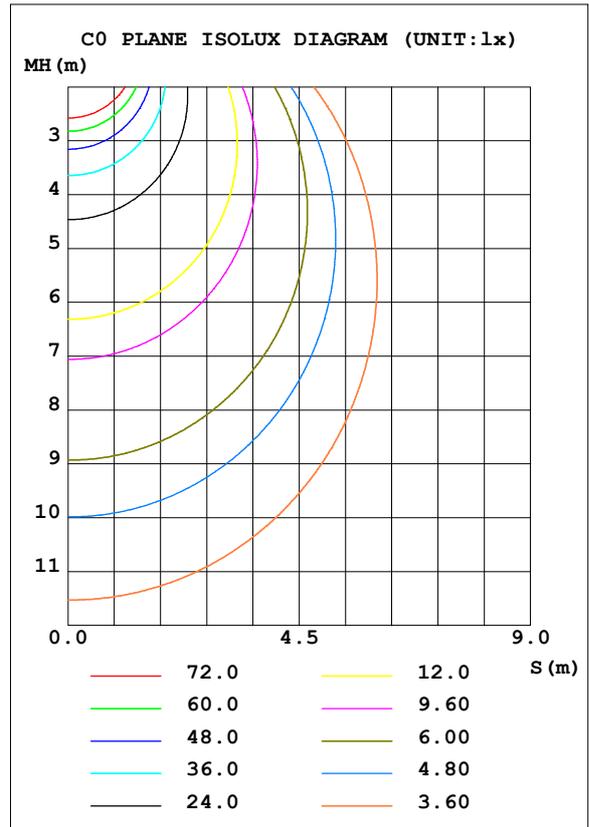
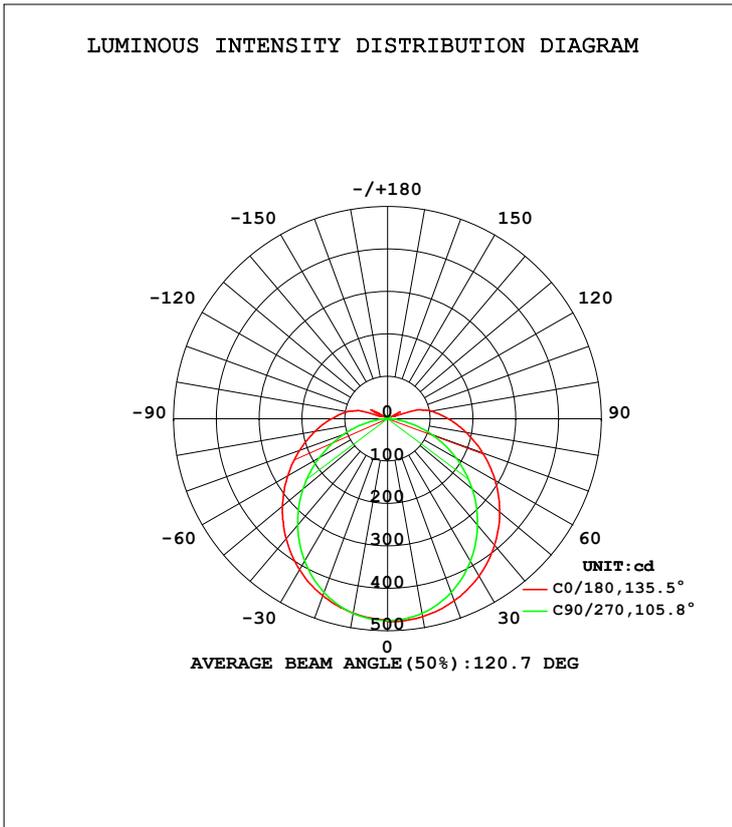


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 135.03 lm/W			
MODEL		I _{max} (cd)	478.4	S/MH (C0/180)	1.33
NOMINAL POWER (W)		LOR (%)	105.6	S/MH (C90/270)	1.22
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1674.4	η UP, DN (C0-180)	4.4, 49.3
NOMINAL FLUX (lm)	1585.17	CIE CLASS	DIRECT	η UP, DN (C180-360)	4.3, 47.6
LAMPS INSIDE	1	η up (%)	8.7	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	96.9	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ROCK
 Test Date: 2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity: 65.0%
 Test Distance: 6.400m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	473.6	465.7	465.1	465.7				0- 10	45.03	45.03	2.69,2.84
20	456.4	435.4	443.9	435.4				10- 20	129.0	174.0	10.4,11
30	428.1	387.7	411.4	387.7				20- 30	195.9	369.9	22.1,23.3
40	389.1	327.4	369.1	327.4				30- 40	237.6	607.5	36.3,38.3
50	342.2	258.4	321.1	258.4				40- 50	250.8	858.2	51.3,54.1
60	290.1	184.7	269.8	184.7				50- 60	236.2	1094	65.4,69
70	236.7	110.7	219.2	110.7				60- 70	198.9	1293	77.2,81.6
80	186.1	42.05	172.4	42.05				70- 80	147.1	1440	86,90.9
90	141.6	4.907	131.2	4.907				80- 90	95.80	1536	91.7,96.9
100	105.0	3.391	96.85	3.391				90-100	66.65	1603	95.7,101
110	18.18	3.573	17.07	3.573				100-110	40.05	1643	98.1,104
120	20.65	4.069	37.41	4.069				110-120	12.93	1656	98.9,104
130	5.000	4.583	5.053	4.583				120-130	6.191	1662	99.3,105
140	5.459	5.068	5.541	5.068				130-140	3.896	1666	99.5,105
150	5.816	5.515	5.883	5.515				140-150	3.444	1669	99.7,105
160	6.126	5.832	6.137	5.832				150-160	2.691	1672	99.9,105
170	6.405	6.107	6.412	6.107				160-170	1.728	1674	100,106
180	6.625	6.238	6.554	6.238				170-180	0.6042	1674	100,106
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

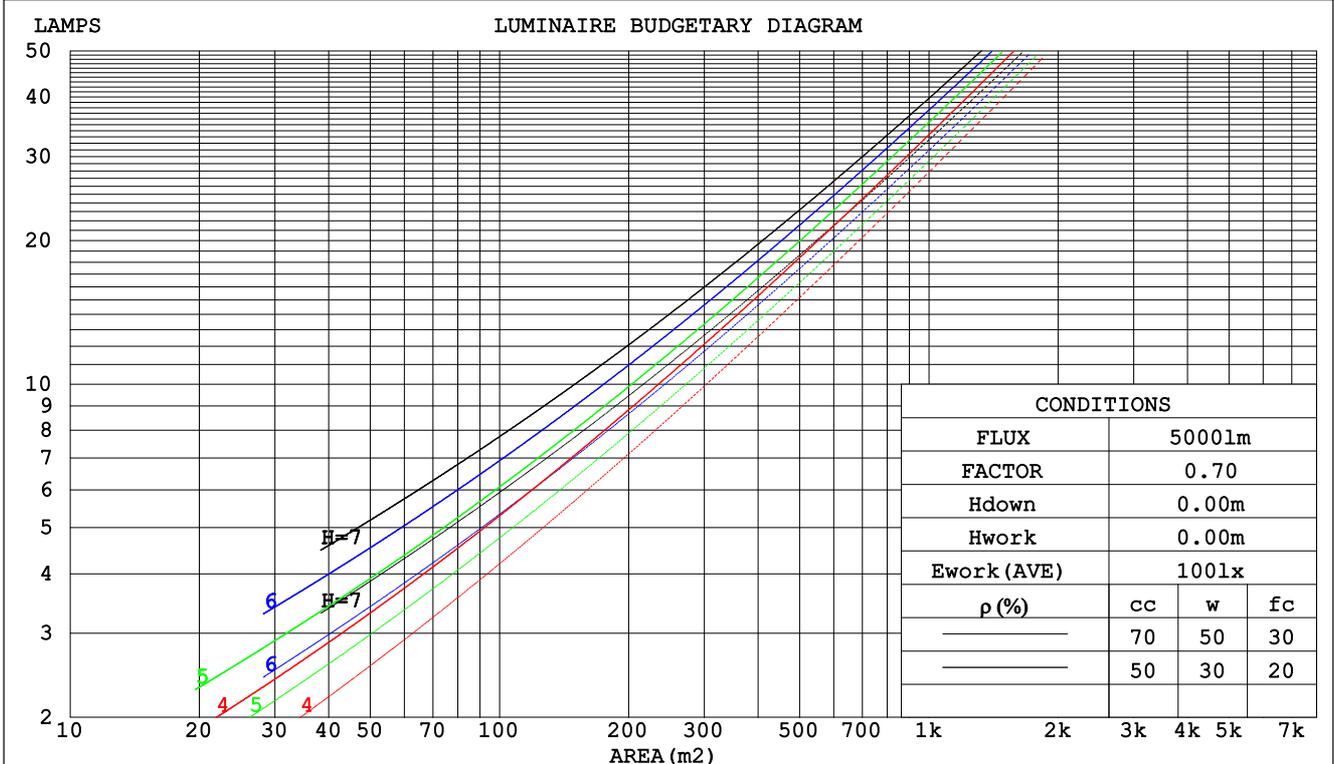
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	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															
	Coefficients of Utilization(CU)															
0.0	1.24	1.24	1.24	1.20	1.20	1.20	1.13	1.13	1.13	1.06	1.06	1.06	.00	.00	.00	.97
1.0	1.05	.00	.95	1.02	.97	.92	.95	.91	.88	.90	.87	.84	.84	.82	.80	.77
2.0	.90	.82	.76	.88	.80	.74	.82	.76	.71	.77	.72	.68	.73	.69	.65	.62
3.0	.79	.69	.62	.76	.68	.61	.72	.65	.59	.68	.62	.57	.64	.59	.55	.52
4.0	.69	.60	.52	.67	.58	.51	.64	.56	.50	.60	.53	.48	.57	.51	.46	.44
5.0	.62	.52	.45	.60	.51	.44	.57	.49	.43	.54	.47	.41	.51	.45	.40	.38
6.0	.56	.46	.39	.54	.45	.38	.51	.43	.37	.49	.42	.36	.46	.40	.35	.33
7.0	.50	.41	.34	.49	.40	.34	.46	.39	.33	.44	.37	.32	.42	.36	.31	.29
8.0	.46	.37	.30	.45	.36	.30	.42	.35	.29	.40	.34	.28	.39	.32	.28	.26
9.0	.42	.33	.27	.41	.33	.27	.39	.31	.26	.37	.30	.26	.36	.30	.25	.23
10.0	.39	.30	.24	.38	.30	.24	.36	.29	.24	.35	.28	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	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	.381	.217	.069	.371	.211	.067	.351	.202	.064	.334	.192	.062	.317	.184	.059	
2.0	.338	.185	.057	.329	.181	.056	.312	.173	.054	.296	.166	.052	.281	.159	.050	
3.0	.304	.162	.048	.296	.158	.048	.280	.152	.046	.266	.146	.045	.253	.140	.043	
4.0	.276	.143	.042	.269	.141	.042	.255	.135	.040	.242	.130	.039	.230	.125	.038	
5.0	.252	.129	.037	.246	.126	.037	.233	.121	.036	.222	.117	.035	.211	.113	.034	
6.0	.232	.116	.033	.226	.114	.033	.215	.110	.032	.204	.106	.031	.194	.102	.030	
7.0	.215	.106	.030	.209	.104	.030	.199	.101	.029	.190	.097	.028	.181	.094	.028	
8.0	.200	.098	.027	.195	.096	.027	.185	.093	.026	.177	.090	.026	.169	.087	.025	
9.0	.186	.090	.025	.182	.089	.025	.173	.086	.024	.166	.083	.024	.158	.080	.023	
10.0	.175	.084	.023	.171	.082	.023	.163	.080	.022	.156	.077	.022	.149	.075	.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	.268	.268	.268	.229	.229	.229	.156	.156	.156	.090	.090	.090	.029	.029	.029	
1.0	.261	.231	.205	.223	.199	.176	.153	.137	.122	.088	.079	.071	.028	.025	.023	
2.0	.253	.207	.167	.217	.178	.145	.149	.123	.101	.086	.072	.059	.028	.023	.019	
3.0	.245	.189	.144	.210	.163	.124	.144	.113	.087	.083	.066	.051	.027	.021	.017	
4.0	.237	.175	.128	.203	.151	.111	.140	.105	.078	.081	.062	.046	.026	.020	.015	
5.0	.229	.164	.117	.196	.142	.102	.135	.099	.072	.078	.058	.043	.025	.019	.014	
6.0	.221	.156	.109	.190	.135	.095	.131	.094	.067	.076	.056	.040	.025	.018	.013	
7.0	.213	.149	.103	.184	.129	.090	.127	.090	.064	.074	.053	.038	.024	.017	.013	
8.0	.206	.143	.099	.178	.124	.086	.123	.087	.061	.072	.051	.036	.023	.017	.012	
9.0	.200	.137	.095	.172	.119	.083	.119	.084	.059	.069	.050	.035	.023	.016	.012	
10.0	.194	.133	.093	.167	.115	.081	.116	.081	.057	.068	.048	.034	.022	.016	.011	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm										
NAME: T8-2FT-12W-5000K					TYPE:			WEIGHT:		
DIM.:					SPEC.:			SERIAL No.:		
MFR.: NOON					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	18.5	20.0	18.9	20.3	20.7	16.9	18.4	17.3	18.8	19.1
3H	20.9	22.2	21.3	22.6	23.0	18.4	19.7	18.8	20.1	20.5
4H	22.2	23.4	22.6	23.8	24.3	18.9	20.2	19.4	20.6	21.1
6H	23.6	24.8	24.0	25.2	25.7	19.3	20.5	19.8	20.9	21.4
8H	24.4	25.5	24.8	26.0	26.4	19.4	20.6	19.9	21.0	21.5
12H	25.3	26.4	25.7	26.8	27.3	19.4	20.6	19.9	21.0	21.5
4H 2H	19.0	20.3	19.5	20.7	21.2	17.9	19.2	18.3	19.6	20.0
3H	21.6	22.7	22.1	23.2	23.7	19.5	20.7	20.0	21.1	21.6
4H	23.0	24.1	23.5	24.5	25.1	20.3	21.3	20.8	21.8	22.3
6H	24.6	25.6	25.2	26.1	26.6	20.8	21.8	21.3	22.3	22.8
8H	25.6	26.4	26.1	26.9	27.5	21.0	21.9	21.5	22.4	23.0
12H	26.6	27.4	27.2	28.0	28.5	21.1	21.9	21.7	22.4	23.0
8H 4H	23.3	24.2	23.8	24.7	25.3	21.0	21.9	21.5	22.4	23.0
6H	25.2	25.9	25.7	26.4	27.0	21.8	22.6	22.4	23.1	23.7
8H	26.3	26.9	26.8	27.5	28.1	22.2	22.9	22.8	23.4	24.1
12H	27.6	28.1	28.2	28.7	29.4	22.5	23.0	23.1	23.6	24.3
12H 4H	23.3	24.1	23.9	24.7	25.2	21.2	22.0	21.8	22.5	23.1
6H	25.2	25.9	25.8	26.5	27.1	22.2	22.9	22.8	23.4	24.1
8H	26.4	27.0	27.0	27.6	28.2	22.7	23.3	23.3	23.9	24.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 1585 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.6)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

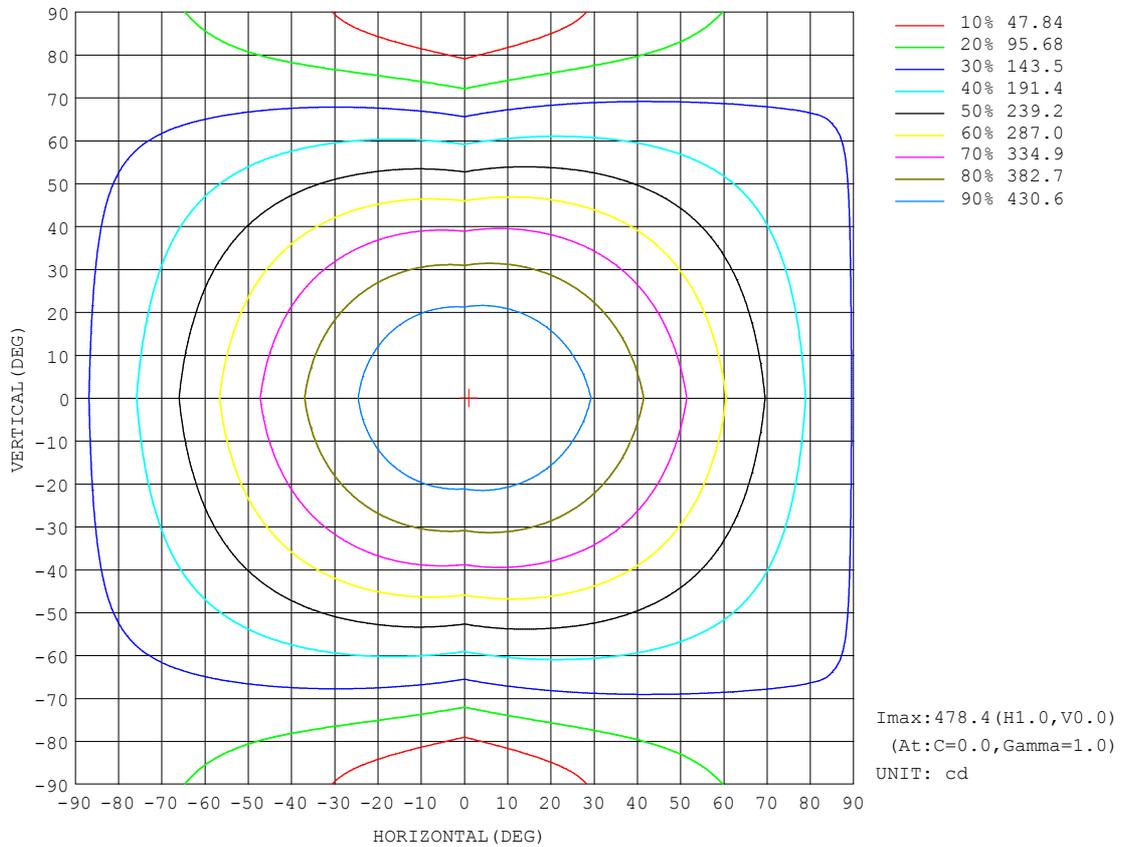
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	35	54	42	35	53	42	35	28
0.80	65	52	44	64	52	44	62	51	43	35
1.00	74	61	52	72	60	52	69	61	51	43
1.25	81	69	60	79	68	60	76	66	59	50
1.50	86	74	66	84	73	65	80	71	64	55
2.00	94	83	75	91	82	74	87	79	72	62
2.50	98	88	81	96	87	80	90	83	77	66
3.00	102	93	86	99	91	85	94	87	82	70
4.00	107	99	93	104	97	91	98	92	87	75
5.00	110	103	98	106	100	95	100	95	91	79
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:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

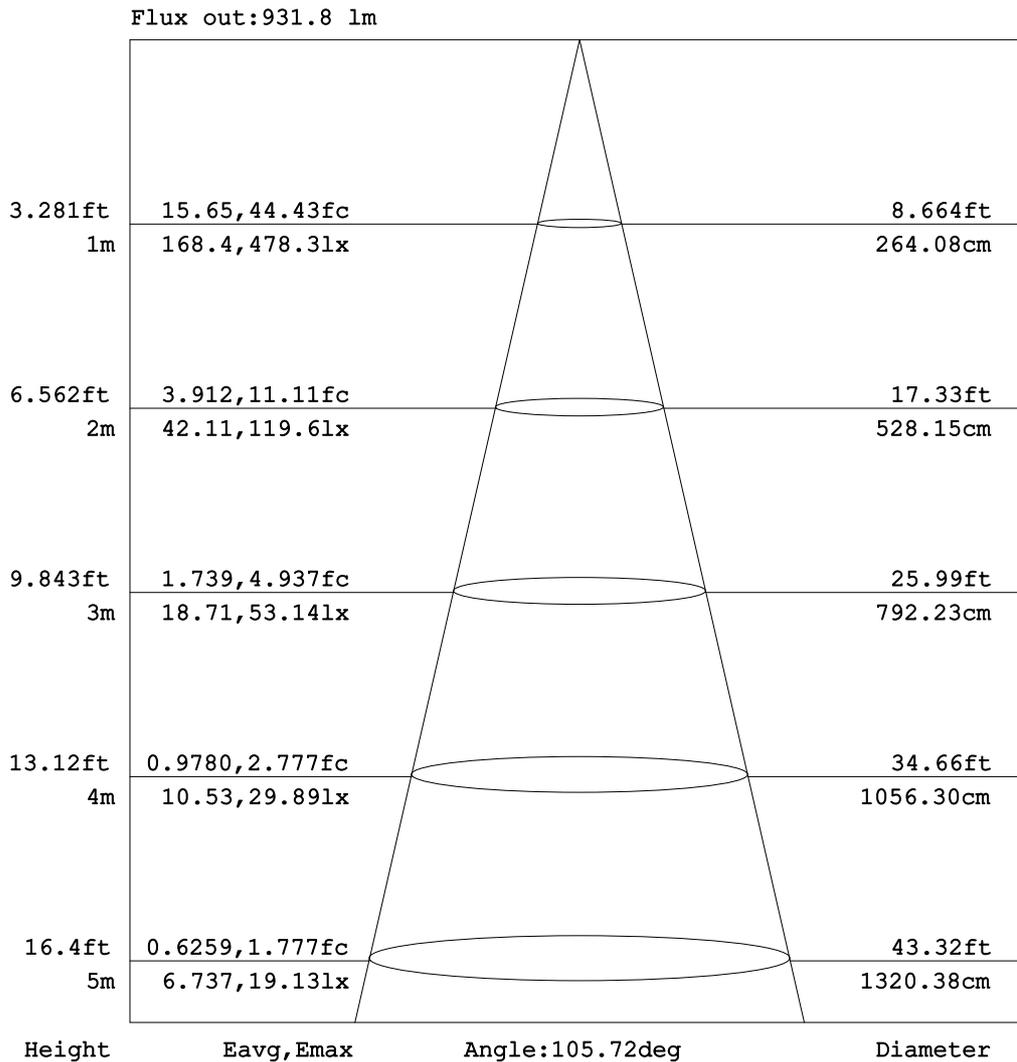


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ROCK
 Test Date: 2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity: 65.0%
 Test Distance: 6.400m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:



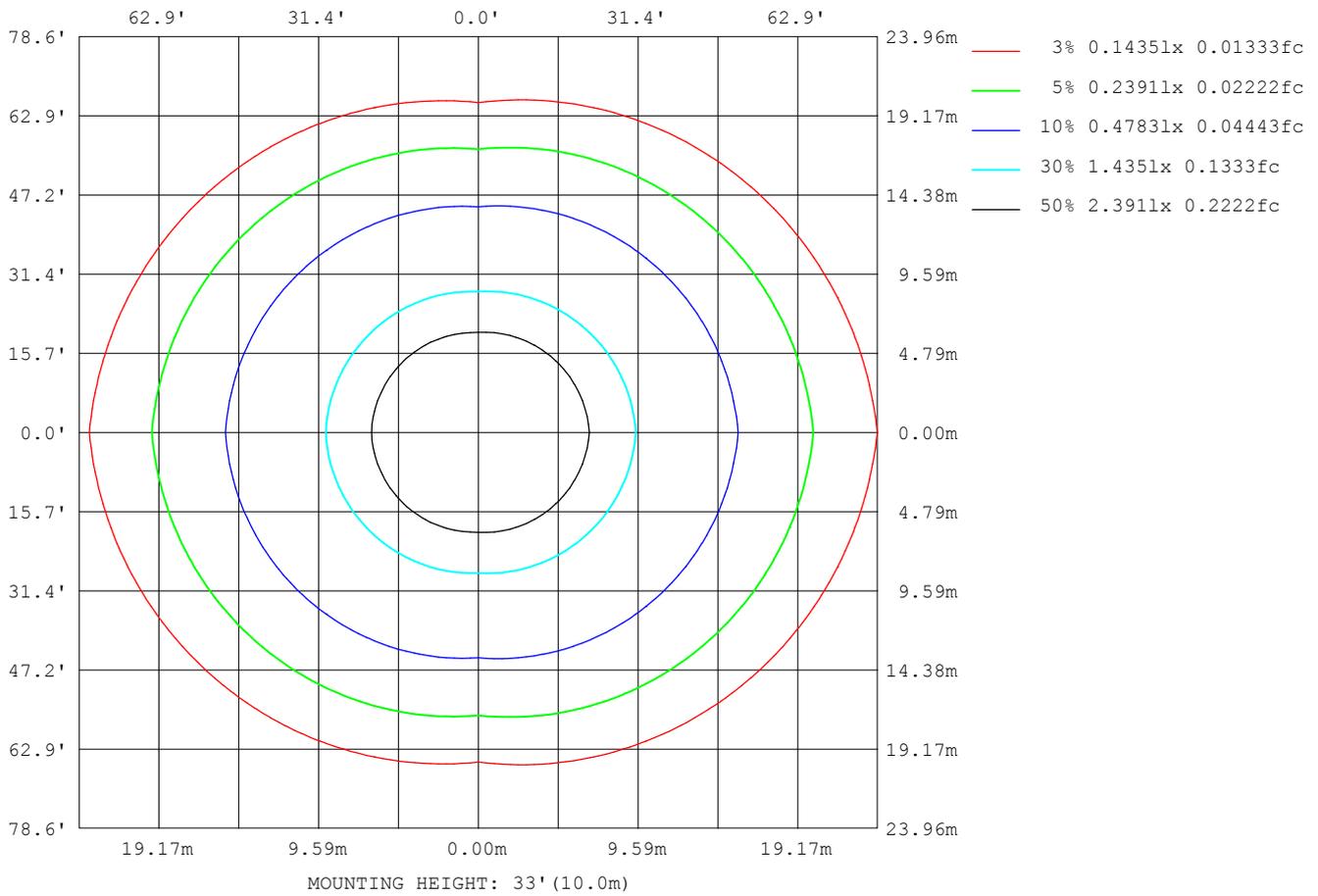
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ROCK
 Test Date: 2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity: 65.0%
 Test Distance: 6.400m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

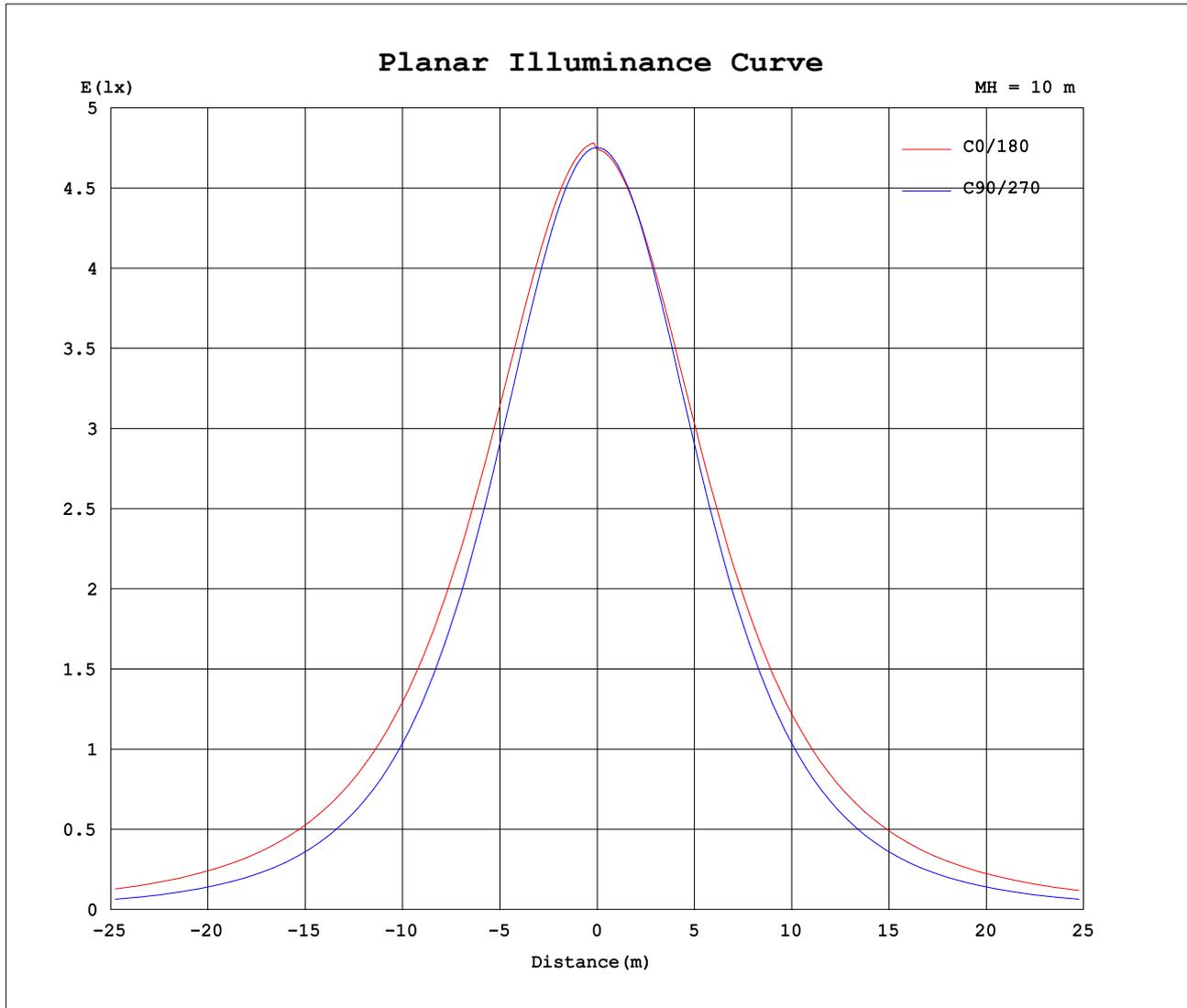
Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.1080A P:12.40W PF:0.9910 Lamp Flux:1585.17x1 lm		
NAME: T8-2FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	478	475	474	475															
5	478	473	471	473															
10	474	466	465	466															
15	466	453	456	453															
20	456	435	444	435															
25	444	414	429	414															
30	428	388	411	388															
35	410	359	391	359															
40	389	327	369	327															
45	367	294	346	294															
50	342	258	321	258															
55	317	222	296	222															
60	290	185	270	185															
65	263	148	244	148															
70	237	111	219	111															
75	211	74.8	195	74.8															
80	186	42.0	172	42.0															
85	163	16.0	151	16.0															
90	142	4.91	131	4.91															
95	122	4.08	113	4.08															
100	105	3.39	96.8	3.39															
105	81.6	3.33	74.7	3.33															
110	18.2	3.57	17.1	3.57															
115	15.6	3.82	14.7	3.82															
120	20.7	4.07	37.4	4.07															
125	4.82	4.31	5.01	4.31															
130	5.00	4.58	5.05	4.58															
135	5.21	4.82	5.28	4.82															
140	5.46	5.07	5.54	5.07															
145	5.66	5.30	5.70	5.30															
150	5.82	5.51	5.88	5.51															
155	5.94	5.66	6.00	5.66															
160	6.13	5.83	6.14	5.83															
165	6.24	5.95	6.28	5.95															
170	6.40	6.11	6.41	6.11															
175	6.52	6.21	6.49	6.21															
180	6.63	6.24	6.55	6.24															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ROCK
 Test Date:2018-10-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.268
 Humidity:65.0%
 Test Distance:6.400m [K=1.0000]
 Remarks: