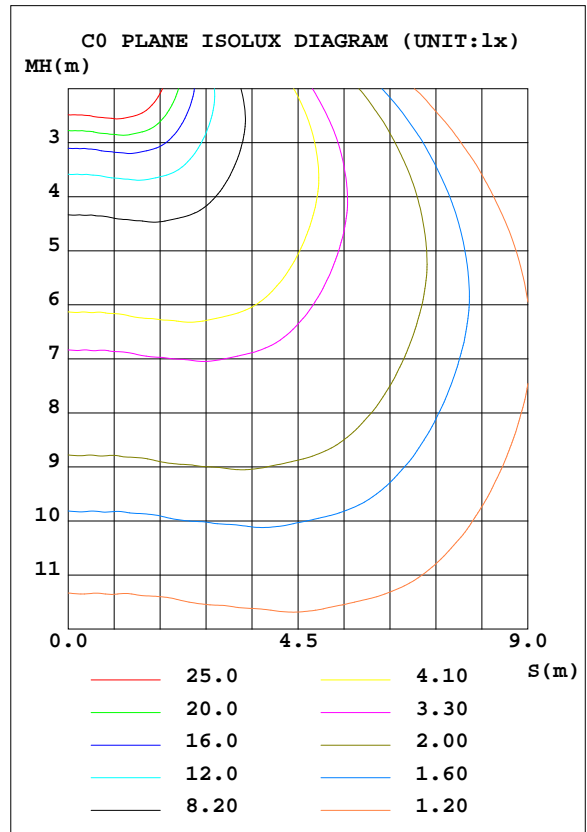
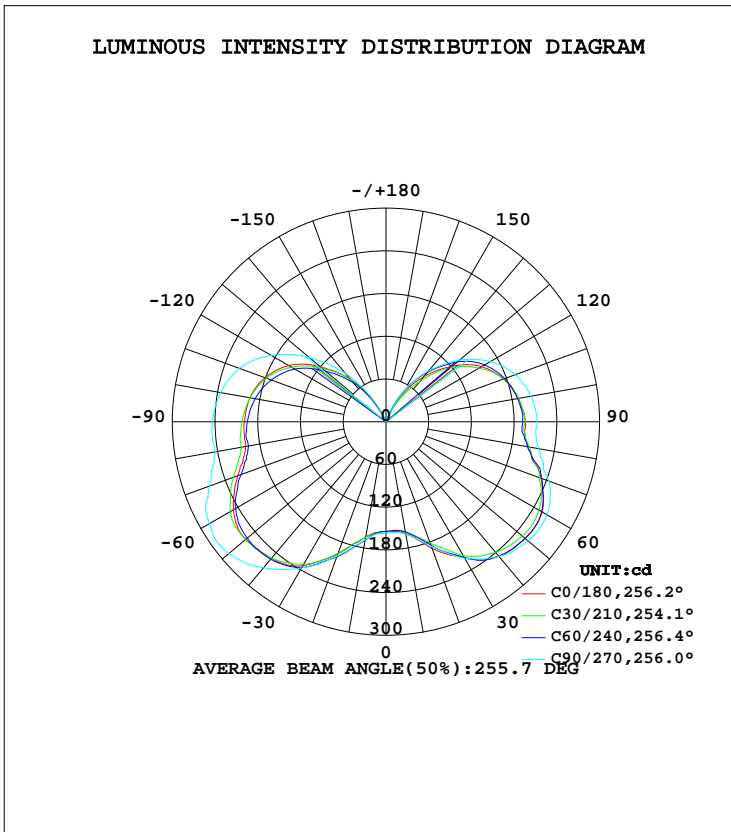


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.77 lm/W			
MODEL	175-536_537	I _{max} (cd)	291.3	S/MH(C0/180)	2.21
NOMINAL POWER(W)	18	LOR(%)	107.6	S/MH(C90/270)	2.36
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	2306.1	η UP, DN(C0-180)	20.2, 34.4
NOMINAL FLUX(lm)	2142.28	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	19.7, 33.3
LAMPS INSIDE	1	η up(%)	39.9	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	226.8	η down(%)	67.7	CIBSE SHR MAX	0.00



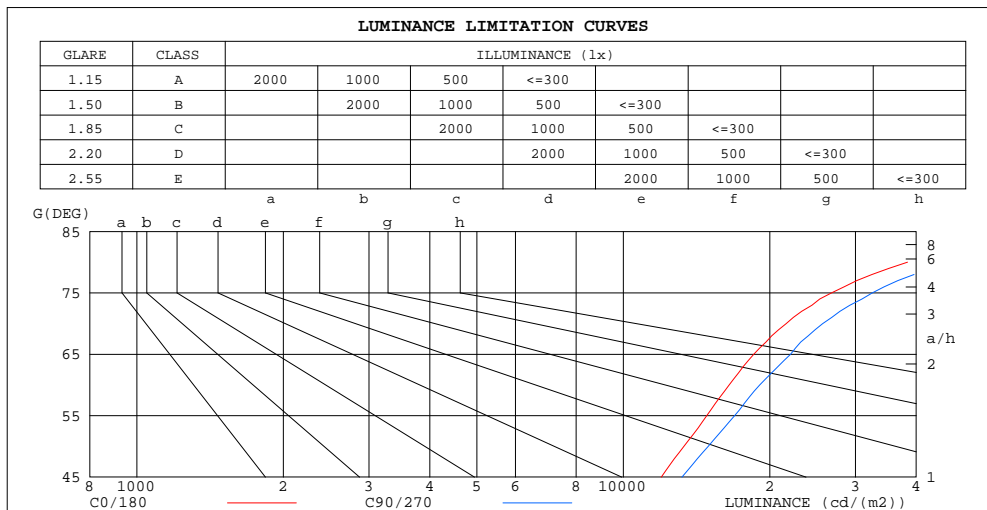
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	164.0	167.2	168.5	161.3	159.4	157.1	160.5	161.8	0- 10	15.06	15.06	0.65,0.70
20	197.3	199.2	200.6	193.1	189.4	182.6	186.1	191.5	10- 20	50.29	65.35	2.83,3.05
30	233.4	233.7	236.9	229.9	220.5	218.6	221.3	227.0	20- 30	97.68	163.0	7.07,7.61
40	250.5	251.1	267.7	256.0	246.5	243.0	247.0	249.1	30- 40	151.5	314.6	13.6,14.7
50	256.8	255.9	288.1	266.8	254.6	252.5	260.4	257.5	40- 50	198.8	513.4	22.3,24
60	247.5	248.3	286.1	264.6	253.3	250.2	261.0	252.8	50- 60	233.3	746.6	32.4,34.9
70	221.8	221.7	263.6	242.7	232.0	231.1	243.6	231.2	60- 70	244.8	991.5	43,46.3
80	199.9	201.2	243.6	215.6	202.1	203.5	217.4	208.2	70- 80	233.6	1225	53.1,57.2
90	199.0	198.5	243.8	211.5	195.6	194.1	212.5	206.1	80- 90	225.9	1451	62.9,67.7
100	194.0	190.2	235.9	205.5	188.6	188.4	206.6	199.2	90-100	221.7	1673	72.5,78.1
110	181.0	175.1	219.2	192.0	175.8	176.6	193.2	183.7	100-110	204.3	1877	81.4,87.6
120	158.0	150.7	186.4	168.1	155.0	155.4	169.4	159.3	110-120	173.1	2050	88.9,95.7
130	119.9	114.0	140.4	130.8	121.5	124.6	135.0	123.9	120-130	129.9	2180	94.5,102
140	78.21	74.09	88.74	88.45	82.83	82.62	93.69	81.10	130-140	81.05	2261	98,106
150	31.74	24.67	32.44	41.75	39.51	39.95	45.80	33.25	140-150	38.35	2299	99.7,107
160	0	0	0	0	0	0.2956	0	0	150-160	6.730	2306	100,108
170	0	0	0	0	0	0	0	0	160-170	0.0009	2306	100,108
180	0	0	0	0	0	0	0	0	170-180	0	2306	100,108
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	76463	93615
80	38375	46764
75	26775	32491
70	21617	25686
65	18542	22072
60	16500	19075
55	14841	16928
50	13319	14941
45	11969	13199

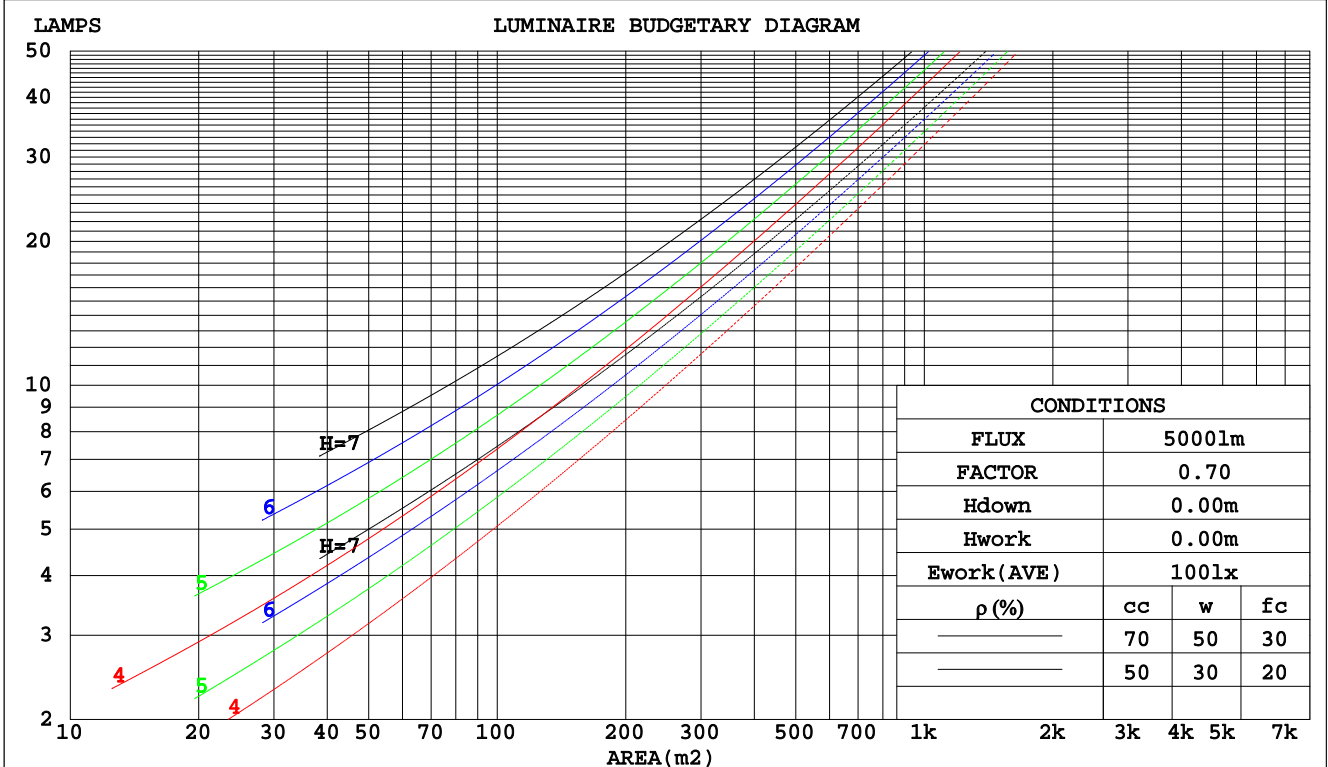
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:14.500m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.11	1.11	1.11	.97	.97	.97	.85	.85	.85	.73	.73	.73	.68
1.0	.96	.90	.84	.90	.84	.79	.78	.73	.69	.67	.63	.60	.56	.54	.51	.46
2.0	.81	.72	.64	.75	.67	.60	.65	.58	.53	.55	.50	.46	.46	.43	.39	.34
3.0	.69	.59	.51	.64	.55	.48	.55	.48	.42	.47	.41	.36	.39	.35	.31	.27
4.0	.60	.50	.42	.56	.46	.39	.48	.40	.34	.41	.35	.30	.34	.29	.25	.21
5.0	.53	.42	.35	.49	.40	.33	.42	.35	.29	.36	.30	.25	.30	.25	.21	.17
6.0	.47	.37	.29	.44	.34	.28	.38	.30	.24	.32	.26	.21	.27	.22	.18	.14
7.0	.42	.32	.25	.39	.30	.24	.34	.26	.21	.29	.23	.18	.24	.19	.15	.12
8.0	.38	.28	.22	.35	.27	.20	.31	.23	.18	.26	.20	.15	.22	.17	.13	.10
9.0	.34	.25	.19	.32	.24	.18	.28	.21	.16	.24	.18	.14	.20	.15	.11	.09
10.0	.31	.23	.17	.29	.21	.16	.25	.19	.14	.22	.16	.12	.18	.14	.10	.08



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	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	.453	.257	.082	.433	.247	.078	.395	.227	.072	.361	.208	.067	.329	.191	.061	
2.0	.380	.208	.064	.362	.199	.061	.328	.182	.057	.296	.166	.052	.267	.151	.048	
3.0	.332	.177	.053	.316	.169	.051	.285	.154	.047	.256	.140	.043	.229	.127	.039	
4.0	.296	.154	.045	.281	.147	.043	.252	.134	.040	.226	.121	.037	.201	.109	.033	
5.0	.267	.136	.039	.253	.130	.038	.227	.118	.035	.203	.107	.032	.180	.096	.029	
6.0	.243	.122	.035	.231	.117	.034	.207	.106	.031	.184	.096	.028	.163	.086	.026	
7.0	.223	.110	.031	.212	.105	.030	.190	.096	.028	.169	.087	.025	.149	.078	.023	
8.0	.206	.101	.028	.196	.096	.027	.175	.087	.025	.156	.079	.023	.138	.071	.021	
9.0	.192	.093	.026	.182	.089	.025	.163	.080	.023	.145	.073	.021	.128	.065	.019	
10.0	.179	.086	.024	.170	.082	.023	.152	.074	.021	.135	.067	.019	.119	.060	.017	

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	.509	.509	.509	.435	.435	.435	.297	.297	.297	.171	.171	.171	.055	.055	.055	
1.0	.509	.474	.442	.435	.407	.380	.298	.280	.263	.171	.162	.153	.055	.052	.049	
2.0	.503	.450	.406	.431	.388	.351	.295	.268	.245	.170	.156	.144	.055	.050	.047	
3.0	.495	.434	.384	.425	.374	.333	.292	.260	.234	.168	.152	.138	.054	.049	.045	
4.0	.487	.421	.370	.418	.364	.322	.288	.254	.227	.166	.149	.134	.054	.048	.044	
5.0	.479	.411	.361	.412	.356	.314	.284	.248	.222	.164	.146	.131	.053	.048	.043	
6.0	.471	.403	.354	.405	.349	.308	.280	.244	.218	.162	.144	.130	.052	.047	.043	
7.0	.464	.396	.349	.399	.343	.304	.276	.241	.215	.160	.142	.128	.052	.046	.042	
8.0	.457	.391	.345	.393	.339	.301	.272	.238	.214	.158	.140	.127	.051	.046	.042	
9.0	.450	.386	.342	.388	.335	.299	.269	.235	.212	.156	.139	.126	.051	.046	.042	
10.0	.444	.381	.340	.382	.331	.297	.265	.233	.211	.155	.138	.126	.050	.045	.042	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm										
NAME: 175-536_537					TYPE:LED			WEIGHT:10KG		
DIM.: 445*392*57MM					SPEC.:18W			SERIAL No.:		
MFR.: Tronix Lighting					SUR.:340*240MM			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	20.2	21.4	20.9	22.2	23.1	20.5	21.7	21.2	22.5	23.4
3H	22.9	24.0	23.7	24.8	25.8	23.5	24.6	24.2	25.4	26.4
4H	24.4	25.5	25.2	26.3	27.3	25.1	26.2	25.9	27.0	28.0
6H	26.1	27.1	26.9	27.9	29.0	27.0	28.0	27.8	28.8	29.8
8H	27.1	28.1	27.9	28.9	29.9	28.1	29.0	28.9	29.8	30.9
12H	28.3	29.2	29.1	30.1	31.1	29.3	30.3	30.2	31.1	32.1
4H 2H	21.0	22.1	21.8	22.9	23.9	21.3	22.3	22.0	23.1	24.1
3H	24.0	24.9	24.8	25.7	26.8	24.3	25.2	25.1	26.1	27.1
4H	25.6	26.5	26.5	27.3	28.4	26.1	26.9	26.9	27.8	28.8
6H	27.5	28.3	28.4	29.1	30.2	28.1	28.9	29.0	29.7	30.8
8H	28.6	29.3	29.5	30.2	31.3	29.3	30.0	30.2	30.9	32.0
12H	29.9	30.6	30.8	31.5	32.6	30.7	31.4	31.6	32.3	33.4
8H 4H	26.2	27.0	27.1	27.8	28.9	26.6	27.3	27.4	28.2	29.3
6H	28.4	29.0	29.3	29.9	31.1	28.8	29.4	29.7	30.3	31.5
8H	29.7	30.3	30.6	31.2	32.4	30.2	30.8	31.1	31.7	32.8
12H	31.3	31.8	32.2	32.7	33.8	31.9	32.4	32.8	33.3	34.5
12H 4H	26.4	27.1	27.3	28.0	29.1	26.7	27.4	27.6	28.3	29.4
6H	28.7	29.3	29.6	30.2	31.3	29.1	29.6	30.0	30.5	31.7
8H	30.2	30.6	31.1	31.6	32.7	30.6	31.0	31.5	32.0	33.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 2142 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.6)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:

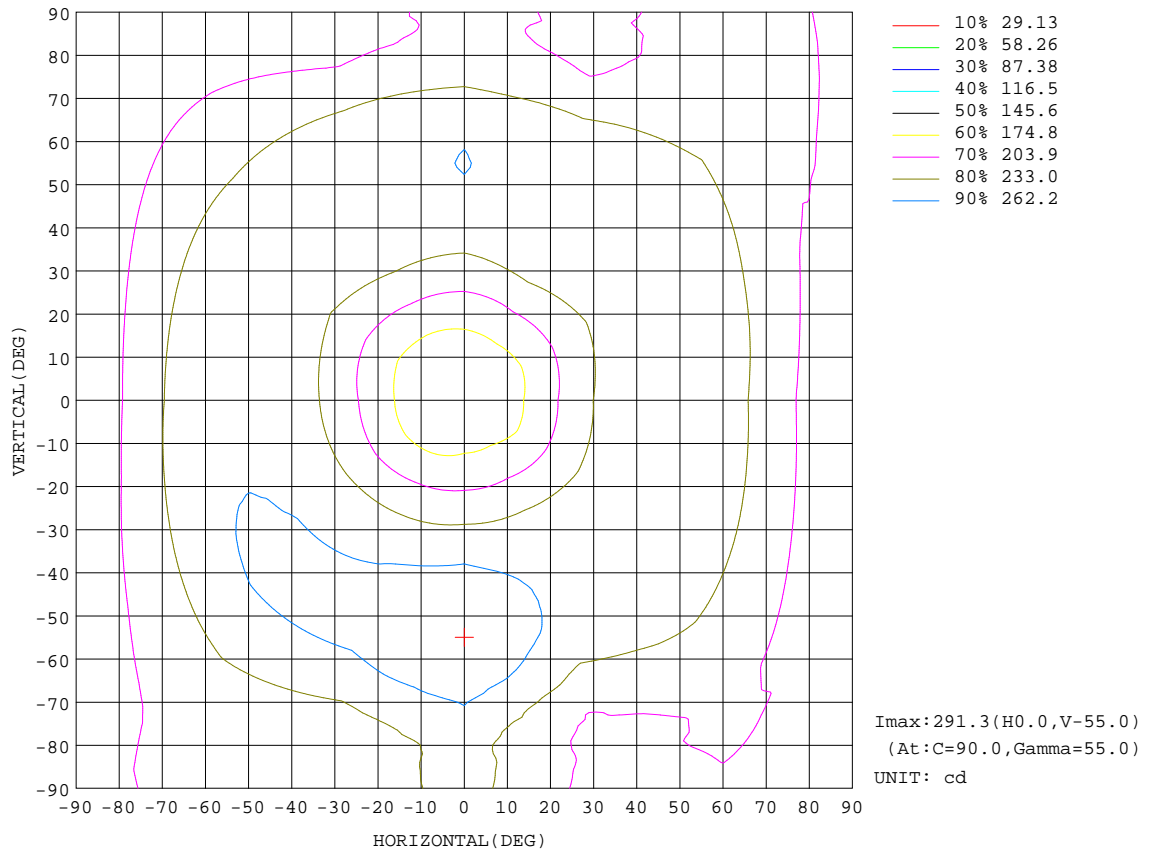
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	41	27	19	39	26	19	37	25	18	10
0.80	51	35	26	48	34	25	44	32	24	14
1.00	59	43	33	56	41	32	50	41	30	19
1.25	66	51	40	63	49	39	56	44	36	23
1.50	72	57	46	68	54	45	60	49	41	27
2.00	80	67	56	76	63	54	67	57	49	32
2.50	86	73	63	81	69	60	71	62	54	36
3.00	90	78	69	85	74	66	74	66	59	39
4.00	96	86	77	90	81	73	79	72	66	44
5.00	100	91	83	93	85	79	82	76	70	47
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:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:

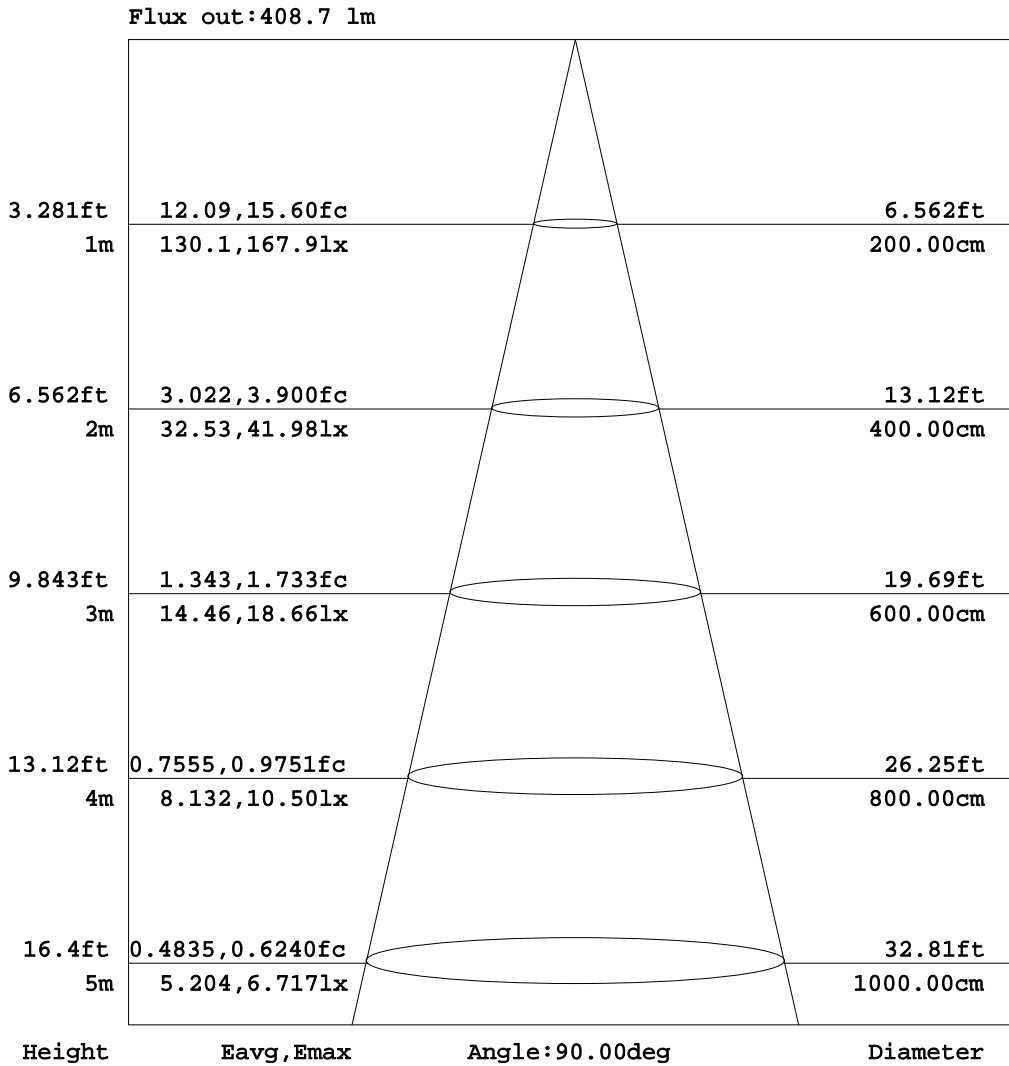


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity: 65.0%
 Test Distance: 14.500m [K=1.0000]
 Remarks:

AAI Figure

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:



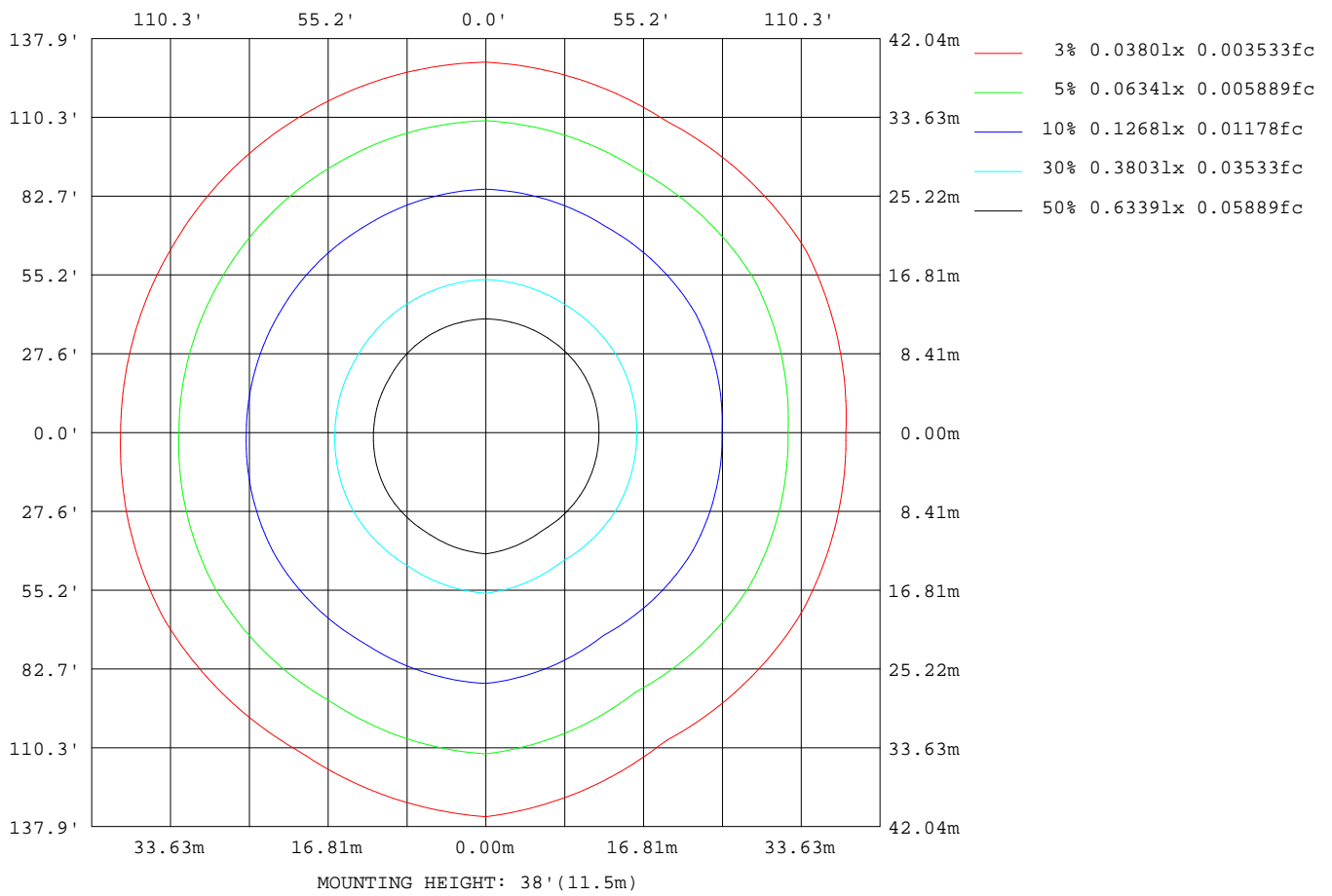
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

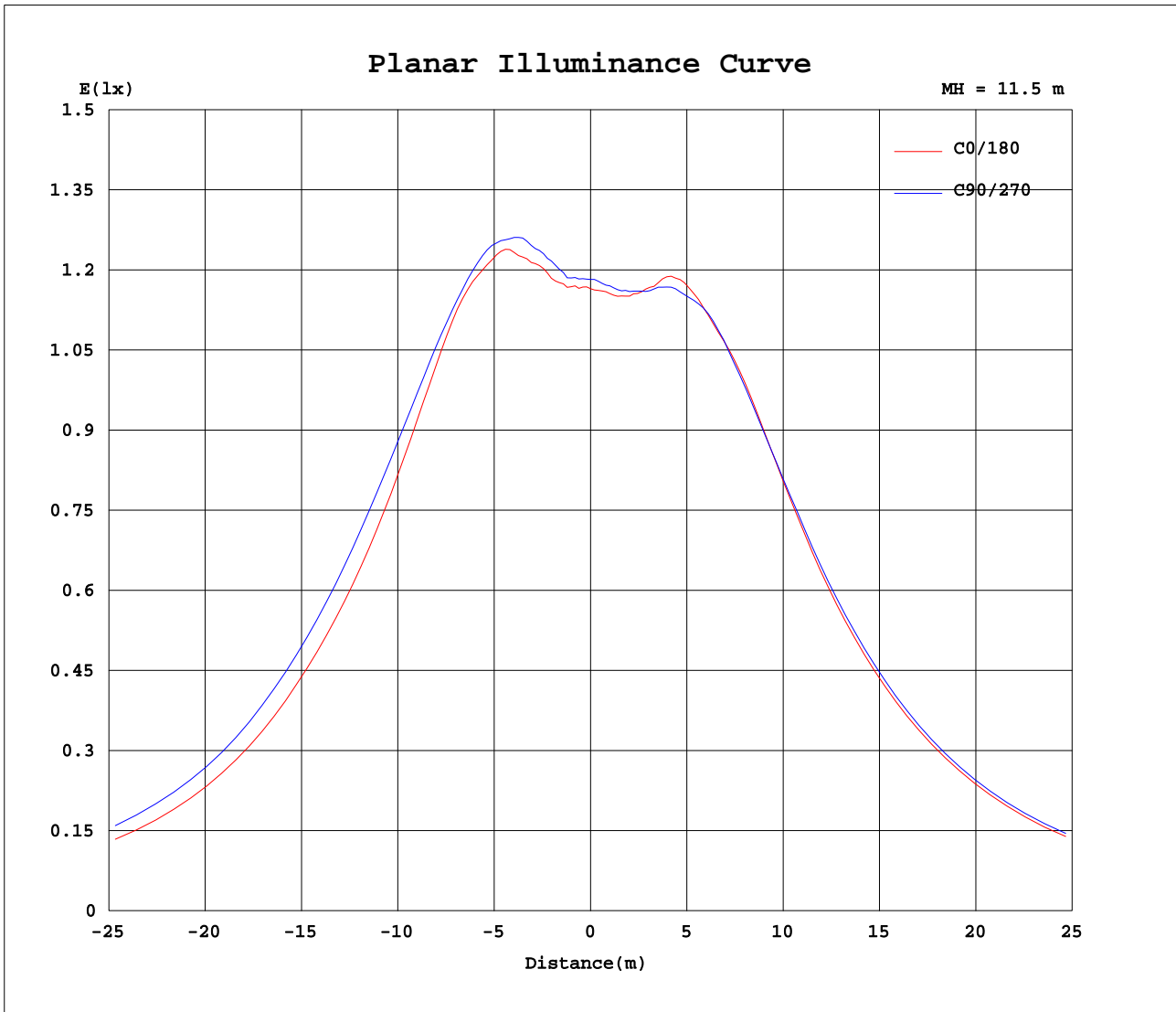
Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity: 65.0%
 Test Distance: 14.500m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:226.7V I:0.0790A P:17.50W PF:0.9690 Lamp Flux:2142.28x1 lm		
NAME: 175-536_537	TYPE:LED	WEIGHT:10KG
DIM.: 445*392*57MM	SPEC.:18W	SERIAL No.:
MFR.: Tronix Lighting	SUR.:340*240MM	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	154	154	154	156	154	154	154	154	154	156	154	154						
5	156	156	157	159	155	154	155	153	153	157	156	156						
10	164	165	169	168	163	159	159	157	157	161	161	162						
15	178	177	184	183	177	172	171	167	168	170	175	174						
20	197	197	202	201	197	190	189	181	184	186	193	190						
25	215	216	219	220	214	208	205	198	203	203	210	209						
30	233	231	236	237	233	227	221	217	220	221	230	224						
35	245	242	246	254	250	242	237	230	237	235	244	237						
40	250	250	252	268	259	253	246	239	246	247	250	248						
45	254	255	255	280	264	261	252	246	252	255	254	256						
50	257	258	254	288	268	266	255	250	255	260	256	259						
55	255	258	252	291	269	267	256	251	256	263	254	259						
60	247	253	244	286	265	264	253	248	252	261	250	256						
65	235	241	231	280	254	256	244	241	243	254	241	248						
70	222	227	216	264	240	245	232	229	233	244	226	236						
75	208	215	203	252	225	231	214	215	216	229	208	223						
80	200	206	196	244	213	218	202	205	202	217	200	217						
85	200	205	197	245	211	213	196	196	193	211	196	217						
90	199	202	195	244	210	213	196	196	192	212	197	215						
95	197	199	191	241	207	212	193	193	191	210	195	211						
100	194	194	187	236	203	208	189	189	188	207	193	206						
105	189	187	180	229	197	203	183	184	183	201	187	198						
110	181	179	172	219	189	195	176	176	177	193	180	187						
115	171	168	161	205	180	184	166	165	170	183	171	174						
120	158	153	148	186	168	169	155	151	160	169	160	158						
125	141	137	131	165	151	151	140	136	147	153	145	142						
130	120	117	111	140	130	131	121	118	131	135	126	122						
135	98.6	97.9	91.0	114	110	109	102	97.4	111	113	105	99.5						
140	78.2	76.5	71.7	88.7	89.6	87.3	82.8	74.5	90.7	93.7	83.7	78.5						
145	55.4	51.4	49.1	60.7	67.8	64.7	63.0	52.9	71.2	71.1	61.6	55.3						
150	31.7	24.6	24.7	32.4	42.5	41.0	39.5	31.6	48.3	45.8	36.6	29.9						
155	8.28	0.00	1.97	5.29	17.0	13.5	15.0	9.38	23.7	18.6	12.4	5.86						
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00						
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-3-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:14.500m [K=1.0000]
 Remarks: