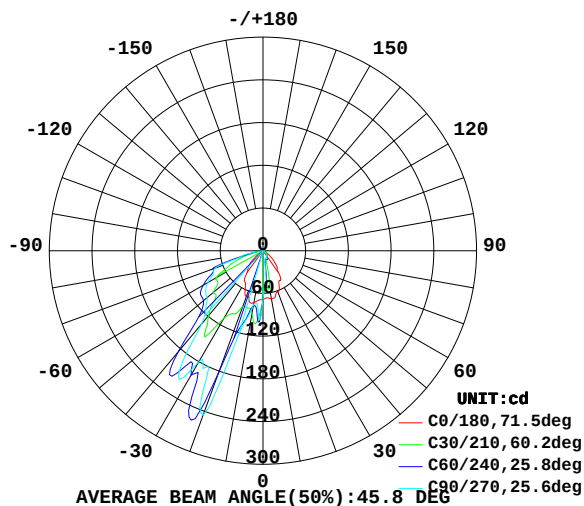


LUMINAIRE PHOTOMETRIC TEST REPORT

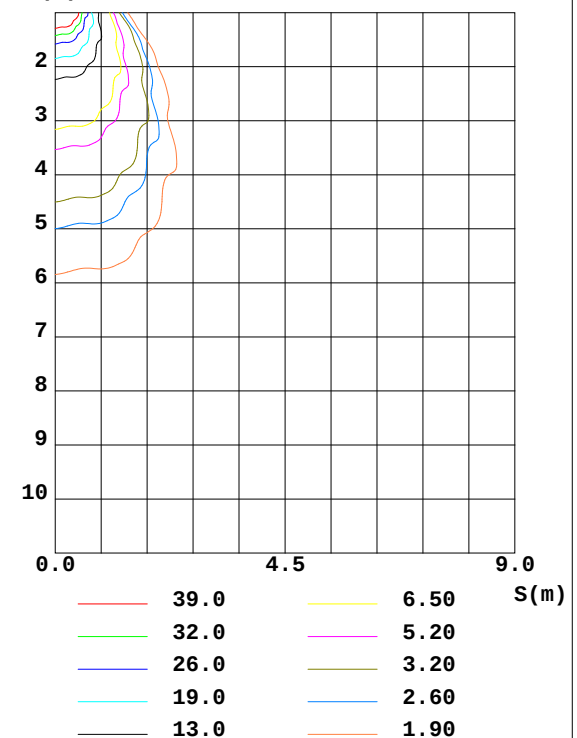
Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE:3W	WEIGHT:
DIM.:	SPEC.:6000K	SERIAL No.:1
MFR.:	SUR.:0.04X0.035	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 64.19 lm/W			
MODEL	STP3W-CW-W	I _{max} (cd)	258.3	S/MH(C0/180)	1.04
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	0.23
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	238.13	η UP, DN(C0-180)	0.0, 10.2
NOMINAL FLUX(lm)	238.131	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 89.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	240.0	η down(%)	100.0	CIBSE SHR MAX	0.70

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	68.63	35.93	15.87	34.83	73.98	84.23	77.21	79.01	0- 10	6.203	6.203	2.6,2.6
20	61.24	13.87	10.74	13.49	67.90	132.9	245.5	121.8	10- 20	17.84	24.04	10.1,10.1
30	48.23	11.36	10.82	10.65	50.96	156.0	179.6	144.2	20- 30	38.80	62.84	26.4,26.4
40	31.41	8.491	9.195	8.138	32.91	152.3	134.2	146.7	30- 40	49.96	112.8	47.4,47.4
50	16.50	6.798	5.466	5.765	14.49	100.3	102.6	89.36	40- 50	41.80	154.6	64.9,64.9
60	6.464	4.130	3.230	3.704	5.168	86.35	89.16	82.50	50- 60	37.16	191.8	80.5,80.5
70	2.267	2.429	2.427	2.234	1.947	56.98	71.92	50.89	60- 70	31.38	223.1	93.7,93.7
80	0.9880	1.577	1.871	1.418	0.9281	6.005	4.205	5.408	70- 80	14.20	237.3	99.7,99.7
90	0	0	0	0	0	0	0	0	80- 90	0.7833	238.1	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

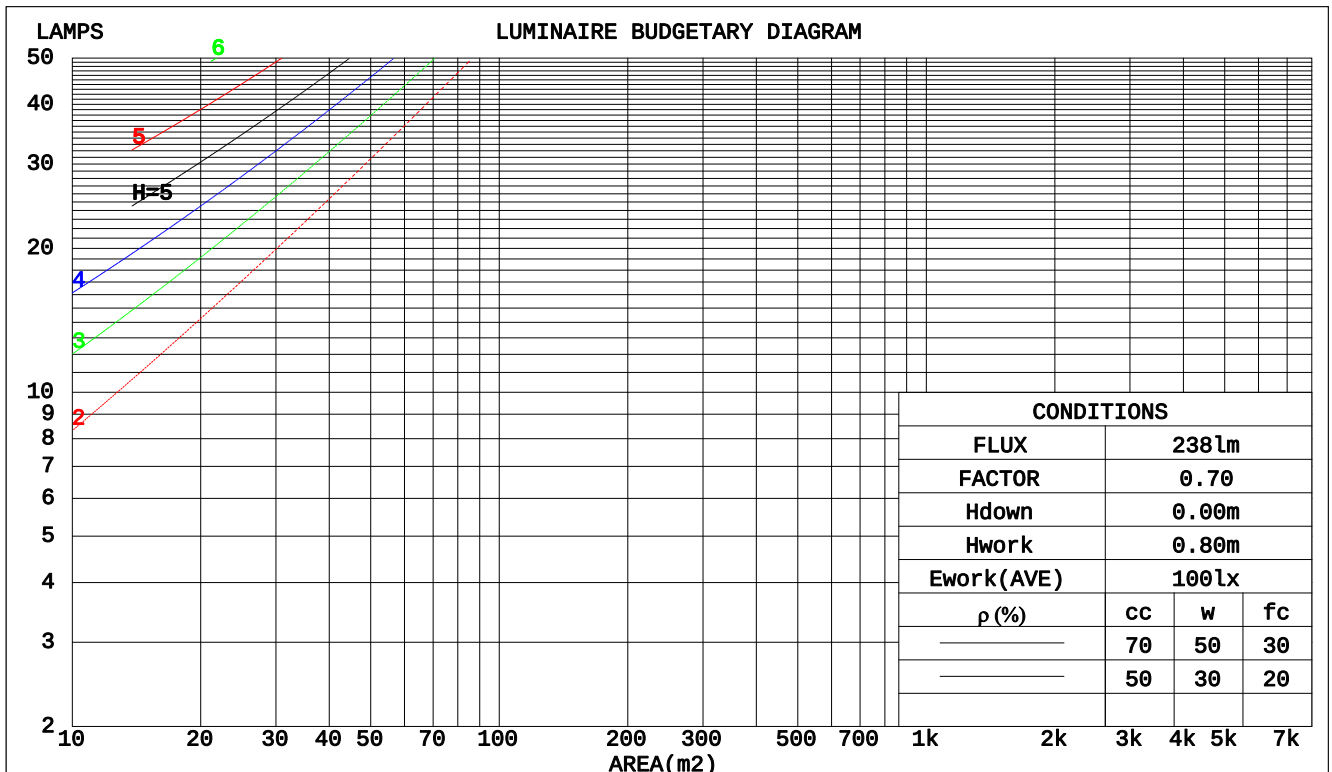
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE:3W	WEIGHT:
DIM.:	SPEC.:6000K	SERIAL No.:1
MFR.:	SUR.:0.04X0.035	PROTECTION 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			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	1.02	1.02	1.02	1.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.93	.94	.92	.90	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.67	.63	.70	.66	.62	.60
4.0	.71	.62	.56	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.47	.60	.53	.47	.58	.51	.46	.56	.50	.46	.44
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7.0	.51	.43	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.34	.29	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm								
NAME: STP3W-CW-W				TYPE: 3W			WEIGHT:	
DIM.:				SPEC.: 6000K			SERIAL No.: 1	
MFR.:				SUR.: 0.04X0.035			PROTECTION 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	.291	.166	.052	.284	.162	.052	.271	.156	.050	.259	.149	.048	.248	.144	.046	
2.0	.282	.155	.047	.276	.152	.047	.264	.147	.046	.254	.142	.045	.244	.138	.043	
3.0	.264	.141	.042	.259	.139	.042	.249	.135	.041	.239	.131	.040	.230	.128	.039	
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.216	.117	.036	
5.0	.228	.116	.034	.224	.115	.034	.216	.112	.033	.209	.110	.033	.201	.108	.032	
6.0	.213	.107	.031	.209	.105	.030	.202	.103	.030	.195	.101	.030	.189	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.172	.084	.023	.166	.082	.023	.162	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.148	.075	.021	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.600m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm											
NAME: STP3W-CW-W					TYPE:3W			WEIGHT:			
DIM.:					SPEC.:6000K			SERIAL No.:1			
MFR.:					SUR.:0.04X0.035			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		15.3	16.8	15.6	17.0	17.2	11.2	12.8	11.5	13.0	13.2
	3H	15.7	17.1	16.0	17.3	17.6	12.6	14.0	12.9	14.2	14.4
	4H	15.8	17.2	16.2	17.4	17.7	13.5	14.8	13.8	15.0	15.3
	6H	16.0	17.2	16.3	17.5	17.8	14.5	15.8	14.9	16.1	16.3
	8H	16.1	17.3	16.4	17.5	17.8	15.2	16.4	15.5	16.6	16.9
	12H	16.1	17.3	16.5	17.6	17.9	15.7	16.9	16.1	17.2	17.5
4H	2H	15.3	16.6	15.6	16.8	17.1	11.8	13.2	12.2	13.4	13.7
	3H	15.9	17.0	16.2	17.3	17.6	13.4	14.6	13.8	14.9	15.2
	4H	16.2	17.2	16.5	17.5	17.9	14.5	15.5	14.8	15.8	16.2
	6H	16.5	17.4	16.9	17.7	18.1	15.8	16.7	16.2	17.0	17.4
	8H	16.6	17.5	17.0	17.9	18.2	16.5	17.4	16.9	17.7	18.1
	12H	16.8	17.6	17.2	17.9	18.4	17.2	18.0	17.6	18.3	18.7
8H	4H	16.3	17.2	16.8	17.6	18.0	14.8	15.7	15.2	16.1	16.4
	6H	16.8	17.6	17.3	18.0	18.4	16.4	17.1	16.9	17.5	18.0
	8H	17.1	17.8	17.6	18.2	18.6	17.4	18.0	17.8	18.4	18.9
	12H	17.4	17.9	17.9	18.4	18.8	18.2	18.7	18.6	19.1	19.6
12H	4H	16.4	17.2	16.8	17.6	18.0	14.9	15.7	15.3	16.1	16.5
	6H	17.0	17.6	17.4	18.0	18.5	16.6	17.2	17.0	17.6	18.1
	8H	17.4	17.9	17.8	18.3	18.8	17.6	18.1	18.1	18.6	19.0
Variations with the observer position at spacings:											
S = 1.0H	+ 1.2 / - 0.4					+ 0.2 / - 0.2					
1.5H	+ 1.9 / - 1.4					+ 0.2 / - 0.3					
2.0H	+ 3.1 / - 1.5					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 238.1 lm Total Lamp Luminous Flux.(8log(F/F0) = -5.0)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-09-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE: 3W	WEIGHT:
DIM.:	SPEC.: 6000K	SERIAL No.: 1
MFR.:	SUR.: 0.04X0.035	PROTECTION ANGLE:

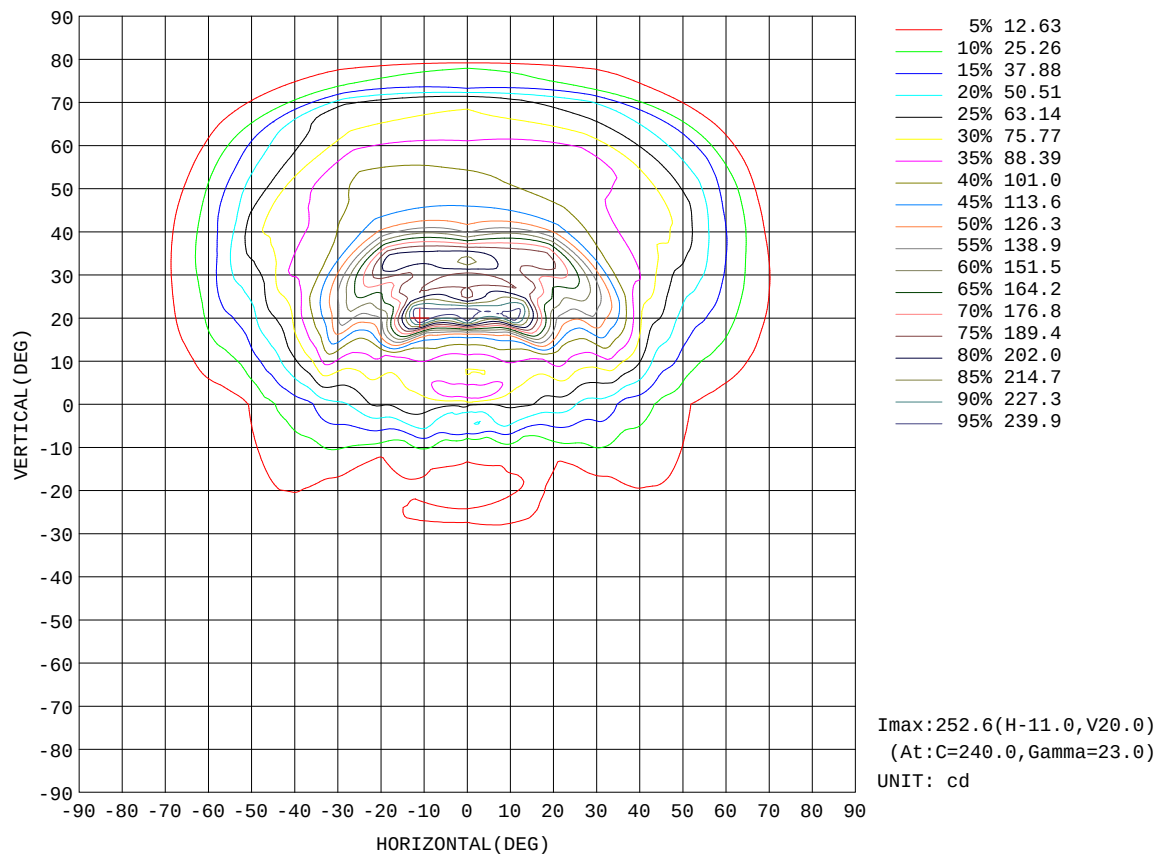
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	59	48	41	57	47	41	35
0.80	69	58	51	68	57	51	66	57	50	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	84	74	67	83	74	67	80	72	66	59
1.50	89	80	73	88	79	73	85	77	72	64
2.00	96	88	82	94	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	92	88	80
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.600m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE: 3W	WEIGHT:
DIM.:	SPEC.: 6000K	SERIAL No.: 1
MFR.:	SUR.: 0.04X0.035	PROTECTION ANGLE:

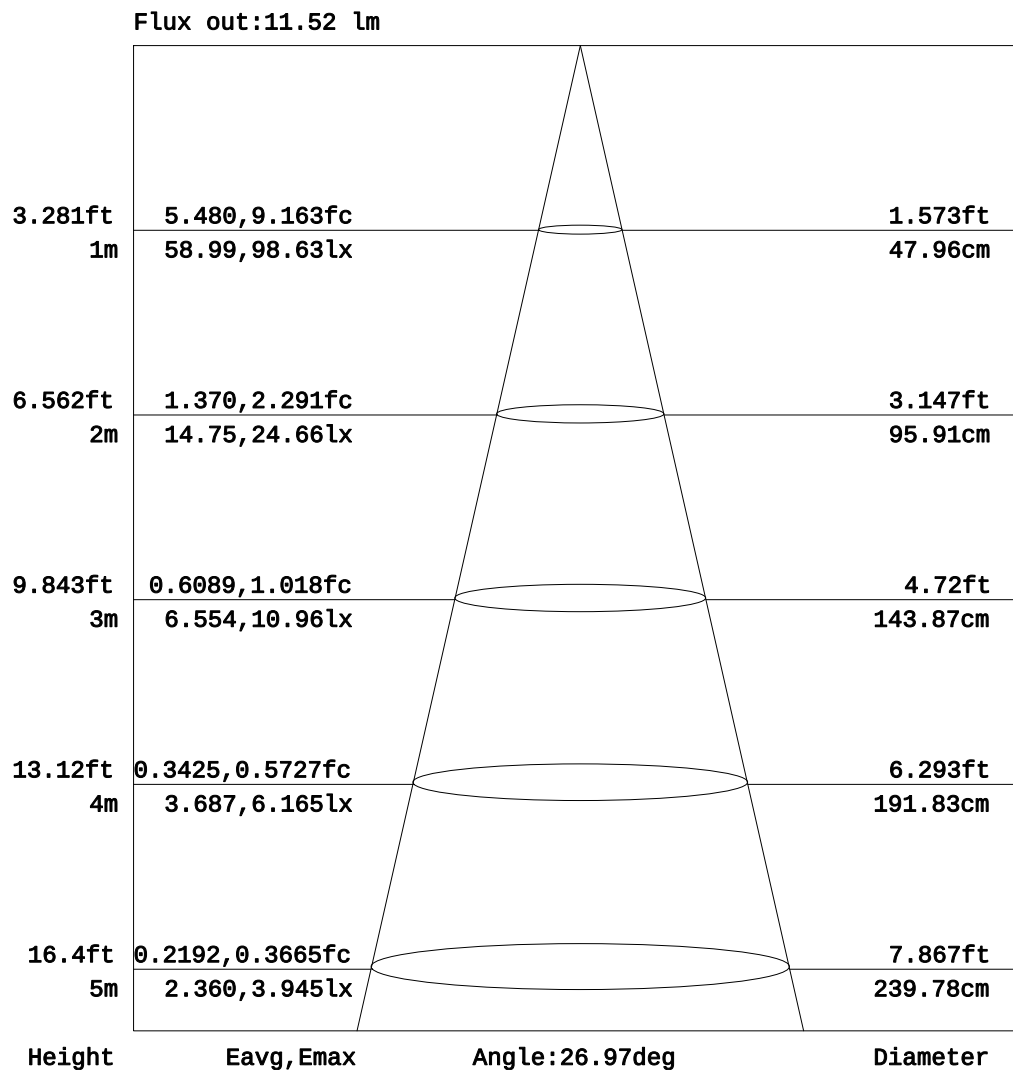


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.600m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE:3W	WEIGHT:
DIM.:	SPEC.:6000K	SERIAL No.:1
MFR.:	SUR.:0.04X0.035	PROTECTION ANGLE:



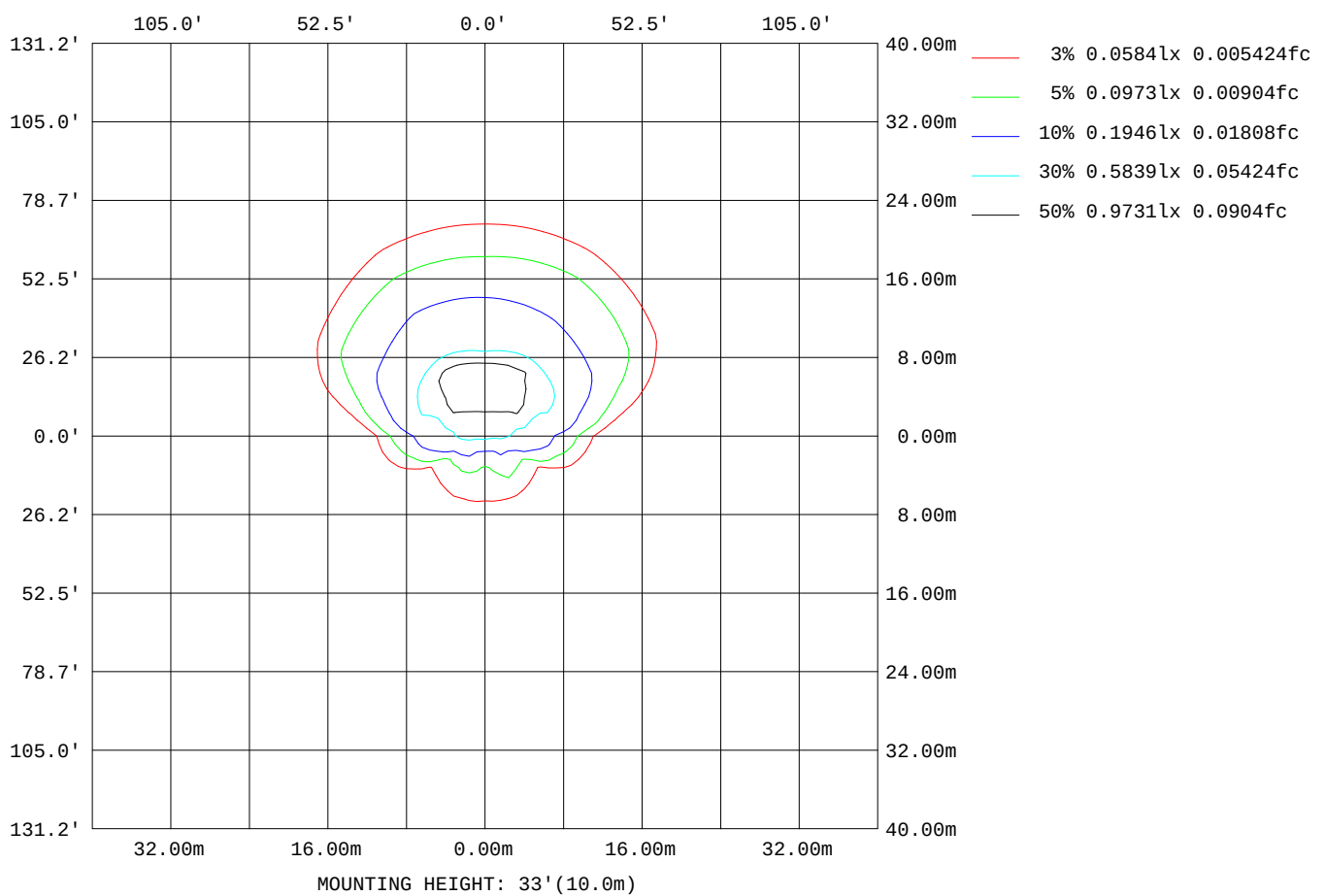
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-09-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

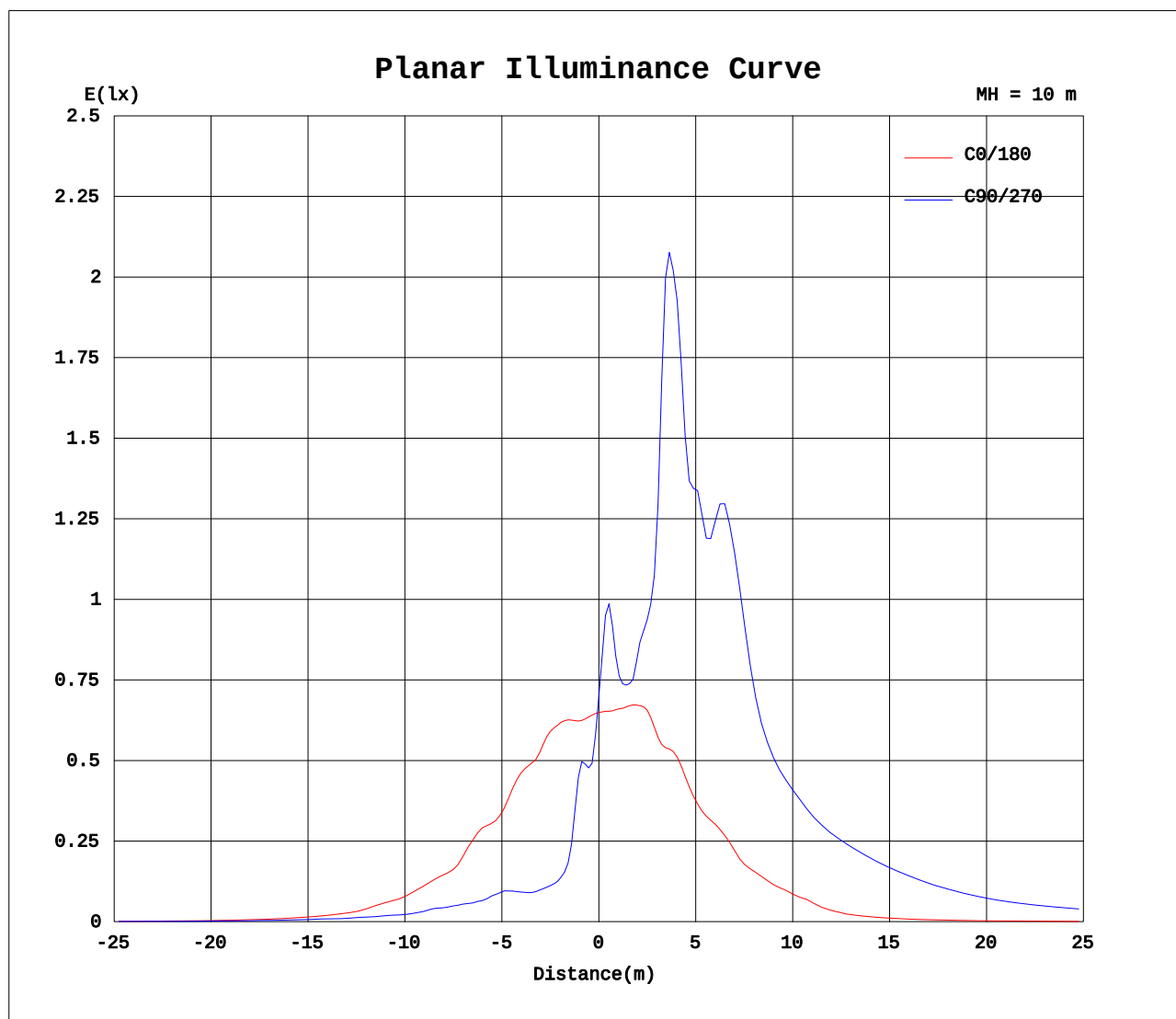
Test:U:240.0V I:0.0320A P:3.710W PF:0.4740 Lamp Flux:238.131x1 lm		
NAME: STP3W-CW-W	TYPE:3W	WEIGHT:
DIM.:	SPEC.:6000K	SERIAL No.:1
MFR.:	SUR.:0.04X0.035	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-09-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.600m [K=1.0000]
Remarks:

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks: