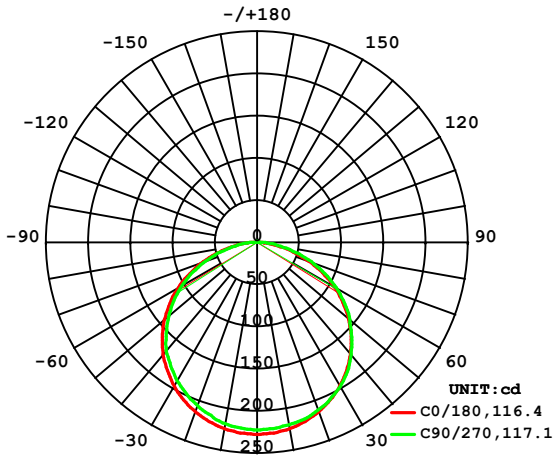
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:23.998V I:0.3386A P:8.1257W PF:1.0000 Freq:49.99Hz Lamp Flux:679.494x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding Angle:

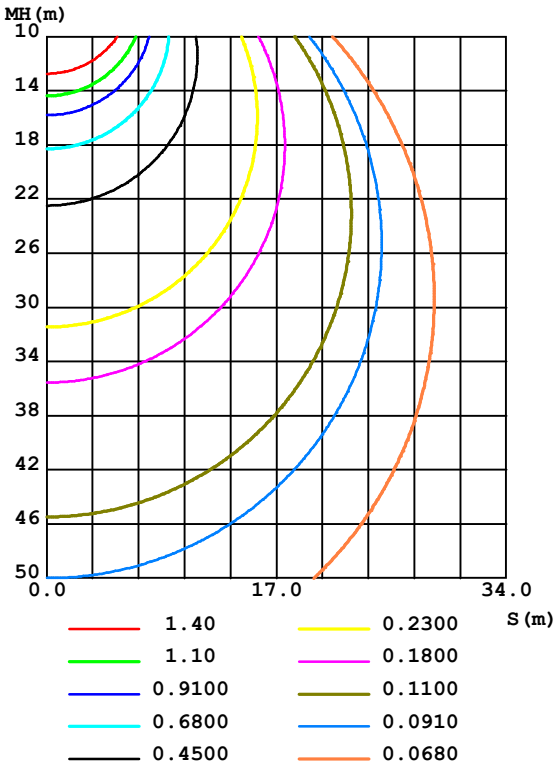
DATA OF LAMP		PHOTOMETRIC DATA Eff: 83.62 lm/W			
MODEL	TF3BD-MINI	Imax(cd)	227.5	S/MH(C0/180)	1.29
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	679.49	η UP,DN(C0-180)	0.5,49.8
NOMINAL FLUX(lm)	679.494	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.5,49.2
LAMPS INSIDE	1	η up(%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):116.8 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum,lamp
10	224.1	219.4	224.1	218.4					0- 10	21.30	21.30	3.13,3.13
20	213.7	212.0	213.9	206.3					10- 20	61.37	82.67	12.2,12.2
30	196.4	197.2	196.9	189.4					20- 30	94.08	176.8	26,26
40	172.5	173.7	173.3	167.7					30- 40	115.3	292.0	43,43
50	142.1	143.4	143.6	137.1					40- 50	121.2	413.2	60.8,60.8
60	105.8	108.7	108.1	102.8					50- 60	111.4	524.6	77.2,77.2
70	64.97	68.64	68.15	64.70					60- 70	85.85	610.5	89.8,89.8
80	24.52	28.57	27.82	26.75					70- 80	48.87	659.3	97,97
90	1.118	4.337	0.6472	2.740					80- 90	13.41	672.7	99,99
100	0.3082	1.339	0.4263	0.4396					90-100	1.123	673.9	99.2,99.2
110	0.5492	0.9672	0.6562	0.6053					100-110	0.6724	674.5	99.3,99.3
120	0.8018	0.9591	0.9198	0.8802					110-120	0.7819	675.3	99.4,99.4
130	1.059	1.234	1.172	1.138					120-130	0.9149	676.2	99.5,99.5
140	1.284	1.430	1.385	1.356					130-140	0.9719	677.2	99.7,99.7
150	1.474	1.536	1.564	1.525					140-150	0.9063	678.1	99.8,99.8
160	1.609	1.649	1.693	1.660					150-160	0.7355	678.8	99.9,99.9
170	1.738	1.761	1.800	1.755					160-170	0.4840	679.3	100,100
180	1.800	1.850	1.805	1.794					170-180	0.1702	679.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 352.89 lm

%lum = 51.9%
%lamp = 51.9%

Conical surface Flux(120deg): 524.61 lm

%lum = 77.2%
%lamp = 77.2%

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Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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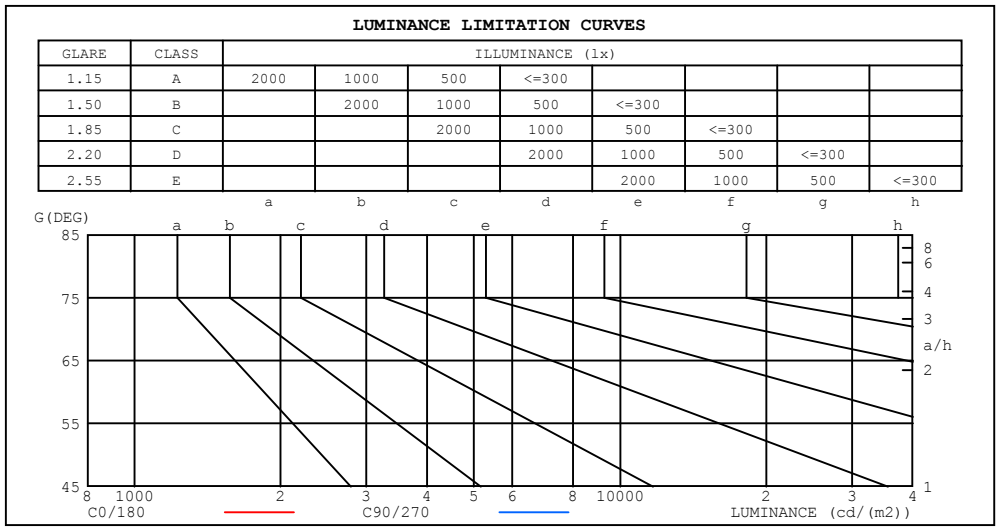
LUMINANCE LIMITATION CURVES

Test:U:23.998V I:0.3386A P:8.1257W PF:1.0000 Freq:49.99Hz Lamp Flux:679.494x1 lm		
NAME:	**TYPE:**	**WEIGHT:**
SPEC.:	**DIM.:**	**SERIAL No.:**
MFR.: VICTRONICS	**SUR.:**	**Shielding Angle:**



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	10	15
80	14	16
75	17	19
70	19	20
65	20	21
60	21	22
55	22	22
50	22	22
45	22	22

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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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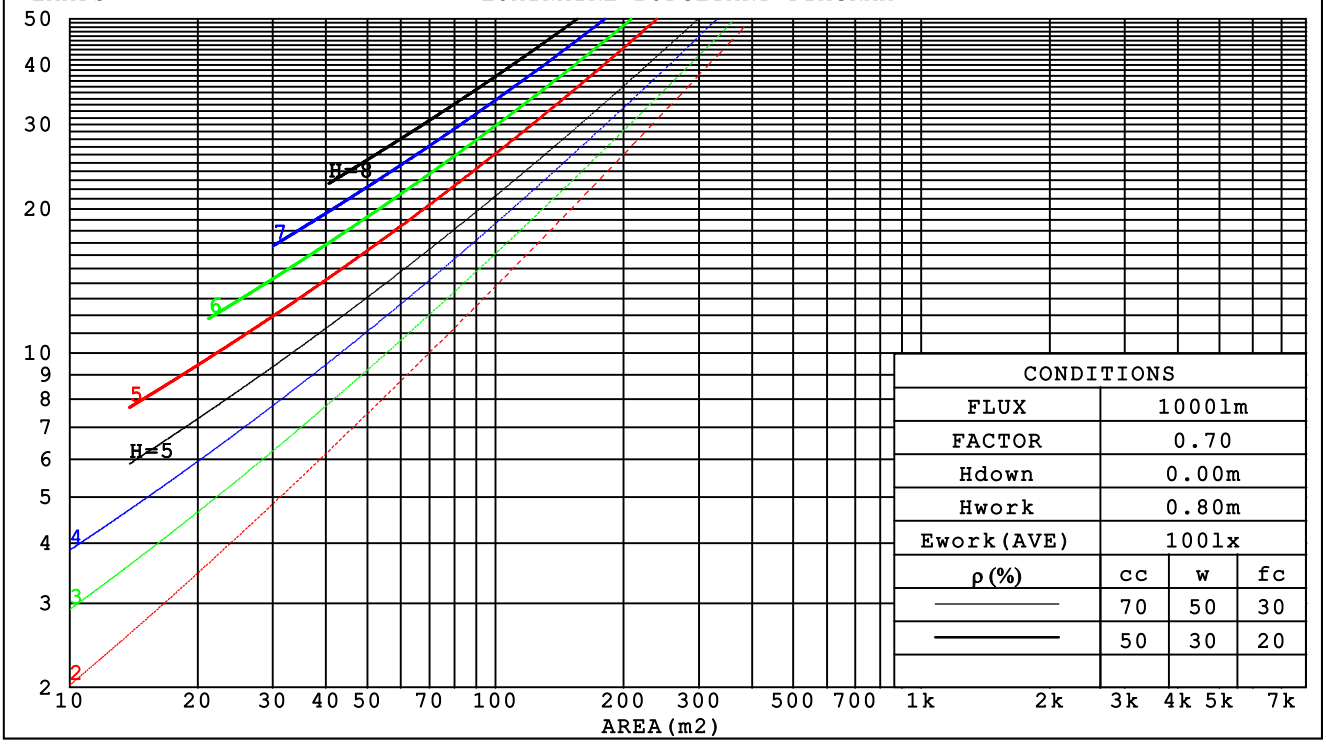
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding Angle:

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			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	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.87	.89	.87	.85	.82
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.61	.68	.64	.59	.57
4.0	.70	.61	.54	.68	.60	.53	.65	.58	.53	.63	.57	.52	.61	.55	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.56	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.39	.37
7.0	.50	.42	.35	.50	.41	.35	.48	.40	.35	.46	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



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WEC AND CCEC

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NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding 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 Coeffcients(WEC)									
0.0																
1.0	.314	.178	.057	.306	.175	.056	.292	.168	.054	.280	.161	.052	.268	.155	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.154	.048	.265	.149	.047	.254	.144	.045	
3.0	.273	.145	.043	.267	.143	.043	.256	.139	.042	.246	.135	.041	.237	.131	.041	
4.0	.251	.131	.038	.246	.129	.038	.237	.125	.037	.228	.122	.037	.219	.119	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.204	.109	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.187	.091	.026	.184	.090	.026	.177	.089	.025	.172	.087	.025	.166	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021	

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	.116	.116	.116	.066	.066	.066	.021	.021	.021	
1.0	.188	.164	.142	.161	.141	.122	.110	.097	.084	.063	.056	.049	.020	.018	.016	
2.0	.180	.140	.105	.154	.120	.091	.106	.083	.064	.061	.048	.037	.020	.016	.012	
3.0	.173	.122	.082	.148	.105	.071	.102	.073	.050	.059	.043	.029	.019	.014	.010	
4.0	.165	.109	.066	.142	.094	.057	.097	.066	.040	.056	.038	.024	.018	.012	.008	
5.0	.158	.098	.055	.135	.085	.048	.093	.060	.034	.054	.035	.020	.017	.011	.007	
6.0	.151	.090	.047	.129	.078	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006	
7.0	.144	.083	.041	.124	.072	.036	.085	.051	.025	.050	.030	.015	.016	.010	.005	
8.0	.137	.077	.036	.118	.067	.032	.082	.047	.023	.048	.028	.013	.015	.009	.004	
9.0	.131	.073	.033	.113	.063	.029	.078	.044	.020	.046	.026	.012	.015	.009	.004	
10.0	.125	.068	.030	.108	.059	.026	.075	.042	.019	.044	.025	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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UGR(Unified Glare Rating) Table

Test:U:23.998V I:0.3386A P:8.1257W PF:1.0000 Freq:49.99Hz Lamp Flux:679.494x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	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	0.9	2.5	1.2	2.7	2.9	1.0	2.6	1.3	2.8	3.0
	3H	2.5	3.9	2.8	4.1	4.4	2.6	4.0	2.9	4.3	4.5
	4H	3.0	4.3	3.3	4.6	4.9	3.2	4.6	3.5	4.8	5.1
	6H	3.4	4.6	3.7	4.9	5.2	3.6	4.9	4.0	5.2	5.5
	8H	3.5	4.7	3.8	5.0	5.3	3.8	5.0	4.1	5.3	5.6
	12H	3.5	4.7	3.9	5.0	5.3	3.9	5.0	4.2	5.3	5.7
4H	2H	1.6	2.9	1.9	3.2	3.5	1.6	3.0	2.0	3.3	3.5
	3H	3.3	4.4	3.6	4.7	5.1	3.4	4.6	3.8	4.9	5.2
	4H	3.9	5.0	4.3	5.3	5.7	4.1	5.2	4.5	5.5	5.9
	6H	4.4	5.4	4.8	5.7	6.1	4.7	5.6	5.1	6.0	6.4
	8H	4.5	5.4	5.0	5.8	6.2	4.9	5.7	5.3	6.1	6.5
	12H	4.6	5.4	5.0	5.8	6.2	5.0	5.8	5.4	6.2	6.6
8H	4H	4.2	5.1	4.6	5.5	5.9	4.4	5.2	4.8	5.6	6.0
	6H	4.8	5.5	5.3	6.0	6.4	5.0	5.8	5.5	6.2	6.7
	8H	5.0	5.7	5.5	6.1	6.6	5.3	6.0	5.8	6.4	6.9
	12H	5.1	5.7	5.6	6.2	6.7	5.5	6.1	6.0	6.5	7.0
12H	4H	4.2	5.0	4.6	5.4	5.8	4.4	5.2	4.8	5.6	6.0
	6H	4.8	5.5	5.3	5.9	6.4	5.1	5.7	5.6	6.2	6.7
	8H	5.1	5.7	5.6	6.1	6.6	5.4	5.9	5.9	6.4	6.9

Variations with the observer position at spacings:		
S = 1.0H	+ 0.2 / - 0.2	+ 0.1 / - 0.2
1.5H	+ 0.2 / - 0.3	+ 0.2 / - 0.3
2.0H	+ 0.2 / - 0.3	+ 0.2 / - 0.3

CIE Pub.117, 679.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.3)

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Humidity:65.0%
Test Distance:9.150m [K=1.0000]
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UTILIZATION FACTORS TABLE

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NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	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) x RCR = 5									
k = 0.60	57	45	38	56	45	38	55	44	37	31
0.80	67	55	47	65	54	47	64	53	47	40
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	72	64	81	71	64	78	69	63	55
1.50	87	77	70	86	76	70	82	74	68	61
2.00	94	86	79	92	84	78	89	82	77	68
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	97	101	97	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

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ISOCANDELA DIAGRAM

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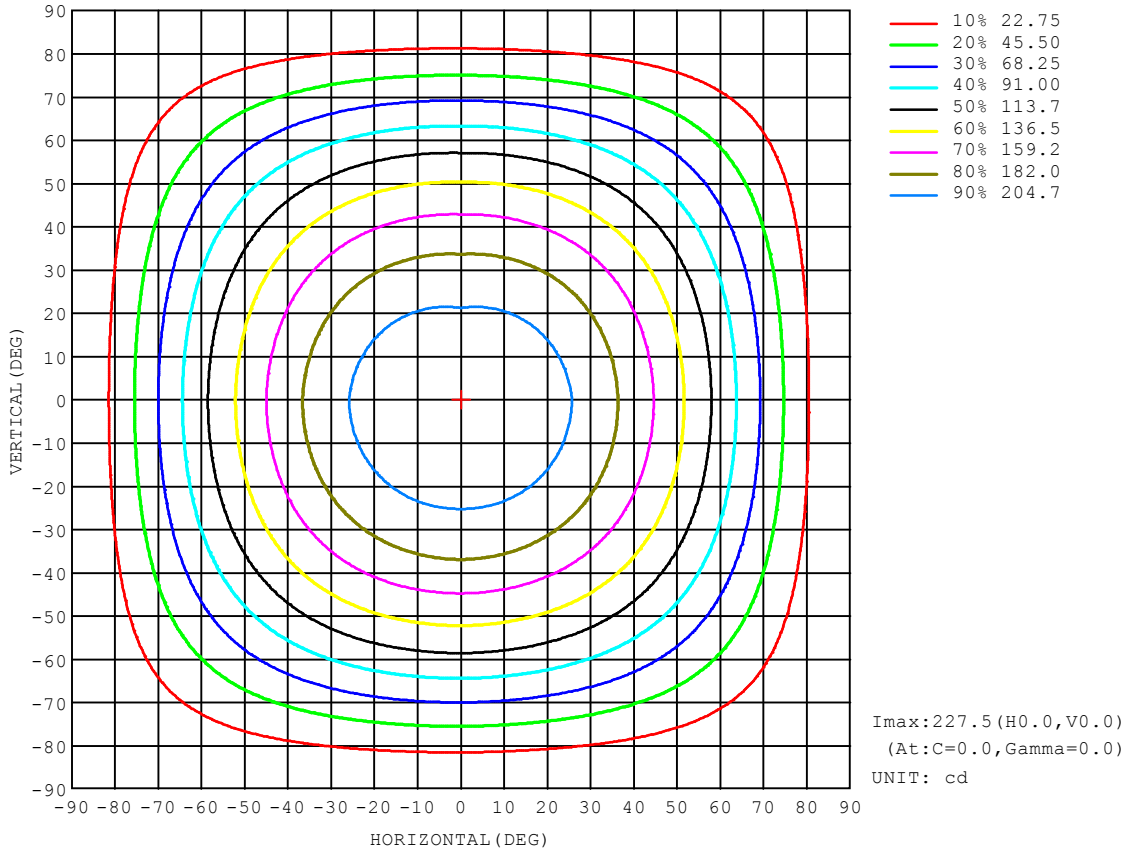

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AAI Figure

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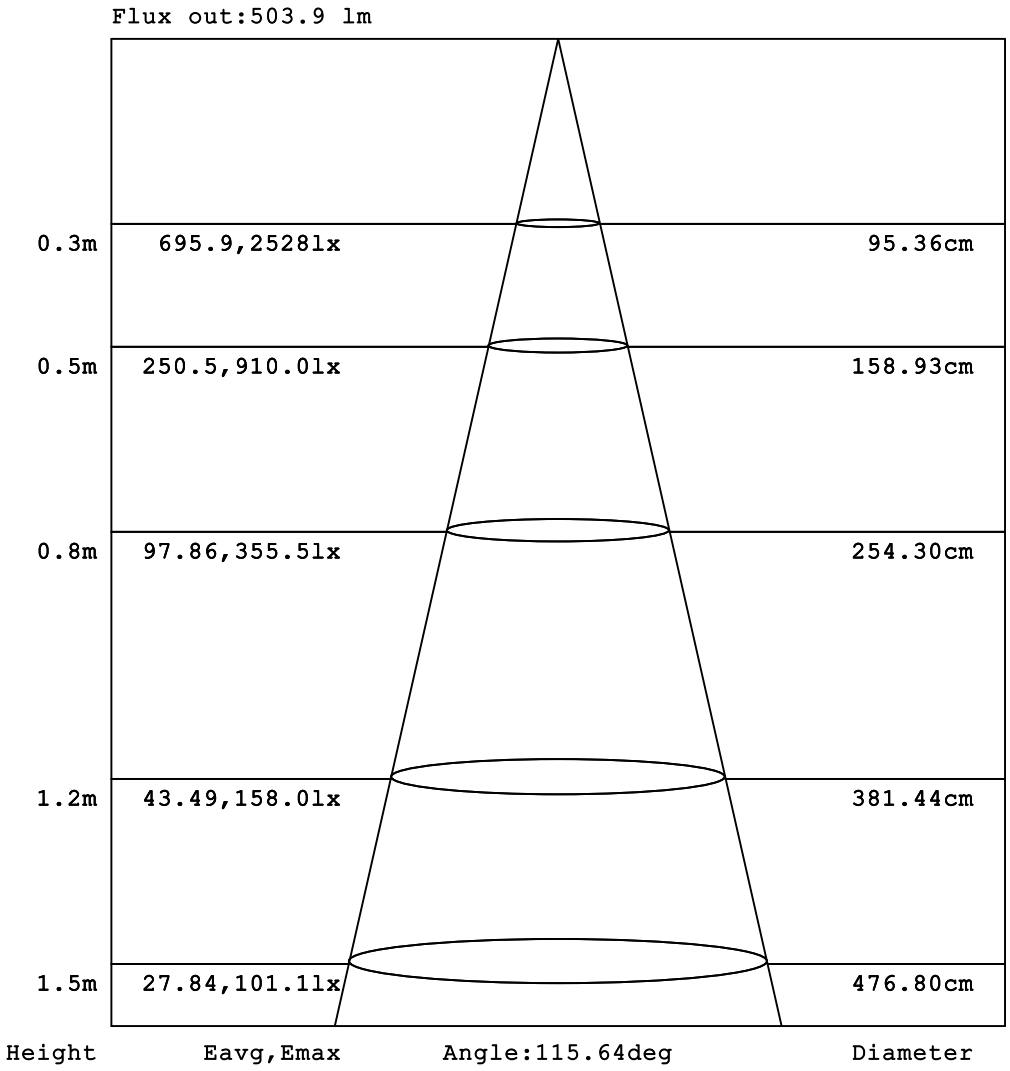

Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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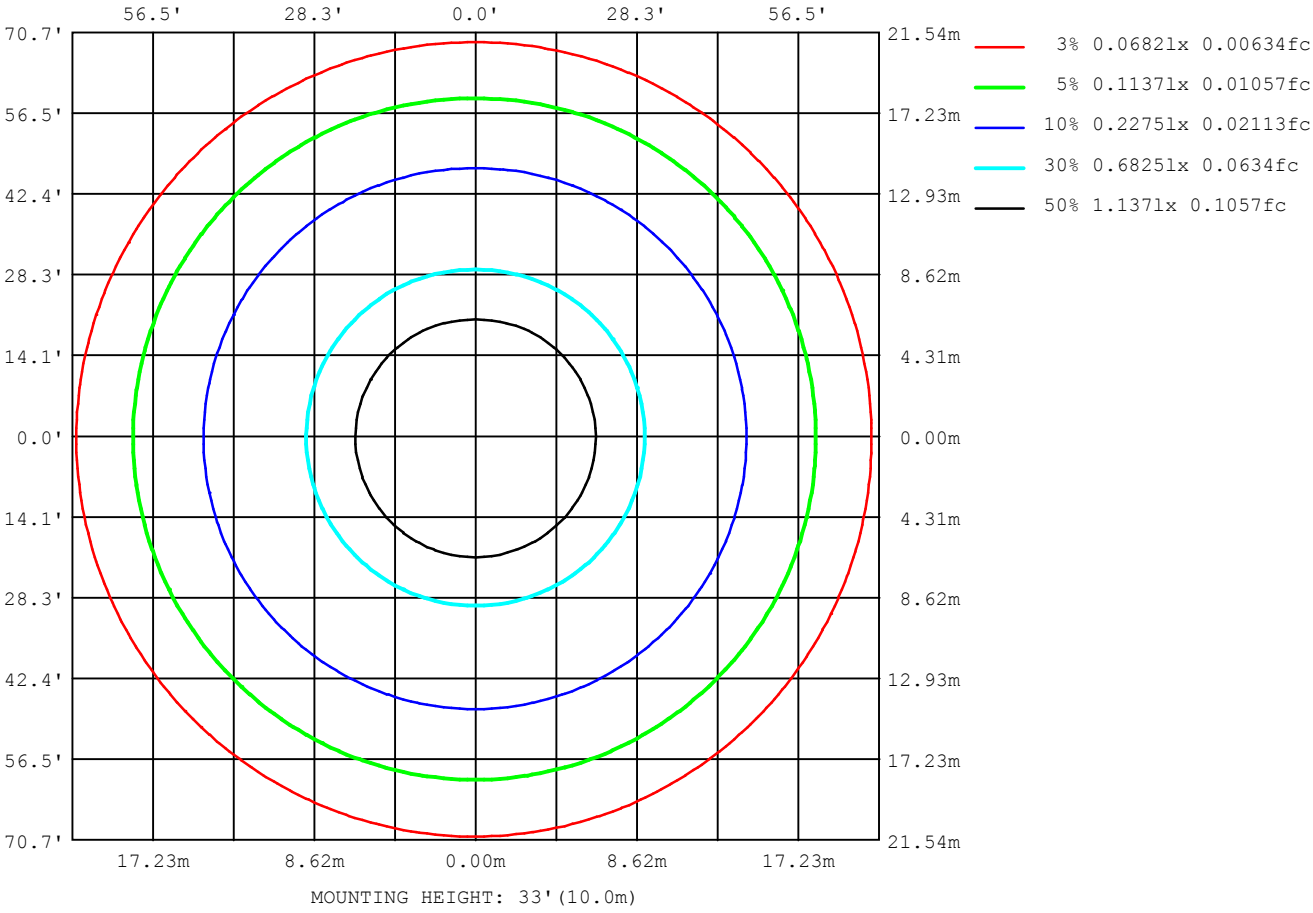
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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LED Avg.L Report

Test:U:23.998V I:0.3386A P:8.1257W PF:1.0000 Freq:49.99Hz Lamp Flux:679.494x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	21
L_0~180(75)av	18
L_0~180(85)av	12
L_90~270(65)av	20
L_90~270(75)av	18
L_90~270(85)av	14
L_45(65)av	21
L_45(75)av	18
L_45(85)av	13

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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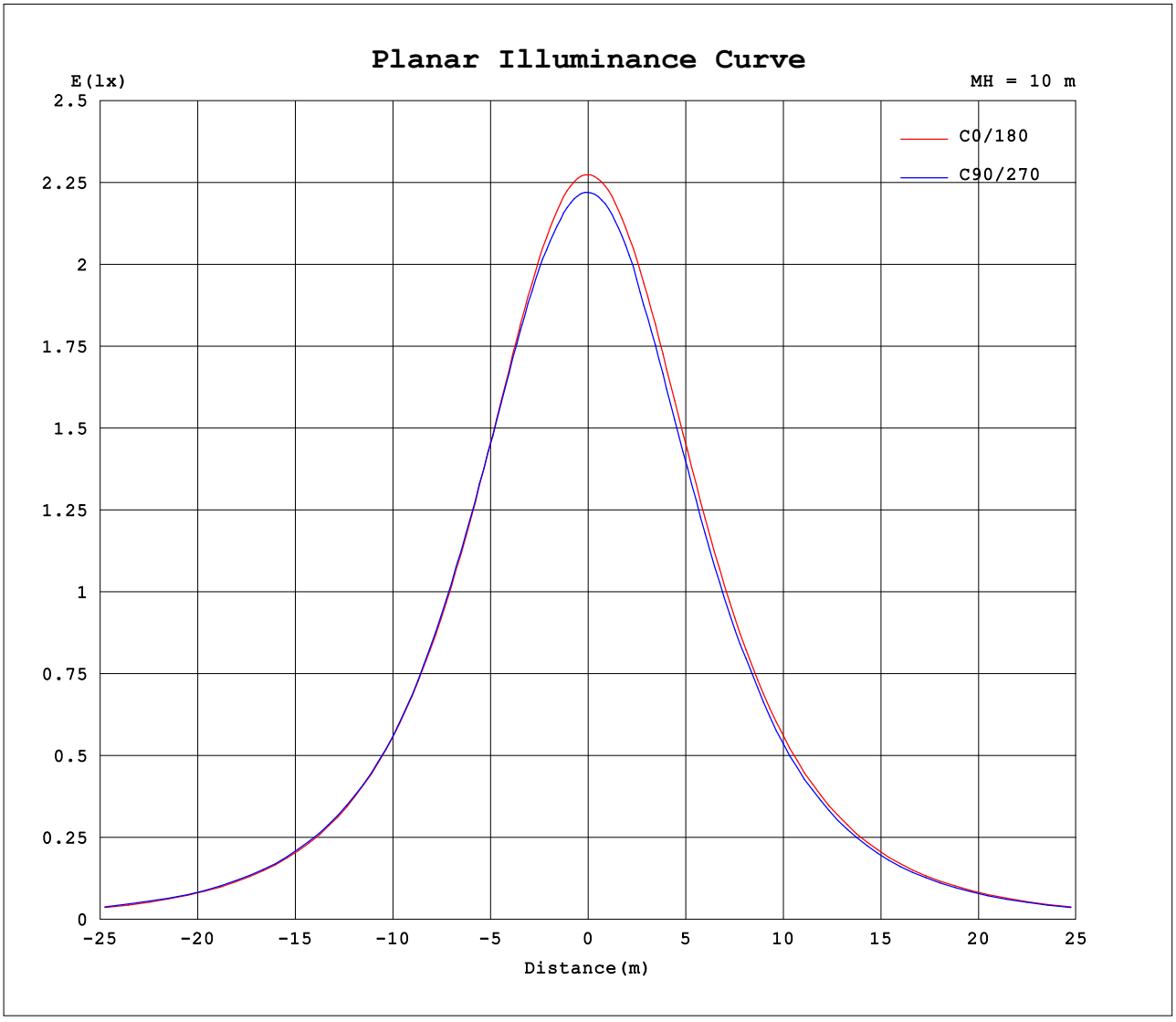
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJ
Test Date:2019-08-13

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.150m [K=1.0000]
Remarks: 3900-4200K

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LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:23.998V I:0.3386A P:8.1257W PF:1.0000 Freq:49.99Hz Lamp Flux:679.494x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VICTRONICS	SUR.:	Shielding Angle:

Table--1 UNIT: cd

γ (DEG) \ C (DEG)	0	90	180	270															
0	227	222	227	222															
5	227	221	227	221															
10	224	219	224	218															
15	220	217	220	213															
20	214	212	214	206															
25	206	205	206	199															
30	196	197	197	189															
35	185	187	186	179															
40	172	174	173	168															
45	158	159	159	152															
50	142	143	144	137															
55	125	127	126	121															
60	106	109	108	103															
65	85.8	89.1	88.6	84.1															
70	65.0	68.6	68.2	64.7															
75	44.0	48.0	47.5	45.3															
80	24.5	28.6	27.8	26.8															
85	9.08	12.7	11.5	11.6															
90	1.12	4.34	0.65	2.74															
95	0.22	2.09	0.33	0.82															
100	0.31	1.34	0.43	0.44															
105	0.43	1.03	0.54	0.49															
110	0.55	0.97	0.66	0.61															
115	0.67	0.94	0.79	0.75															
120	0.80	0.96	0.92	0.88															
125	0.92	1.10	1.05	1.01															
130	1.06	1.23	1.17	1.14															
135	1.17	1.34	1.28	1.24															
140	1.28	1.43	1.38	1.36															
145	1.38	1.49	1.48	1.45															
150	1.47	1.54	1.56	1.52															
155	1.55	1.59	1.64	1.60															
160	1.61	1.65	1.69	1.66															
165	1.68	1.71	1.76	1.72															
170	1.74	1.76	1.80	1.75															
175	1.77	1.81	1.80	1.79															
180	1.80	1.85	1.81	1.79															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
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