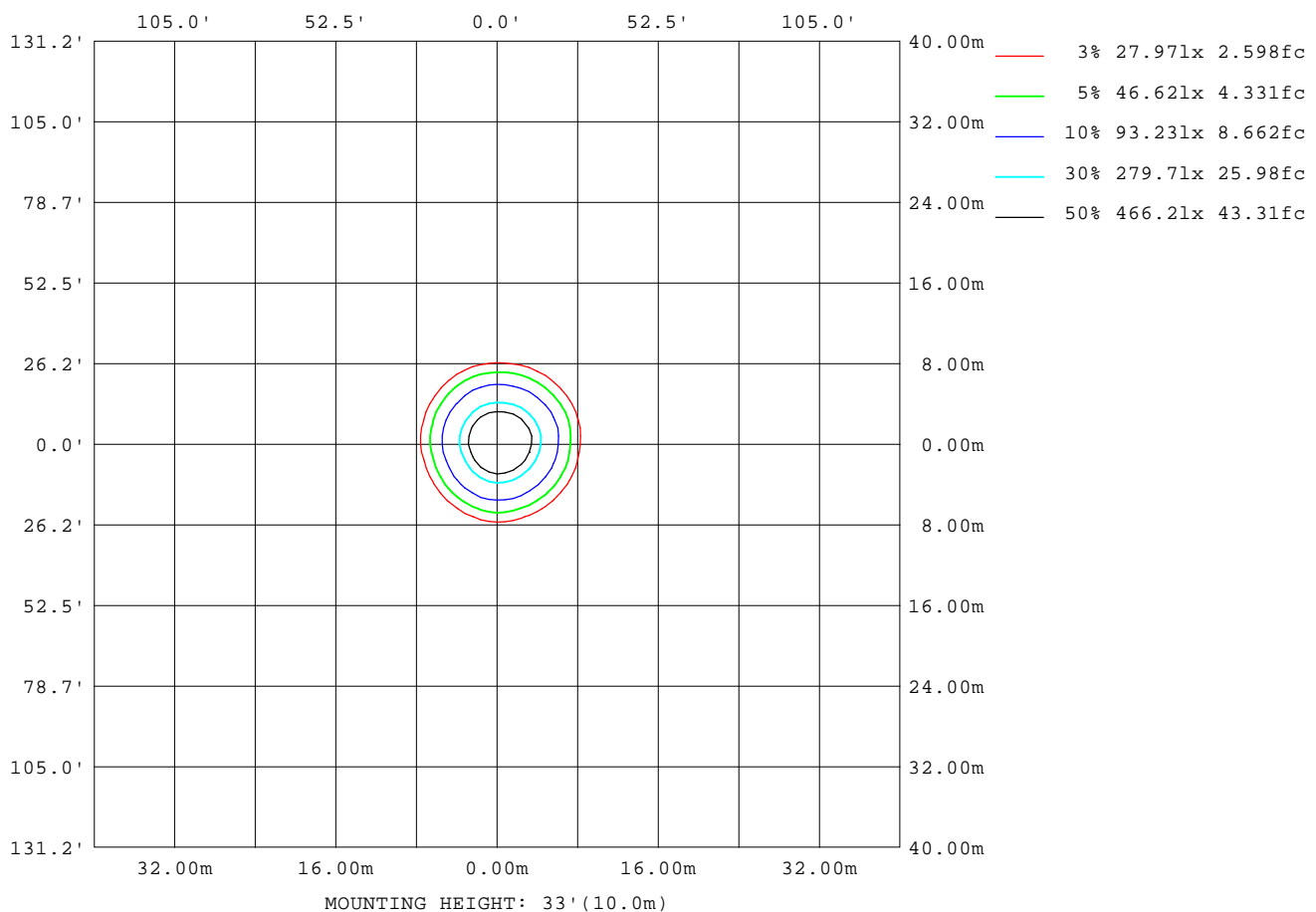
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

ISOLUX DIAGRAM

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

LED Avg.L Report

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

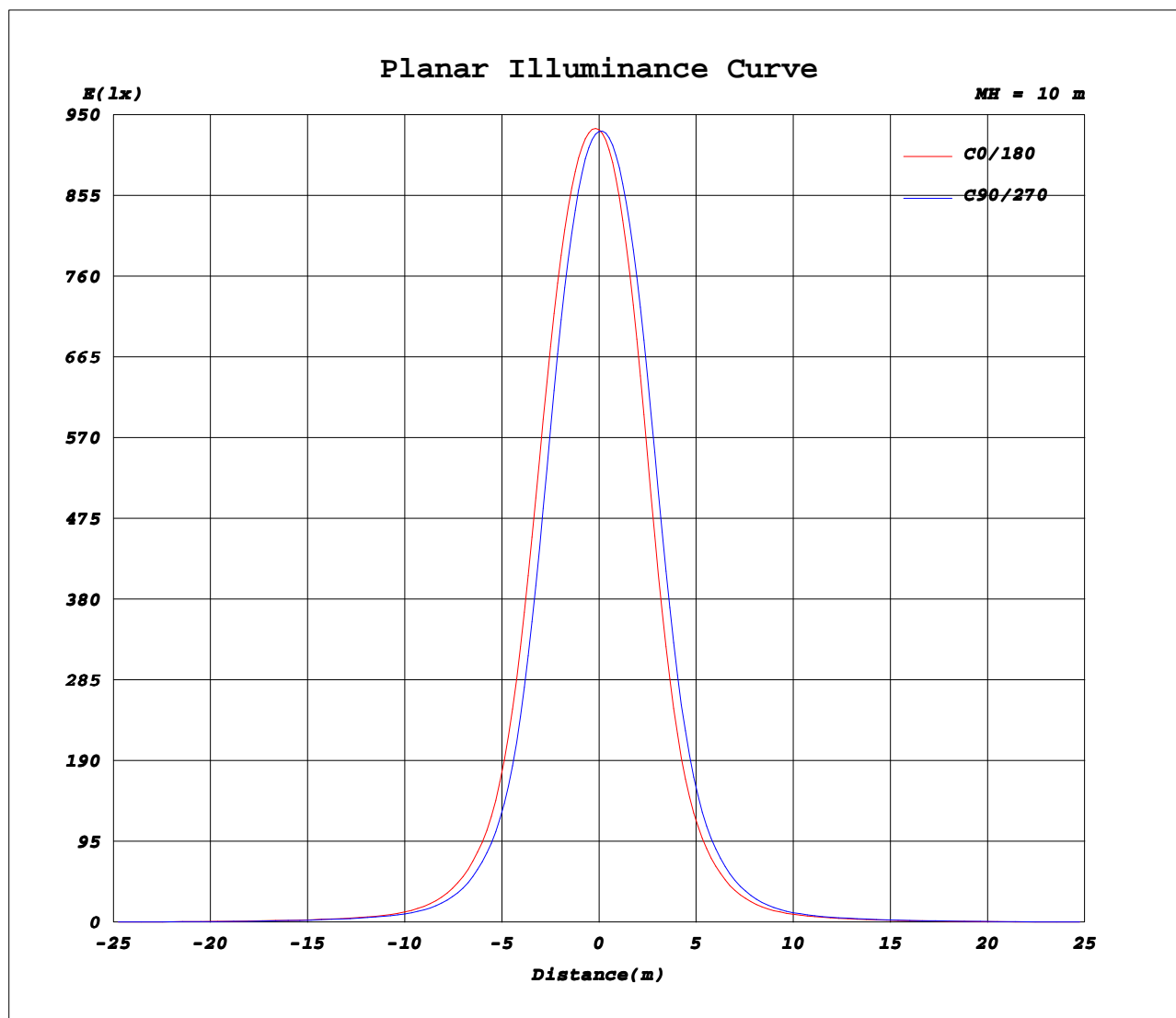
AvgL	cd/m2
L_0~180(65)av	23122
L_0~180(75)av	13864
L_0~180(85)av	4498
L_90~270(65)av	23184
L_90~270(75)av	13653
L_90~270(85)av	3822
L_45(65)av	23158
L_45(75)av	13780
L_45(85)av	4279

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--1

UNIT: #10cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	9323	9315	9309	9303	9300	9303	9305	9308	9309	9314	9316	9327	9323	9315	9309	9303	9300	9303	9305
5	9227	9162	9088	9015	8942	8911	8917	8875	8815	8773	8738	8753	8849	8900	8966	9029	9092	9129	9128
10	8528	8385	8216	8053	7892	7806	7813	7708	7568	7464	7381	7388	7604	7728	7887	8041	8195	8285	8287
15	7054	6833	6569	6317	6068	5932	5924	5757	5541	5386	5268	5271	5573	5756	5992	6231	6484	6631	6645
20	4915	4679	4406	4156	3917	3785	3777	3621	3430	3296	3199	3197	3451	3612	3825	4048	4293	4445	4461
25	2944	2802	2578	2430	2244	2185	2153	2080	1942	1884	1808	1829	1979	2056	2215	2335	2525	2604	2639
30	1665	1593	1469	1397	1308	1268	1262	1213	1145	1106	1071	1077	1167	1218	1299	1354	1466	1503	1525
35	982	933	867	815	762	739	736	708	667	643	624	627	682	714	761	805	861	890	897
40	570	542	506	477	448	436	435	418	396	384	374	376	406	423	449	472	503	520	523
45	346	333	314	303	287	282	281	274	264	258	253	254	267	274	286	297	314	321	323
50	242	236	228	221	214	211	211	207	201	197	194	194	202	206	214	219	227	231	232
55	187	183	177	173	168	166	166	163	158	156	152	152	159	162	167	171	177	179	180
60	146	144	139	135	131	129	128	126	121	118	115	115	121	125	129	134	138	140	141
65	109	106	102	98.3	94.3	92.2	91.9	89.3	85.5	82.9	80.4	80.4	86.1	89.1	93.4	97.2	102	104	104
70	75.5	72.5	68.4	65.0	61.2	59.3	58.9	56.6	53.3	50.9	48.7	49.1	54.3	57.0	60.7	64.4	68.4	70.3	70.6
75	44.2	41.7	38.2	35.2	31.9	31.0	30.2	28.8	26.2	24.8	23.4	23.6	27.6	29.4	32.3	35.1	38.3	40.0	40.5
80	20.4	18.7	16.3	14.4	12.7	11.7	11.6	10.6	9.23	8.42	7.69	7.77	10.1	11.2	13.0	14.6	16.6	17.5	17.8
85	5.93	5.04	3.98	3.14	2.38	2.10	2.05	1.81	1.49	1.30	1.15	1.15	1.91	2.16	2.58	3.14	3.99	4.46	4.61
90	0.96	0.91	0.91	0.91	0.94	0.95	0.95	0.96	0.99	1.01	1.03	1.04	1.47	1.43	1.38	1.35	1.33	1.33	1.33
95	1.05	1.06	1.09	1.11	1.15	1.16	1.16	1.19	1.22	1.25	1.28	1.28	1.87	1.81	1.74	1.69	1.63	1.62	1.61
100	1.30	1.33	1.37	1.40	1.46	1.48	1.48	1.51	1.57	1.60	1.64	1.65	2.50	2.41	2.31	2.23	2.14	2.11	2.11
105	1.68	1.72	1.78	1.85	1.92	1.96	1.96	2.01	2.09	2.15	2.21	2.21	3.50	3.37	3.21	3.08	2.94	2.88	2.89
110	2.27	2.34	2.44	2.54	2.66	2.72	2.72	2.81	2.93	3.02	3.10	3.11	5.09	4.89	4.64	4.43	4.22	4.13	4.12
115	3.20	3.31	3.48	3.64	3.83	3.93	3.93	4.06	4.26	4.41	4.54	4.55	7.45	7.16	6.80	6.50	6.18	6.04	6.04
120	4.68	4.86	5.12	5.37	5.66	5.82	5.82	6.02	6.31	6.53	6.73	6.74	10.6	10.2	9.74	9.35	8.93	8.74	8.74
125	6.93	7.18	7.54	7.90	8.30	8.51	8.51	8.78	9.17	9.46	9.71	9.72	14.2	13.8	13.3	12.8	12.3	12.1	12.1
130	9.97	10.3	10.7	11.2	11.7	11.9	11.9	12.2	12.7	13.0	13.3	13.3	18.1	17.7	17.1	16.7	16.1	15.9	15.8
135	13.6	14.0	14.5	14.9	15.5	15.7	15.8	16.0	16.6	16.8	17.2	17.2	21.9	21.6	21.0	20.6	20.0	19.8	19.8
140	17.5	17.8	18.4	18.8	19.4	19.6	19.7	19.9	20.5	20.7	21.1	21.0	25.3	25.0	24.5	24.2	23.7	23.5	23.4
145	21.4	21.6	22.2	22.5	23.1	23.2	23.3	23.5	23.9	24.1	24.4	24.4	27.9	27.7	27.3	27.1	26.7	26.6	26.5
150	24.7	24.8	25.3	25.5	25.9	26.0	26.1	26.2	26.5	26.6	26.8	26.8	29.4	29.3	29.0	28.9	28.7	28.6	28.6
155	27.0	27.0	27.3	27.3	27.6	27.6	27.7	27.7	27.8	27.8	27.9	27.9	29.7	29.7	29.6	29.6	29.5	29.5	29.5
160	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.8	27.8	27.7	27.8	27.9	29.1	29.1	29.1	29.1	29.2	29.3	29.3
165	27.5	27.5	27.3	27.3	27.2	27.1	27.2	27.0	26.9	26.9	26.9	26.9	27.7	27.7	27.9	27.9	28.1	28.2	28.2
170	26.5	26.4	26.2	26.2	26.1	26.1	26.0	25.9	25.8	25.8	25.8	25.9	26.2	26.3	26.4	26.5	26.6	26.7	26.7
175	25.6	25.5	25.4	25.5	25.4	25.4	25.4	25.3	25.3	25.3	25.4	25.3	25.5	25.3	25.5	25.6	25.6	25.7	25.7
180	25.5	25.4	25.3	25.5	25.4	25.4	25.4	25.4	25.5	25.5	25.6	25.6	25.5	25.2	25.4	25.5	25.3	25.4	25.4

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:218.6V I:1.846A P:392.3W PF:0.9722 Lamp Flux:48319.7x1 lm		
NAME: CD4010-400W-HLG480-54A-5700K-P20	TYPE:LED	WEIGHT:
SPEC.:3535chip 유산 P20	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: #10cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	9308	9309	9314	9316	9327														
5	9172	9233	9279	9309	9322														
10	8399	8544	8659	8741	8756														
15	6832	7076	7264	7401	7421														
20	4658	4924	5141	5308	5333														
25	2753	2976	3109	3237	3257														
30	1578	1697	1759	1847	1835														
35	936	1001	1043	1081	1078														
40	546	584	608	629	626														
45	335	354	367	378	375														
50	237	245	250	255	254														
55	183	188	191	195	194														
60	143	148	150	153	153														
65	106	110	113	116	116														
70	72.7	76.1	78.9	81.0	81.1														
75	42.2	45.1	47.5	49.5	49.5														
80	19.1	21.2	22.6	24.1	23.9														
85	5.30	6.49	7.34	8.09	8.09														
90	1.33	1.36	1.45	1.58	1.61														
95	1.59	1.55	1.53	1.52	1.53														
100	2.06	2.00	1.96	1.94	1.95														
105	2.82	2.71	2.65	2.59	2.61														
110	4.01	3.84	3.73	3.64	3.65														
115	5.86	5.60	5.43	5.29	5.30														
120	8.50	8.14	7.91	7.70	7.71														
125	11.8	11.4	11.1	10.9	10.9														
130	15.6	15.1	14.8	14.5	14.6														
135	19.5	19.0	18.8	18.4	18.5														
140	23.2	22.7	22.5	22.2	22.3														
145	26.4	26.0	25.8	25.5	25.6														
150	28.5	28.3	28.2	28.0	28.1														
155	29.5	29.4	29.4	29.3	29.4														
160	29.3	29.4	29.4	29.5	29.5														
165	28.2	28.3	28.5	28.6	28.7														
170	26.8	26.9	27.1	27.2	27.3														
175	25.8	25.9	26.0	26.1	26.2														
180	25.5	25.5	25.5	25.6	25.7														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	93233	93147	93086	93033	92999	93033	93051	93076	93089	93141
3.0	93252	92851	92411	91994	91580	91434	91501	91287	90969	90770
6.0	91429	90648	89737	88840	87920	87500	87559	87027	86261	85730
9.0	87275	85997	84506	83063	81644	80886	80952	80056	78806	77882
12.0	80360	78629	76533	74557	72530	71443	71465	70166	68352	67026
15.0	70535	68329	65687	63172	60677	59315	59240	57568	55413	53856
18.0	58047	55616	52710	50080	47498	46103	46021	44331	42232	40736
21.0	44850	42570	39952	37563	35302	34079	33959	32517	30705	29725
24.0	32943	31077	28938	27295	25219	24498	24173	23321	21750	21062
27.0	23381	22236	20487	19357	17920	17483	17236	16693	15615	15188
30.0	16651	15925	14689	13966	13080	12678	12616	12128	11449	11060
33.0	12167	11555	10763	10133	9463	9174	9140	8788	8281	7994
36.0	8802	8358	7777	7309	6833	6634	6606	6350	5980	5773
39.0	6346	6029	5627	5297	4969	4834	4813	4628	4369	4230
42.0	4623	4411	4128	3913	3694	3607	3593	3471	3300	3216
45.0	3462	3326	3143	3025	2875	2815	2809	2736	2636	2580
48.0	2726	2644	2540	2461	2385	2356	2351	2304	2233	2189
51.0	2296	2236	2158	2096	2031	2006	2002	1968	1913	1880
54.0	1958	1917	1857	1813	1763	1741	1737	1709	1658	1633
57.0	1697	1665	1611	1574	1526	1509	1501	1479	1429	1406
60.0	1465	1437	1387	1350	1307	1286	1282	1256	1208	1178
63.0	1243	1211	1166	1126	1084	1061	1058	1033	990.0	961.6
66.0	1022	992.9	950.9	913.6	875.7	855.8	852.5	827.0	788.9	762.4
69.0	820.3	790.6	750.8	715.1	677.4	656.2	652.1	628.5	595.4	570.5
72.0	625.4	597.7	558.9	525.4	488.2	469.5	465.3	444.1	413.9	392.9
75.0	442.1	416.6	382.0	351.9	319.3	310.3	301.9	288.4	261.9	248.2
78.0	285.7	268.0	237.8	214.9	191.6	181.7	179.3	167.5	149.0	138.7
81.0	167.3	152.5	132.8	114.5	98.16	90.32	89.52	80.90	69.20	61.82
84.0	80.77	70.48	57.30	47.00	36.60	31.87	31.23	26.81	21.42	18.86
87.0	26.66	22.11	17.58	14.30	11.46	10.42	10.23	9.460	9.246	9.292
90.0	9.615	9.147	9.144	9.136	9.355	9.483	9.489	9.631	9.883	10.10
93.0	9.684	9.808	10.02	10.24	10.54	10.68	10.70	10.87	11.18	11.43
96.0	10.91	11.07	11.35	11.62	11.99	12.16	12.18	12.40	12.81	13.08
99.0	12.44	12.65	13.02	13.35	13.84	14.04	14.07	14.35	14.87	15.20
102.0	14.35	14.63	15.13	15.57	16.19	16.48	16.49	16.89	17.48	17.97
105.0	16.84	17.24	17.82	18.46	19.21	19.61	19.60	20.14	20.94	21.52
108.0	20.02	20.59	21.42	22.23	23.24	23.73	23.78	24.43	25.51	26.24
111.0	24.26	24.98	26.13	27.23	28.51	29.23	29.22	30.13	31.49	32.51
114.0	29.78	30.83	32.32	33.76	35.56	36.45	36.49	37.66	39.45	40.81
117.0	37.13	38.54	40.49	42.43	44.76	45.92	45.98	47.52	49.86	51.64
120.0	46.84	48.64	51.18	53.70	56.65	58.18	58.21	60.19	63.14	65.32
123.0	59.31	61.60	64.78	67.87	71.48	73.37	73.45	75.79	79.40	82.01
126.0	74.71	77.47	81.30	84.98	89.21	91.39	91.47	94.21	98.34	101.3
129.0	93.00	96.14	100.5	104.7	109.4	111.8	111.9	115.0	119.5	122.8
132.0	113.7	117.1	121.9	126.5	131.6	134.1	134.2	137.4	142.2	145.3
135.0	136.1	139.8	144.8	149.2	154.9	156.9	157.6	160.1	165.7	168.4
138.0	159.6	162.6	168.5	172.5	178.6	180.5	181.3	183.7	189.3	191.9
141.0	183.2	186.2	192.0	196.0	201.9	203.7	204.4	206.6	212.0	214.4
144.0	206.3	208.9	214.6	218.2	223.7	225.2	226.1	227.9	232.8	234.9
147.0	227.7	230.1	235.1	238.3	243.2	244.4	245.2	246.7	250.8	252.5
150.0	246.6	248.5	252.6	255.0	259.1	259.9	260.8	261.6	264.9	266.1
153.0	261.9	263.0	266.2	267.7	270.7	271.2	272.0	272.2	274.4	274.8
156.0	272.5	272.9	275.0	275.7	277.2	277.5	277.9	277.9	278.7	278.8
159.0	277.7	277.9	278.4	278.8	279.0	279.0	279.3	278.9	278.5	278.4
162.0	278.4	278.2	277.6	277.5	276.6	276.6	277.0	276.1	275.1	274.6
165.0	275.4	274.5	273.2	272.9	271.5	271.3	271.8	270.5	269.0	268.6
168.0	269.7	268.3	266.8	266.5	264.9	264.9	264.9	263.5	262.0	262.0
171.0	262.8	261.5	260.3	260.4	259.2	258.7	258.3	257.2	256.1	256.4
174.0	257.4	256.5	255.5	256.1	254.9	254.5	254.1	253.4	252.9	253.4
177.0	254.8	253.9	253.1	254.2	253.4	253.2	253.4	253.0	253.0	253.4
180.0	254.7	254.1	253.4	254.6	253.6	253.9	254.2	254.5	254.8	255.1
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	93164	93270	93233	93147	93086	93033	92999	93033	93051	93076
3.0	90598	90721	91245	91479	91817	92124	92451	92658	92647	92893
6.0	85318	85443	86639	87300	88143	88932	89738	90211	90213	90776
9.0	77203	77283	79224	80293	81673	83011	84371	85193	85176	86155
12.0	66009	66053	68701	70256	72229	74167	76116	77252	77296	78736
15.0	52684	52709	55727	57557	59916	62305	64838	66307	66452	68318
18.0	39640	39619	42494	44253	46580	48968	51635	53201	53368	55404
21.0	28522	28810	30897	32400	34412	36529	38826	40300	40452	42358
24.0	20186	20421	22133	23027	24816	26176	28305	29151	29578	30841
27.0	14578	14772	15972	16548	17800	18715	20199	20751	21047	21901
30.0	10714	10768	11665	12184	12987	13537	14664	15027	15254	15776

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: LUC

Test Date: 05 February 2020

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351

Humidity: 65.0%

Test Distance: 8.100m [K=1.0000]

Remarks: CD4010-400W-HLG480-54A-5700K-P20

Photometric Data Table [cd]

33.0	7747	7786	8465	8850	9454	9992	10681	11037	11126	11605
36.0	5600	5636	6127	6410	6834	7222	7724	7986	8046	8404
39.0	4113	4142	4483	4677	4970	5239	5593	5779	5818	6075
42.0	3131	3167	3377	3502	3702	3869	4102	4231	4263	4445
45.0	2533	2539	2665	2743	2860	2975	3143	3207	3234	3349
48.0	2148	2151	2249	2302	2384	2448	2533	2580	2593	2661
51.0	1848	1847	1922	1959	2028	2079	2153	2189	2199	2244
54.0	1600	1600	1667	1700	1755	1798	1853	1880	1886	1917
57.0	1374	1374	1437	1468	1519	1557	1609	1632	1636	1663
60.0	1150	1148	1211	1247	1295	1336	1384	1404	1410	1431
63.0	936.2	935.7	995.1	1027	1073	1114	1159	1182	1186	1210
66.0	737.3	739.2	795.2	824.8	866.8	904.3	946.8	966.6	970.2	992.6
69.0	549.1	551.2	604.2	632.3	669.8	708.0	749.2	768.1	770.4	791.8
72.0	373.5	377.1	424.9	450.4	486.9	521.0	559.0	577.7	581.1	600.9
75.0	234.0	236.0	275.6	293.7	323.2	351.1	383.4	399.5	404.8	421.9
78.0	130.9	130.5	159.9	173.6	197.0	216.5	241.4	252.9	257.4	271.2
81.0	55.93	56.49	76.80	86.30	101.4	115.9	132.8	143.6	144.7	155.9
84.0	16.81	16.87	26.11	30.24	38.16	46.74	57.57	63.57	64.98	73.71
87.0	9.389	9.445	13.41	13.48	14.46	16.45	19.76	21.70	22.21	25.02
90.0	10.32	10.41	14.68	14.31	13.84	13.50	13.29	13.25	13.31	13.28
93.0	11.68	11.75	16.84	16.39	15.78	15.37	14.91	14.76	14.75	14.54
96.0	13.39	13.43	19.71	19.08	18.37	17.80	17.20	16.99	16.98	16.70
99.0	15.58	15.60	23.46	22.69	21.74	20.97	20.21	19.88	19.92	19.49
102.0	18.36	18.43	28.46	27.46	26.17	25.21	24.16	23.77	23.74	23.23
105.0	22.06	22.10	35.03	33.72	32.08	30.76	29.41	28.84	28.86	28.15
108.0	26.94	26.98	43.71	42.00	39.88	38.15	36.35	35.60	35.58	34.63
111.0	33.42	33.45	55.00	52.81	50.06	47.83	45.46	44.49	44.45	43.18
114.0	42.00	42.04	69.12	66.44	63.04	60.19	57.22	55.94	55.91	54.28
117.0	53.15	53.25	86.12	82.93	78.86	75.46	71.85	70.28	70.24	68.20
120.0	67.26	67.35	105.6	102.0	97.40	93.48	89.26	87.40	87.36	84.96
123.0	84.28	84.38	127.1	123.2	118.1	113.8	109.1	107.0	107.0	104.3
126.0	103.9	104.1	149.3	145.9	140.4	135.9	130.8	128.6	128.5	125.6
129.0	125.6	125.7	172.8	169.3	163.0	159.0	153.0	151.5	150.6	148.4
132.0	148.6	148.4	196.3	192.9	186.6	182.6	176.6	175.0	174.1	171.8
135.0	172.2	171.6	219.1	215.8	209.8	205.9	200.0	198.5	197.6	195.3
138.0	195.6	195.1	240.4	237.3	231.6	228.1	222.4	221.1	220.2	218.1
141.0	218.0	217.4	259.2	256.5	251.4	248.3	243.2	242.0	241.1	239.3
144.0	238.2	237.7	274.7	272.6	268.3	265.7	261.3	260.4	259.7	258.1
147.0	255.3	255.0	286.6	284.4	281.4	279.2	276.0	275.5	274.7	273.7
150.0	268.4	268.1	294.1	292.5	290.5	288.9	286.8	286.2	286.1	284.9
153.0	276.6	276.5	297.4	296.3	295.2	294.4	293.3	293.0	292.9	292.3
156.0	279.6	280.2	296.7	296.1	295.7	295.6	295.3	295.5	295.5	295.3
159.0	278.9	279.5	292.7	292.5	292.6	293.0	293.4	294.1	294.0	294.2
162.0	275.1	275.5	285.9	286.0	286.6	287.4	288.4	289.2	289.0	289.5
165.0	269.1	269.4	277.3	277.5	278.6	279.5	281.0	281.9	281.8	282.4
168.0	262.4	262.6	268.0	268.3	269.7	270.3	272.2	272.9	273.0	273.7
171.0	256.7	256.9	259.8	260.0	261.6	262.2	263.7	264.5	264.5	265.5
174.0	253.9	253.6	255.1	254.1	256.4	256.8	257.4	258.4	258.3	259.3
177.0	254.3	254.0	254.7	254.1	254.7	255.1	254.6	255.1	255.3	256.2
180.0	255.7	256.4	254.7	251.7	253.5	254.6	253.5	254.1	254.2	254.6
G/C	300.0	315.0	330.0	345.0						
0.0	93089	93141	93164	93270						
3.0	93222	93495	93694	93815						
6.0	91528	92106	92496	92622						
9.0	87410	88432	89144	89291						
12.0	80565	81998	83020	83198						
15.0	70760	72645	74013	74212						
18.0	58181	60385	62044	62274						
21.0	44900	47014	48582	48861						
24.0	32992	34701	36071	36301						
27.0	23668	24703	26014	25918						
30.0	16972	17589	18467	18351						
33.0	12376	12891	13383	13376						
36.0	8982	9361	9709	9678						
39.0	6496	6767	7003	6971						
42.0	4735	4926	5091	5059						
45.0	3539	3668	3776	3749						
48.0	2766	2846	2912	2902						
51.0	2316	2368	2412	2403						
54.0	1973	2011	2049	2046						
57.0	1711	1742	1774	1769						
60.0	1477	1504	1534	1530						
63.0	1251	1283	1308	1308						
66.0	1031	1059	1083	1083						

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 05 February 2020

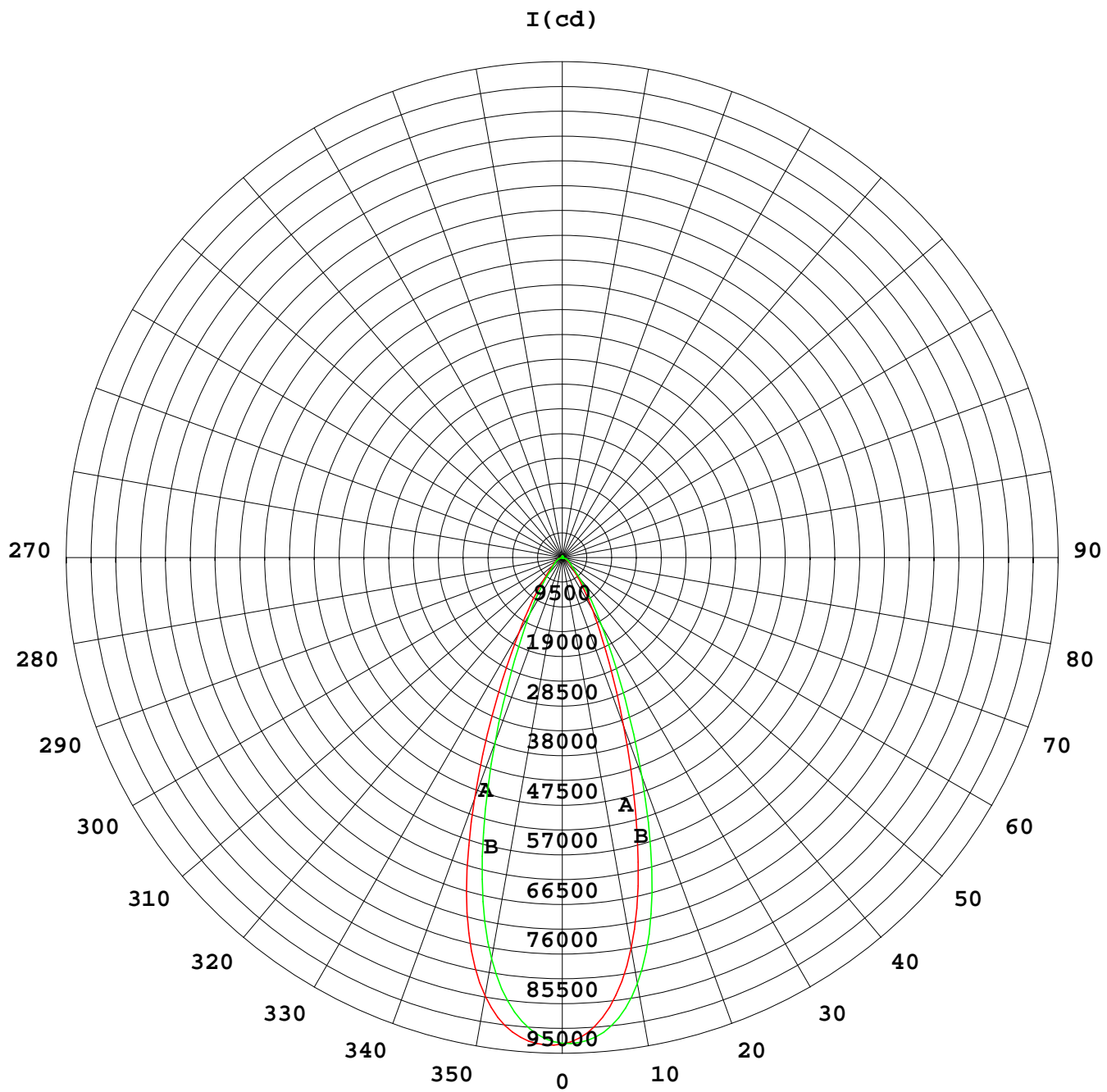
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20

Photometric Data Table [cd]

69.0	826.9	854.4	876.4	875.3
72.0	632.7	659.9	680.7	681.0
75.0	451.3	475.4	495.5	495.3
78.0	296.7	311.8	329.0	328.6
81.0	175.5	188.1	201.9	200.1
84.0	87.42	97.21	105.6	105.3
87.0	31.10	36.23	41.67	41.80
90.0	13.59	14.46	15.78	16.05
93.0	14.21	14.08	13.97	14.14
96.0	16.22	16.04	15.85	16.03
99.0	18.94	18.61	18.36	18.51
102.0	22.45	22.01	21.64	21.76
105.0	27.08	26.49	25.93	26.08
108.0	33.20	32.36	31.61	31.74
111.0	41.29	40.11	39.14	39.25
114.0	51.82	50.28	49.00	49.07
117.0	65.17	63.25	61.58	61.66
120.0	81.42	79.08	77.04	77.12
123.0	100.2	97.61	95.24	95.35
126.0	121.2	118.3	115.7	115.8
129.0	143.5	140.7	137.9	138.0
132.0	166.4	163.9	160.4	161.2
135.0	189.8	187.5	183.9	184.8
138.0	212.8	210.6	207.1	208.0
141.0	234.4	232.4	229.1	230.0
144.0	253.8	252.2	249.1	250.0
147.0	270.1	269.0	266.3	267.2
150.0	282.7	281.8	280.0	280.6
153.0	291.0	290.5	289.5	289.9
156.0	294.9	295.0	294.6	295.0
159.0	294.5	295.1	295.3	295.9
162.0	290.4	291.6	292.2	293.1
165.0	283.5	285.0	286.1	287.1
168.0	275.1	276.4	278.0	278.9
171.0	266.7	267.9	269.5	270.4
174.0	260.5	261.3	263.0	263.8
177.0	256.9	257.6	258.3	259.6
180.0	254.8	255.4	255.7	256.6

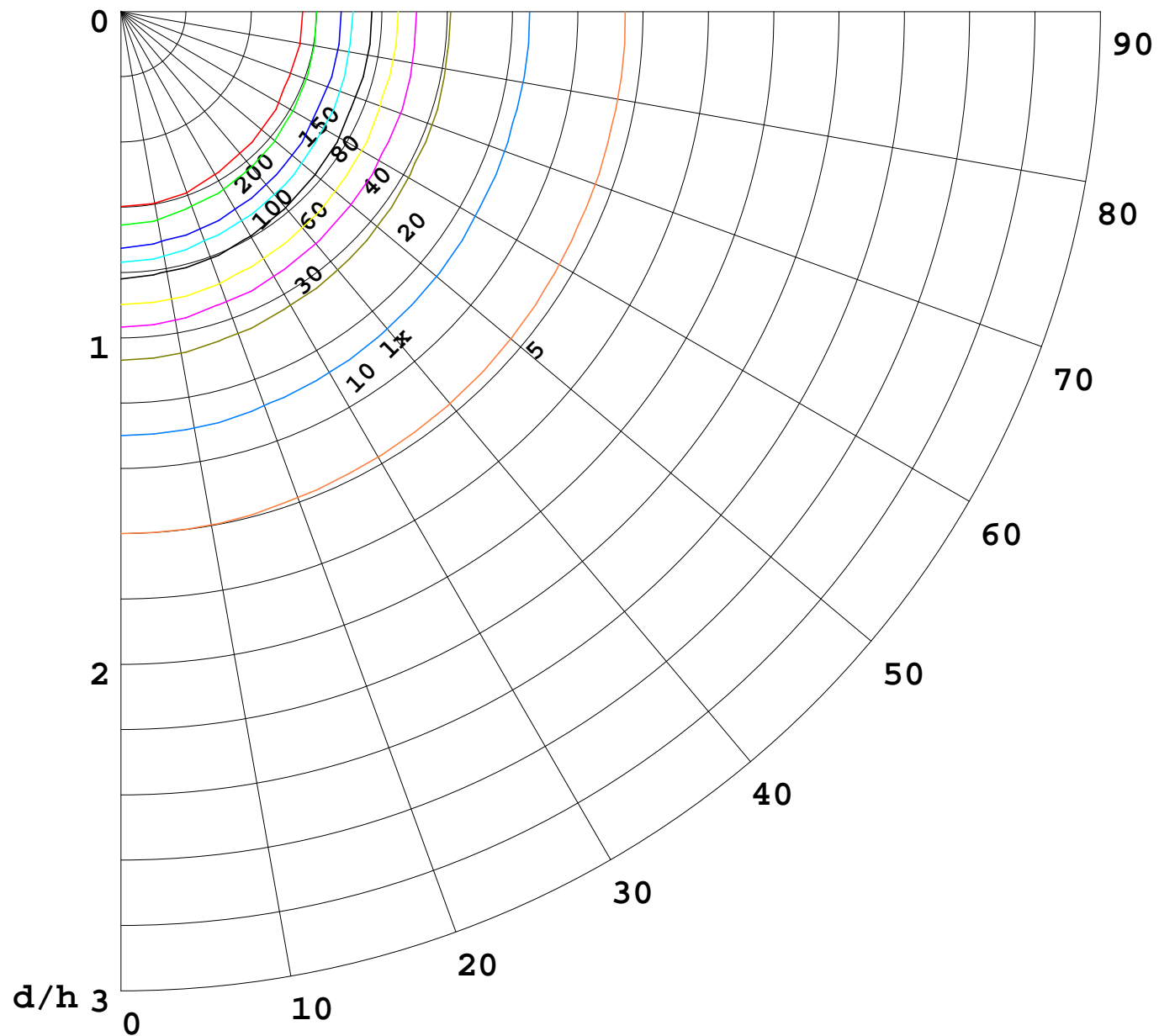
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 05 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: CD4010-400W-HLG480-54A-5700K-P20



1000 lm

$K = 1$



F = 1000 lm
 K = 0.7
 H_{cc} = 0.8 m
 H_{fc} = 0.0 m
 E_{ave} = 100 lx

	P_{cc}	P_w	P_{fc}
—————	70	50	30
—————	50	30	20

