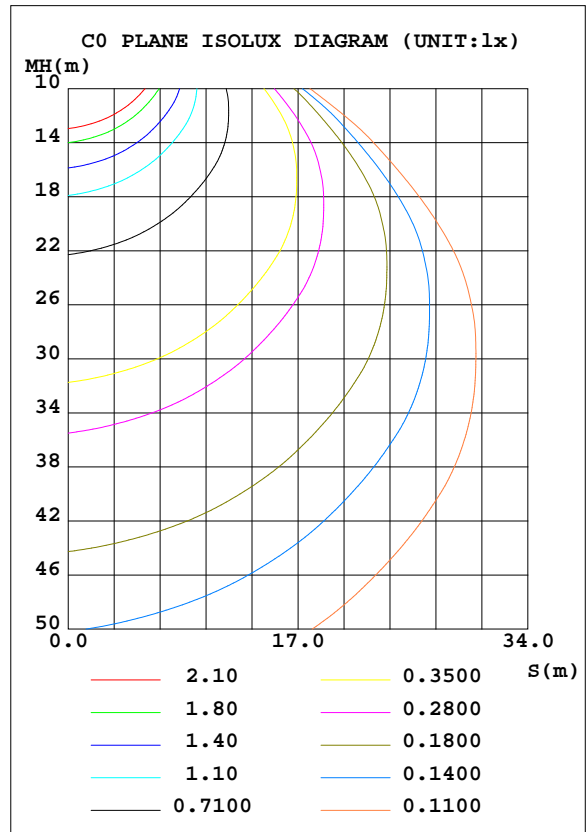
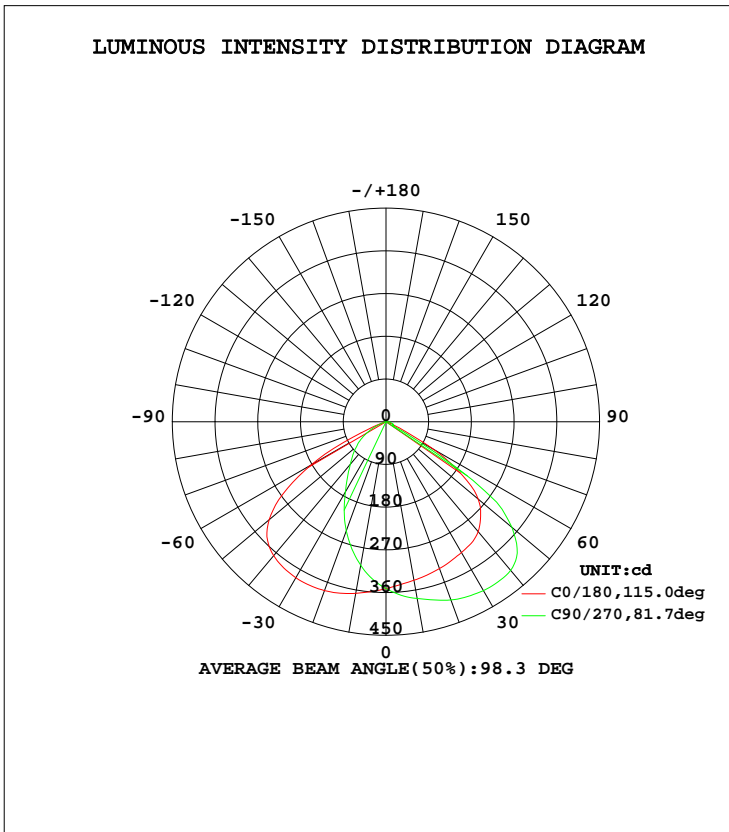


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	SPHWP5W5-50K-B	Imax(cd)	411.9	S/MH(C0/180)	1.61
NOMINAL POWER(W)	5	LOR(%)	100.0	S/MH(C90/270)	0.84
RATED VOLTAGE(V)	3	TOTAL FLUX(lm)	919.00	η UP, DN(C0-180)	0.4,55.5
NOMINAL FLUX(lm)	919.002	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.6,43.6
LAMPS INSIDE	1	η up(%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	3	η down(%)	99.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	lum, lamp
10	339.2	378.1	367.0	307.0				0- 10	33.39	33.39	3.63,3.63
20	329.2	399.5	378.5	244.8				10- 20	97.20	130.6	14.2,14.2
30	318.1	410.7	379.5	171.2				20- 30	152.3	282.9	30.8,30.8
40	302.1	408.7	368.2	117.0				30- 40	194.6	477.5	52,52
50	253.8	346.3	321.4	80.88				40- 50	215.6	693.1	75.4,75.4
60	111.8	42.44	182.4	44.80				50- 60	166.2	859.3	93.5,93.5
70	7.369	16.68	15.29	5.308				60- 70	41.61	900.9	98,98
80	1.707	9.891	2.636	0.0805				70- 80	6.386	907.2	98.7,98.7
90	0.2823	3.343	0.5457	0.0805				80- 90	2.696	909.9	99,99
100	0.3782	0.1399	0.2908	0.3257				90-100	0.3769	910.3	99.1,99.1
110	0.9884	0.3137	0.7581	1.473				100-110	0.5895	910.9	99.1,99.1
120	1.561	0.5298	1.263	2.486				110-120	1.174	912.1	99.2,99.2
130	1.999	0.8222	1.739	3.050				120-130	1.504	913.6	99.4,99.4
140	2.210	1.174	2.105	3.415				130-140	1.606	915.2	99.6,99.6
150	2.479	1.619	2.429	3.580				140-150	1.483	916.7	99.7,99.7
160	2.816	2.165	2.698	3.652				150-160	1.237	917.9	99.9,99.9
170	3.018	2.234	2.909	3.542				160-170	0.8275	918.7	100,100
180	3.039	3.190	3.043	3.203				170-180	0.2608	919.0	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

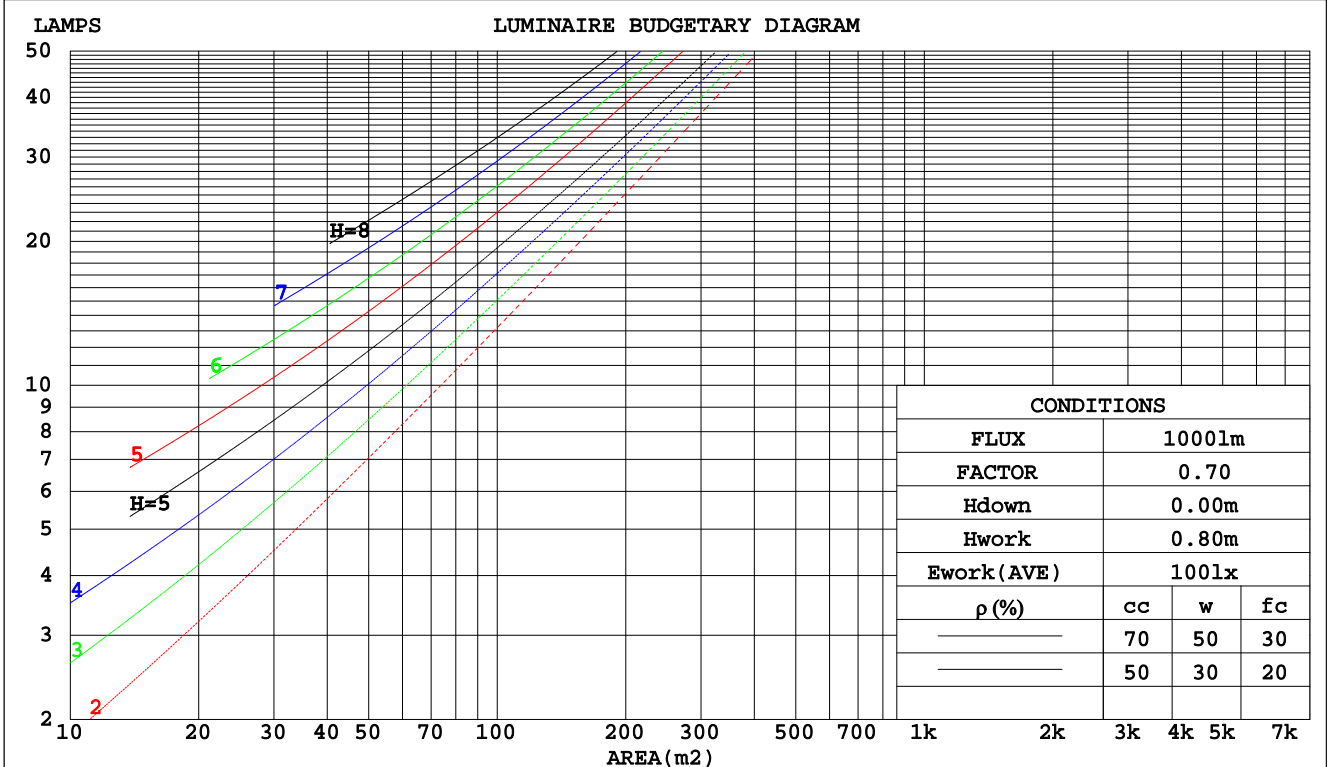
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	
pw																0
pfc																0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.07	1.04	1.00	1.05	1.02	.99	1.00	.98	.95	.96	.94	.92	.93	.91	.90	.88
2.0	.95	.90	.85	.93	.88	.84	.90	.85	.82	.87	.83	.80	.83	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.72	.80	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.75	.67	.62	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.59	.54	.65	.58	.53	.63	.57	.52	.61	.56	.52	.50
6.0	.61	.53	.47	.61	.53	.47	.59	.52	.47	.57	.51	.46	.55	.50	.46	.44
7.0	.56	.48	.42	.55	.47	.42	.53	.46	.41	.52	.46	.41	.50	.45	.41	.39
8.0	.51	.43	.37	.50	.42	.37	.49	.42	.37	.47	.41	.37	.46	.41	.36	.34
9.0	.47	.39	.33	.46	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.31
10.0	.43	.35	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.39	.34	.30	.28



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:QC
Test Date:2024-11-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.340m [K=1.0000]
Remarks: 100%

WEC AND CCEC

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.246	.140	.044	.239	.136	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038	
2.0	.242	.133	.041	.236	.130	.040	.224	.125	.039	.213	.120	.037	.203	.115	.036	
3.0	.232	.124	.037	.227	.122	.037	.217	.117	.036	.207	.113	.035	.198	.110	.034	
4.0	.221	.115	.034	.216	.113	.033	.207	.110	.033	.198	.106	.032	.190	.103	.031	
5.0	.208	.106	.031	.204	.105	.031	.196	.102	.030	.188	.099	.030	.181	.097	.029	
6.0	.197	.099	.028	.193	.097	.028	.185	.095	.028	.179	.093	.027	.172	.091	.027	
7.0	.185	.092	.026	.182	.091	.026	.175	.089	.026	.169	.087	.025	.163	.085	.025	
8.0	.175	.086	.024	.172	.085	.024	.166	.083	.024	.160	.081	.023	.155	.080	.023	
9.0	.165	.080	.022	.163	.079	.022	.157	.078	.022	.152	.076	.022	.147	.075	.022	
10.0	.157	.075	.021	.154	.074	.021	.149	.073	.021	.145	.072	.020	.140	.071	.020	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.198	.198	.198	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.183	.164	.147	.157	.141	.126	.107	.097	.087	.062	.056	.051	.020	.018	.016	
2.0	.173	.140	.112	.148	.120	.096	.102	.083	.067	.059	.048	.039	.019	.016	.013	
3.0	.165	.122	.087	.141	.105	.076	.097	.073	.053	.056	.043	.031	.018	.014	.010	
4.0	.158	.108	.070	.135	.093	.061	.093	.065	.043	.054	.038	.025	.017	.012	.008	
5.0	.151	.097	.058	.129	.084	.051	.089	.059	.036	.052	.035	.021	.017	.011	.007	
6.0	.144	.089	.049	.124	.077	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
7.0	.138	.082	.043	.119	.071	.037	.082	.050	.026	.048	.029	.016	.015	.010	.005	
8.0	.132	.076	.038	.114	.066	.033	.079	.046	.023	.046	.027	.014	.015	.009	.005	
9.0	.127	.071	.034	.109	.062	.030	.076	.044	.021	.044	.026	.013	.014	.008	.004	
10.0	.122	.067	.031	.105	.058	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

UGR(Unified Glare Rating) Table

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm										
NAME: SPHWP5W5-50K-B					TYPE:SPHWP5W5-50K-B			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.:					SUR.:			PROTECTION 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	17.2	18.5	17.4	18.7	19.0	17.8	19.2	18.1	19.4	19.6
3H	17.0	18.3	17.3	18.5	18.7	17.6	18.9	17.9	19.1	19.4
4H	16.9	18.1	17.2	18.3	18.6	17.6	18.7	17.9	19.0	19.3
6H	16.8	17.9	17.1	18.2	18.5	17.5	18.6	17.8	18.9	19.2
8H	16.7	17.8	17.1	18.1	18.4	17.5	18.5	17.8	18.8	19.1
12H	16.7	17.7	17.1	18.0	18.3	17.5	18.5	17.8	18.8	19.1
4H 2H	17.1	18.3	17.4	18.5	18.8	17.7	18.9	18.0	19.1	19.4
3H	17.0	18.0	17.3	18.3	18.6	17.5	18.6	17.9	18.9	19.2
4H	16.9	17.8	17.3	18.1	18.5	17.5	18.4	17.9	18.7	19.1
6H	16.8	17.6	17.2	17.9	18.3	17.5	18.3	17.9	18.6	19.0
8H	16.7	17.5	17.2	17.9	18.3	17.5	18.2	17.9	18.6	19.0
12H	16.7	17.4	17.1	17.8	18.2	17.5	18.2	17.9	18.6	19.0
8H 4H	16.7	17.5	17.2	17.9	18.3	17.4	18.1	17.8	18.5	18.9
6H	16.7	17.3	17.1	17.7	18.1	17.4	18.0	17.8	18.4	18.8
8H	16.6	17.2	17.1	17.6	18.1	17.4	17.9	17.9	18.4	18.8
12H	16.6	17.1	17.1	17.5	18.0	17.5	17.9	18.0	18.4	18.9
12H 4H	16.7	17.4	17.1	17.8	18.2	17.3	18.0	17.8	18.4	18.8
6H	16.6	17.2	17.1	17.6	18.1	17.3	17.9	17.8	18.3	18.8
8H	16.6	17.1	17.1	17.5	18.0	17.4	17.8	17.9	18.3	18.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 1.3					+ 0.5 / - 0.6				
1.5H	+ 1.1 / - 2.7					+ 0.9 / - 1.8				
2.0H	+ 2.1 / - 7.9					+ 2.9 / - 8.8				

CIE Pub.117 Corrected 919.0 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.3)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

UTILIZATION FACTORS TABLE

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION 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	60	49	42	59	49	42	58	48	42	36
0.80	72	61	54	71	60	54	69	60	53	47
1.00	81	71	65	80	71	65	78	72	64	58
1.25	89	80	74	87	79	73	85	77	72	66
1.50	93	85	79	92	84	79	89	82	78	71
2.00	100	93	88	98	92	87	95	89	85	78
2.50	103	96	91	101	95	91	97	92	89	81
3.00	106	100	96	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	87
5.00	110	106	103	108	104	101	103	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

ISOCANDELA DIAGRAM

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

585.16 lm

%lum = 63.7%

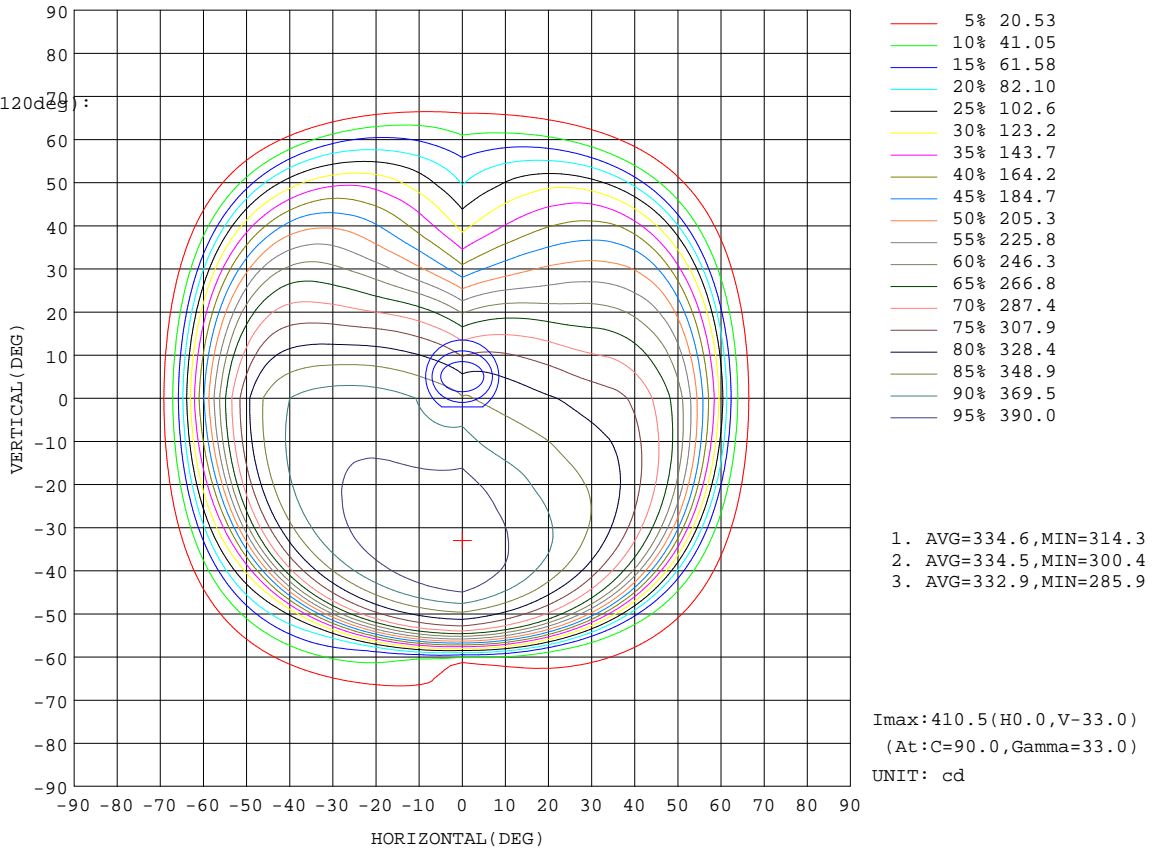
%lamp = 63.7%

Conical surface Flux(120deg):

859.25 lm

%lum = 93.5%

%lamp = 93.5%

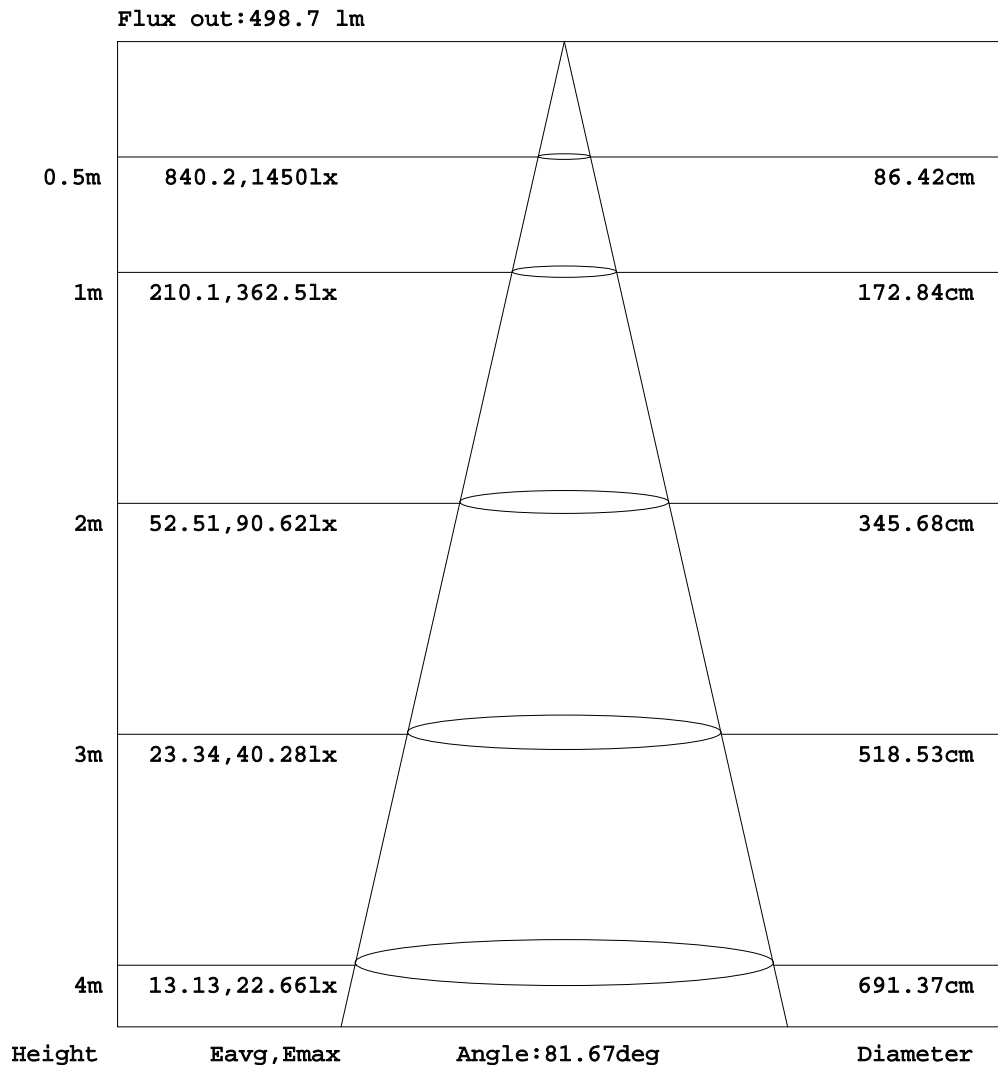


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: QC
 Test Date: 2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 8.340m [K=1.0000]
 Remarks: 100%

AAI Figure

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



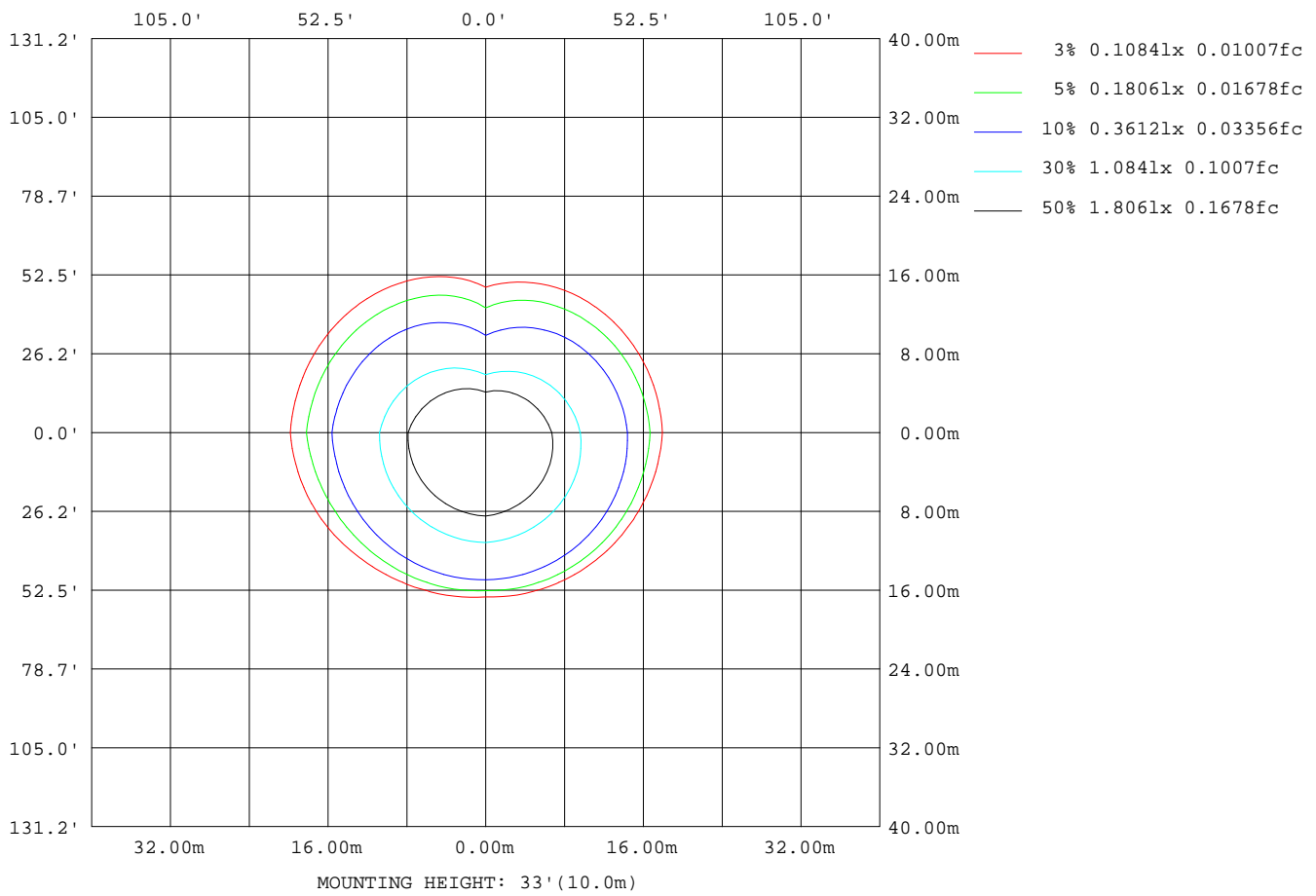
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

ISOLUX DIAGRAM

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

LED Avg.L Report

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

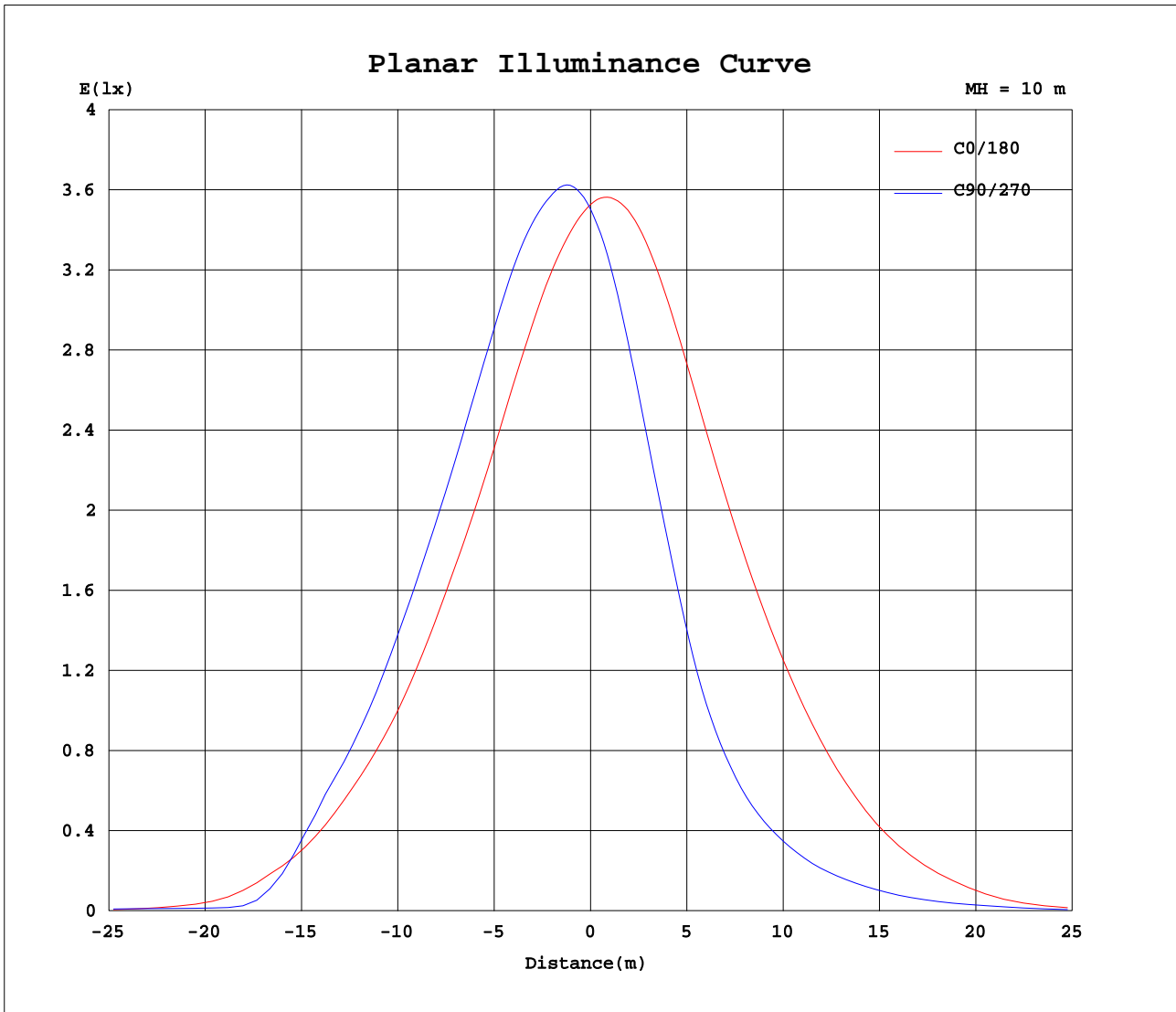
AvgL	cd/m2
L_0~180(65)av	1276
L_0~180(75)av	151
L_0~180(85)av	125
L_90~270(65)av	497
L_90~270(75)av	277
L_90~270(85)av	470
L_45(65)av	824
L_45(75)av	231
L_45(85)av	343

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: QC
 Test Date: 2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 8.340m [K=1.0000]
 Remarks: 100%

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.9V I:1.677A P:200.9W PF:0.9992 Lamp Flux:919.002x1 lm		
NAME: SPHWP5W5-50K-B	TYPE:SPHWP5W5-50K-B	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	352	352	352	352															
5	345	367	359	332															
10	339	378	367	307															
15	334	389	374	278															
20	329	399	378	245															
25	324	406	380	208															
30	318	411	380	171															
35	313	412	376	142															
40	302	409	368	117															
45	282	391	353	98.9															
50	254	346	321	80.9															
55	196	255	264	64.8															
60	112	42.4	182	44.8															
65	31.0	15.7	76.8	26.3															
70	7.37	16.7	15.3	5.31															
75	3.29	13.5	4.51	0.82															
80	1.71	9.89	2.64	0.08															
85	0.73	8.12	1.45	0.08															
90	0.28	3.34	0.55	0.08															
95	0.24	0.10	0.21	0.12															
100	0.38	0.14	0.29	0.33															
105	0.66	0.22	0.51	0.80															
110	0.99	0.31	0.76	1.47															
115	1.30	0.42	1.02	2.05															
120	1.56	0.53	1.26	2.49															
125	1.79	0.66	1.50	2.78															
130	2.00	0.82	1.74	3.05															
135	2.11	0.99	1.94	3.30															
140	2.21	1.17	2.10	3.41															
145	2.33	1.37	2.27	3.46															
150	2.48	1.62	2.43	3.58															
155	2.63	1.88	2.56	3.65															
160	2.82	2.17	2.70	3.65															
165	2.98	2.38	2.82	3.66															
170	3.02	2.23	2.91	3.54															
175	3.03	0.06	3.01	3.39															
180	3.04	3.19	3.04	3.20															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:QC
 Test Date:2024-11-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.340m [K=1.0000]
 Remarks: 100%