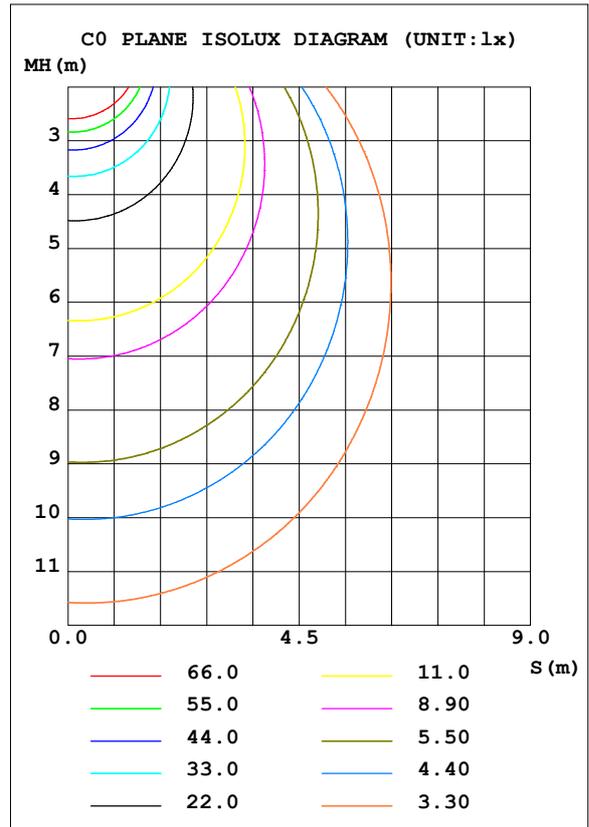
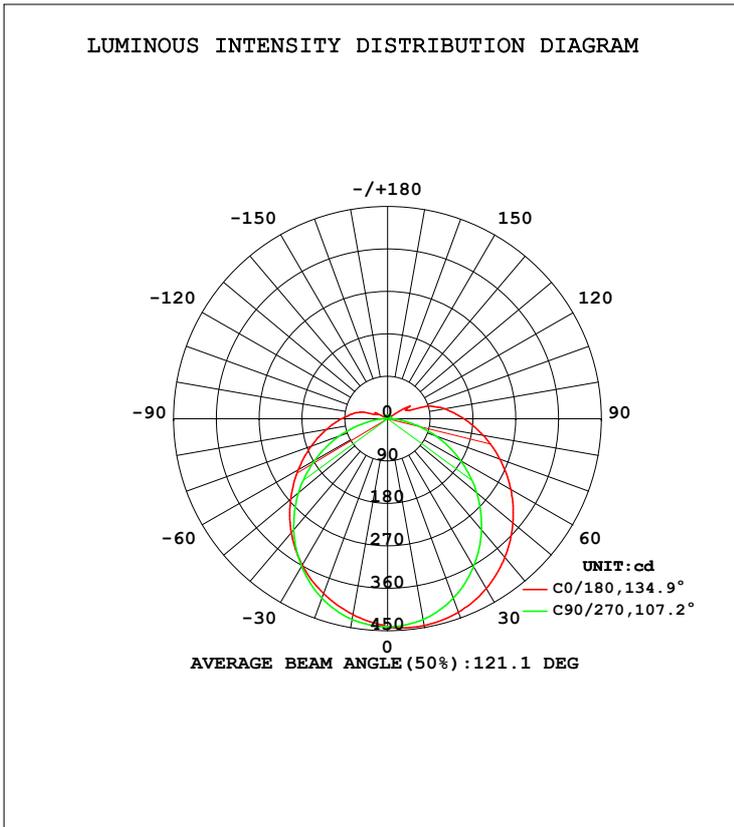


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 129.40 lm/W			
MODEL		I <sub>max</sub> (cd)	445.6	S/MH (C0/180)	1.40
NOMINAL POWER (W)		LOR (%)	90.0	S/MH (C90/270)	1.23
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1585.2	η UP, DN (C0-180)	5.3, 43.9
NOMINAL FLUX (lm)	1761.41	CIE CLASS	DIRECT	η UP, DN (C180-360)	3.2, 37.6
LAMPS INSIDE	1	η up (%)	8.5	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	81.5	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:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	445.3	432.3	421.9	432.3				0- 10	41.70	41.70	2.63,2.37
20	436.7	405.1	394.5	405.1				10- 20	119.5	161.2	10.2,9.15
30	415.7	362.0	359.1	362.0				20- 30	181.6	342.8	21.6,19.5
40	384.1	307.5	315.4	307.5				30- 40	220.7	563.6	35.6,32
50	344.3	244.8	266.6	244.8				40- 50	233.5	797.1	50.3,45.3
60	299.3	177.1	217.2	177.1				50- 60	220.7	1018	64.2,57.8
70	251.5	108.5	171.2	108.5				60- 70	187.0	1205	76,68.4
80	204.4	43.76	130.4	43.76				70- 80	139.7	1344	84.8,76.3
90	160.5	7.056	96.90	7.056				80- 90	91.81	1436	90.6,81.5
100	122.5	4.462	70.81	4.462				90-100	64.76	1501	94.7,85.2
110	57.43	4.501	28.70	4.501				100-110	42.31	1543	97.4,87.6
120	55.30	4.952	5.869	4.952				110-120	19.53	1563	98.6,88.7
130	5.518	5.369	6.118	5.369				120-130	8.307	1571	99.1,89.2
140	5.936	5.828	6.491	5.828				130-140	4.493	1576	99.4,89.5
150	6.312	6.219	6.733	6.219				140-150	3.888	1580	99.6,89.7
160	6.659	6.592	6.949	6.592				150-160	3.020	1583	99.8,89.8
170	7.001	6.838	7.169	6.838				160-170	1.936	1585	100,90
180	7.270	6.938	7.232	6.938				170-180	0.6696	1585	100,90
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

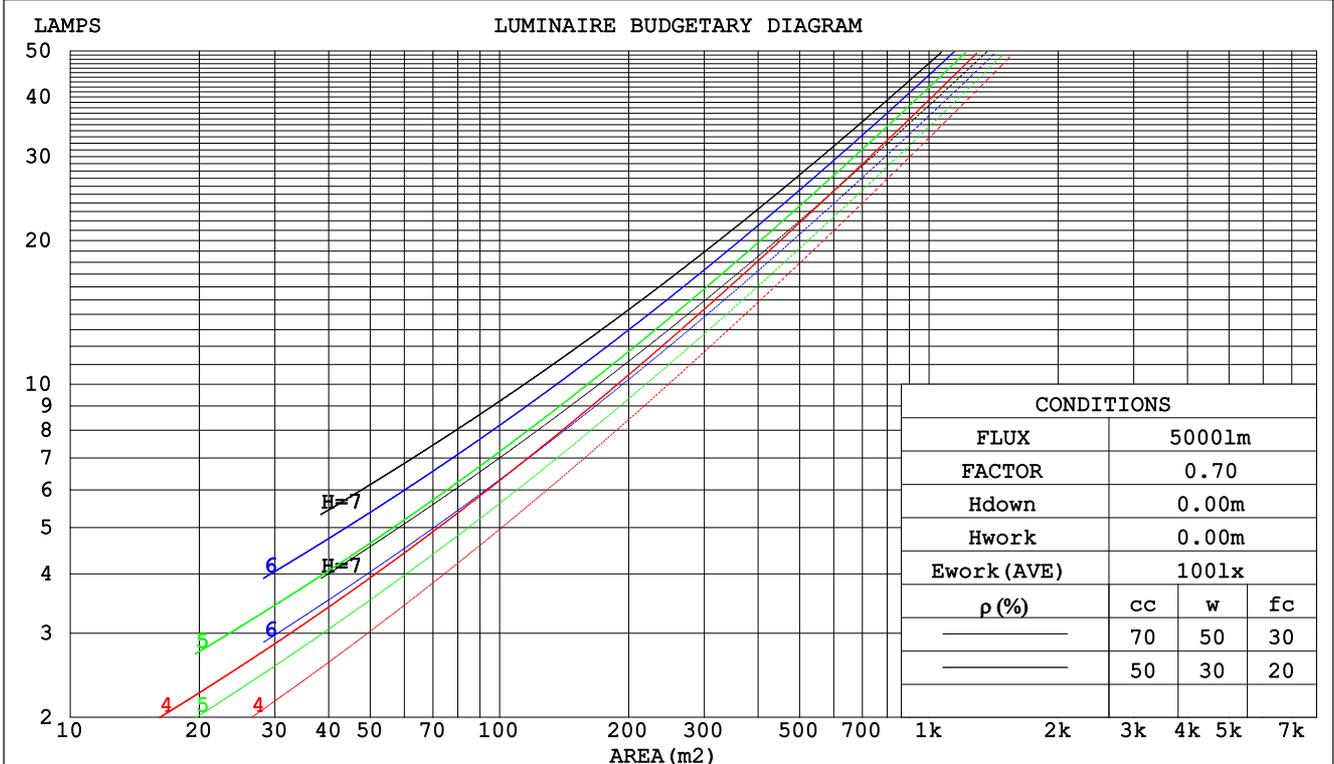
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ROCK  
 Test Date:2018-10-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.05	1.05	1.05	1.02	1.02	1.02	.95	.95	.95	.89	.89	.89	.84	.84	.84	.82
1.0	.89	.84	.80	.86	.82	.78	.81	.77	.74	.76	.73	.70	.71	.69	.67	.64
2.0	.77	.70	.64	.74	.68	.63	.70	.64	.60	.65	.61	.57	.61	.58	.55	.52
3.0	.67	.59	.53	.65	.57	.52	.61	.55	.50	.57	.52	.48	.54	.49	.46	.43
4.0	.59	.51	.44	.57	.49	.43	.54	.47	.42	.51	.45	.40	.48	.43	.39	.37
5.0	.52	.44	.38	.51	.43	.37	.48	.41	.36	.45	.39	.35	.43	.38	.34	.31
6.0	.47	.39	.33	.46	.38	.32	.43	.36	.31	.41	.35	.30	.39	.33	.29	.27
7.0	.43	.34	.29	.41	.34	.28	.39	.32	.28	.37	.31	.27	.35	.30	.26	.24
8.0	.39	.31	.26	.38	.30	.25	.36	.29	.25	.34	.28	.24	.32	.27	.23	.21
9.0	.36	.28	.23	.35	.27	.23	.33	.27	.22	.31	.26	.21	.30	.25	.21	.19
10.0	.33	.25	.21	.32	.25	.20	.30	.24	.20	.29	.23	.19	.28	.23	.19	.17



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

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.325	.185	.059	.316	.180	.057	.299	.172	.055	.284	.164	.053	.269	.156	.050	
2.0	.288	.158	.048	.280	.154	.048	.265	.147	.046	.251	.141	.044	.238	.135	.042	
3.0	.259	.138	.041	.252	.135	.041	.238	.129	.039	.226	.124	.038	.214	.119	.037	
4.0	.235	.122	.036	.229	.120	.035	.216	.115	.034	.205	.110	.033	.194	.106	.032	
5.0	.215	.110	.032	.209	.107	.031	.198	.103	.030	.188	.099	.029	.178	.095	.029	
6.0	.198	.099	.028	.192	.097	.028	.182	.093	.027	.173	.090	.026	.164	.086	.026	
7.0	.183	.090	.026	.178	.089	.025	.169	.085	.025	.160	.082	.024	.152	.079	.023	
8.0	.170	.083	.023	.166	.082	.023	.157	.079	.022	.150	.076	.022	.142	.073	.021	
9.0	.159	.077	.021	.155	.075	.021	.147	.073	.021	.140	.070	.020	.133	.068	.020	
10.0	.149	.071	.020	.145	.070	.020	.138	.068	.019	.132	.065	.019	.125	.063	.018	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.236	.236	.236	.202	.202	.202	.138	.138	.138	.079	.079	.079	.025	.025	.025	
1.0	.230	.205	.182	.197	.176	.157	.135	.121	.108	.078	.070	.063	.025	.023	.020	
2.0	.224	.184	.150	.192	.158	.130	.131	.110	.091	.076	.064	.053	.024	.021	.017	
3.0	.217	.169	.130	.186	.146	.113	.128	.101	.079	.074	.059	.047	.024	.019	.015	
4.0	.210	.157	.117	.180	.136	.102	.124	.095	.071	.072	.055	.042	.023	.018	.014	
5.0	.203	.148	.108	.174	.128	.094	.120	.090	.066	.070	.053	.039	.022	.017	.013	
6.0	.196	.141	.101	.169	.122	.088	.116	.085	.062	.068	.050	.037	.022	.016	.012	
7.0	.190	.135	.096	.163	.117	.084	.113	.082	.059	.066	.048	.035	.021	.016	.012	
8.0	.184	.130	.092	.158	.112	.080	.110	.079	.057	.064	.047	.034	.021	.015	.011	
9.0	.178	.125	.089	.154	.109	.078	.106	.076	.055	.062	.045	.033	.020	.015	.011	
10.0	.173	.121	.087	.149	.105	.076	.104	.074	.054	.060	.044	.032	.020	.014	.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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm										
NAME: T8-3FT-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	18.8	20.2	19.2	20.6	21.0	16.9	18.4	17.3	18.7	19.1
3H	21.3	22.6	21.7	23.0	23.4	18.4	19.8	18.8	20.2	20.6
4H	22.6	23.9	23.1	24.3	24.8	19.0	20.3	19.4	20.7	21.2
6H	24.2	25.4	24.6	25.8	26.3	19.4	20.6	19.9	21.1	21.5
8H	25.0	26.2	25.5	26.6	27.1	19.5	20.7	20.0	21.2	21.7
12H	26.0	27.1	26.5	27.6	28.1	19.6	20.7	20.1	21.2	21.7
4H 2H	19.3	20.6	19.7	21.0	21.4	17.9	19.2	18.4	19.6	20.1
3H	22.0	23.1	22.5	23.6	24.1	19.7	20.8	20.2	21.3	21.8
4H	23.5	24.6	24.0	25.0	25.6	20.4	21.5	21.0	22.0	22.5
6H	25.2	26.2	25.8	26.7	27.3	21.1	22.0	21.6	22.5	23.1
8H	26.2	27.1	26.8	27.6	28.2	21.3	22.1	21.8	22.7	23.2
12H	27.3	28.1	27.9	28.7	29.3	21.4	22.2	22.0	22.8	23.4
8H 4H	23.8	24.7	24.4	25.2	25.8	21.3	22.1	21.8	22.7	23.2
6H	25.8	26.5	26.4	27.1	27.7	22.2	22.9	22.8	23.5	24.1
8H	26.9	27.6	27.5	28.2	28.8	22.6	23.2	23.2	23.8	24.5
12H	28.3	28.9	28.9	29.5	30.2	22.9	23.5	23.5	24.1	24.8
12H 4H	23.8	24.6	24.4	25.2	25.8	21.5	22.3	22.1	22.9	23.5
6H	25.9	26.5	26.5	27.1	27.7	22.6	23.3	23.2	23.8	24.5
8H	27.1	27.7	27.7	28.3	29.0	23.2	23.7	23.8	24.3	25.0
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 / - 0.5				

CIE Pub.117 Corrected 1761 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.0)

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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

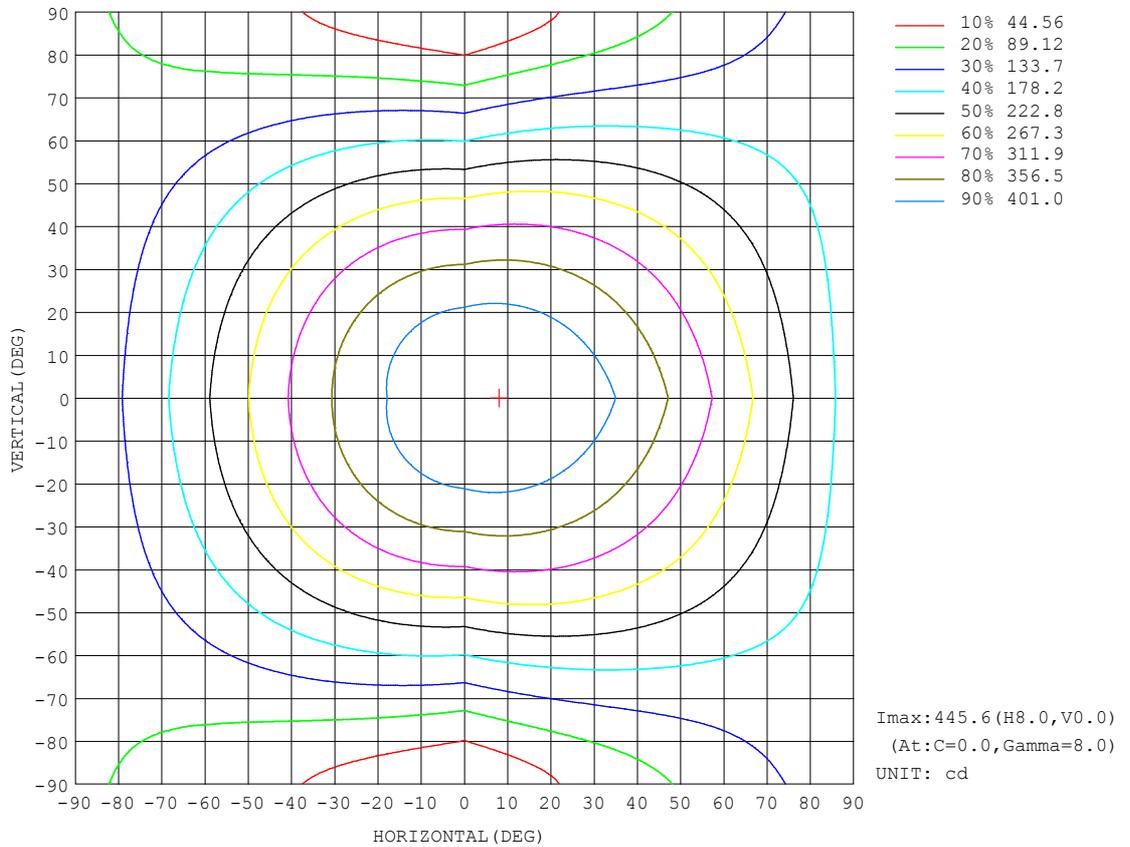
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	47	36	29	46	36	29	45	35	29	23
0.80	55	44	37	54	44	37	52	43	36	30
1.00	62	51	44	61	51	44	58	52	43	36
1.25	69	58	51	67	57	50	64	55	49	42
1.50	73	63	56	71	62	55	68	60	54	46
2.00	80	70	63	77	69	63	73	66	61	52
2.50	83	75	68	81	73	67	76	70	65	55
3.00	87	79	73	84	77	72	79	74	69	59
4.00	91	84	79	88	82	77	83	78	74	63
5.00	93	88	83	90	85	81	85	81	77	66
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

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:

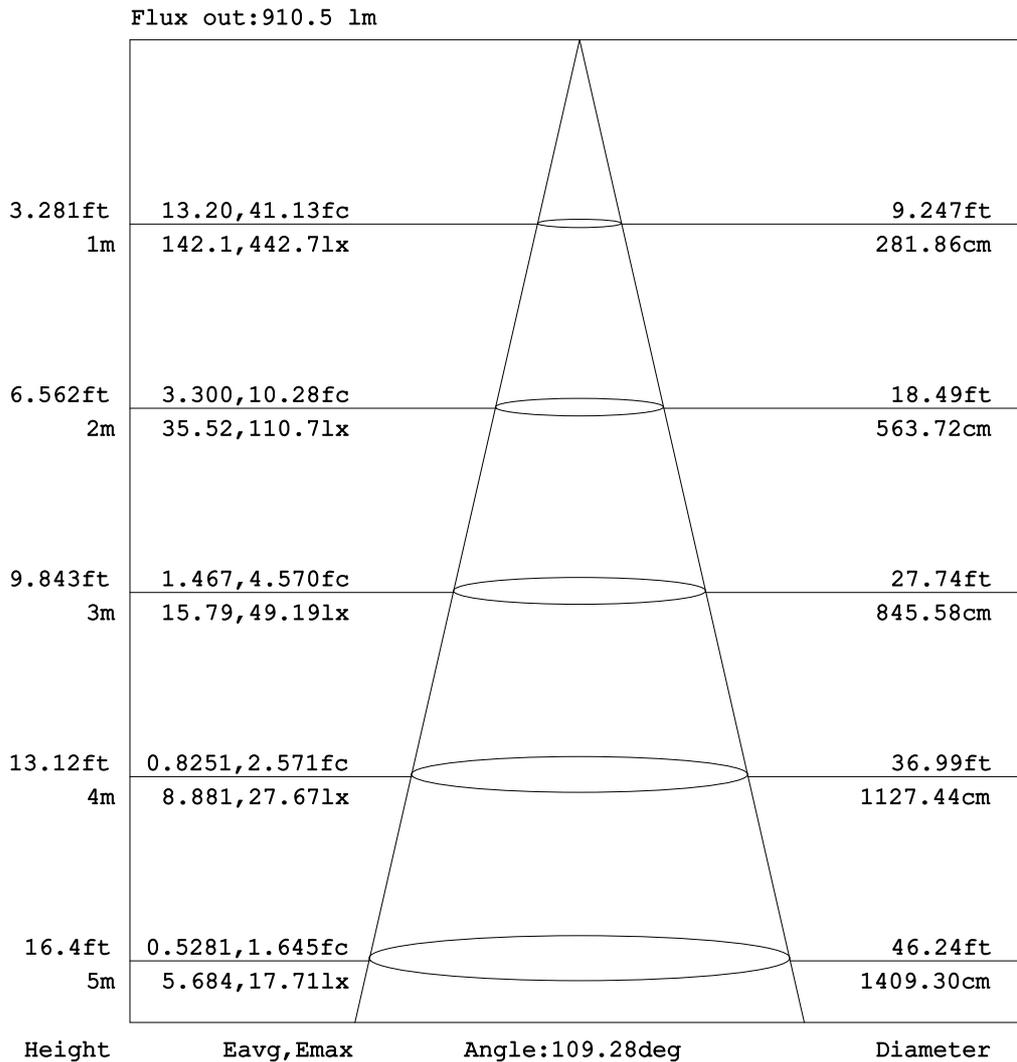


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: ROCK  
 Test Date: 2018-10-22

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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.4lx1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:



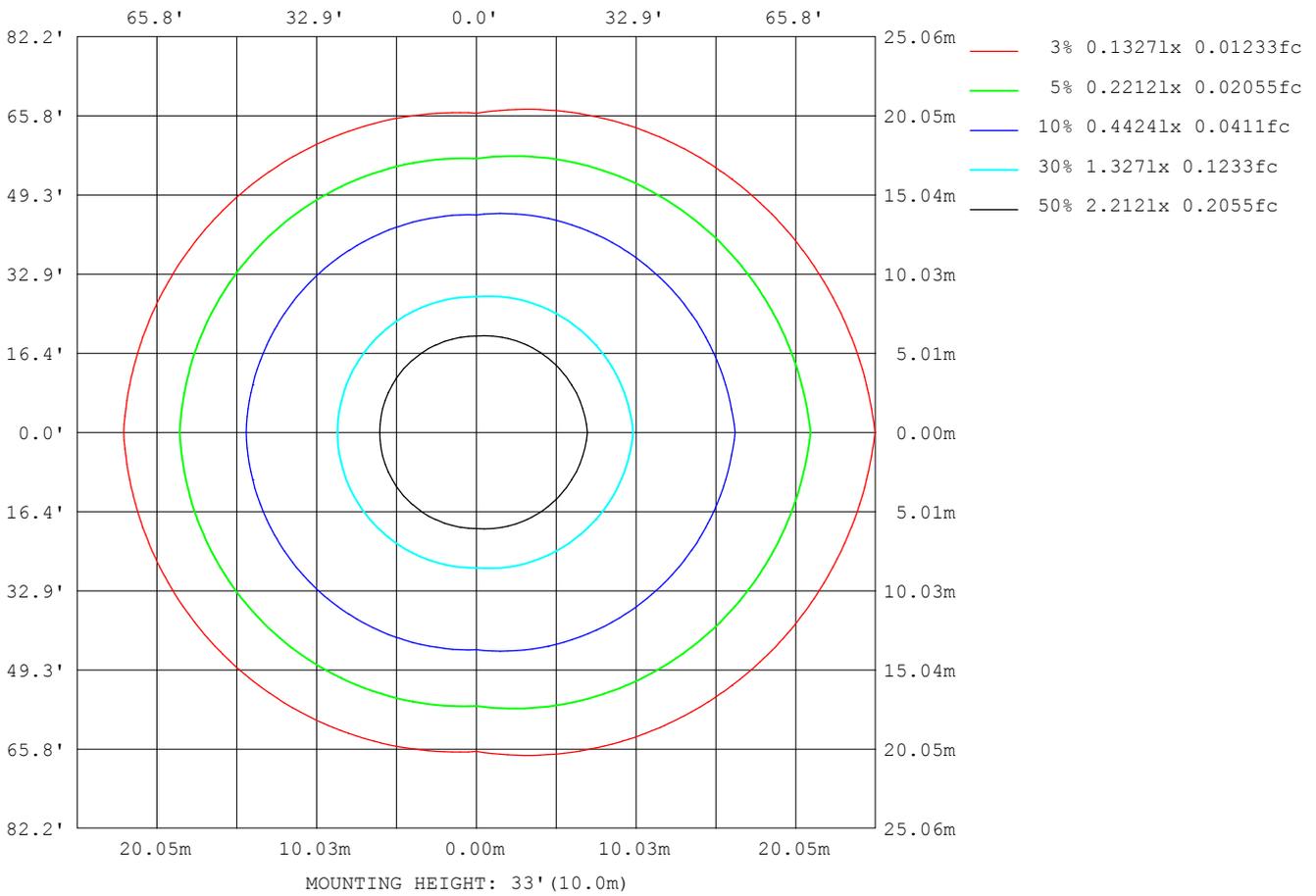
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

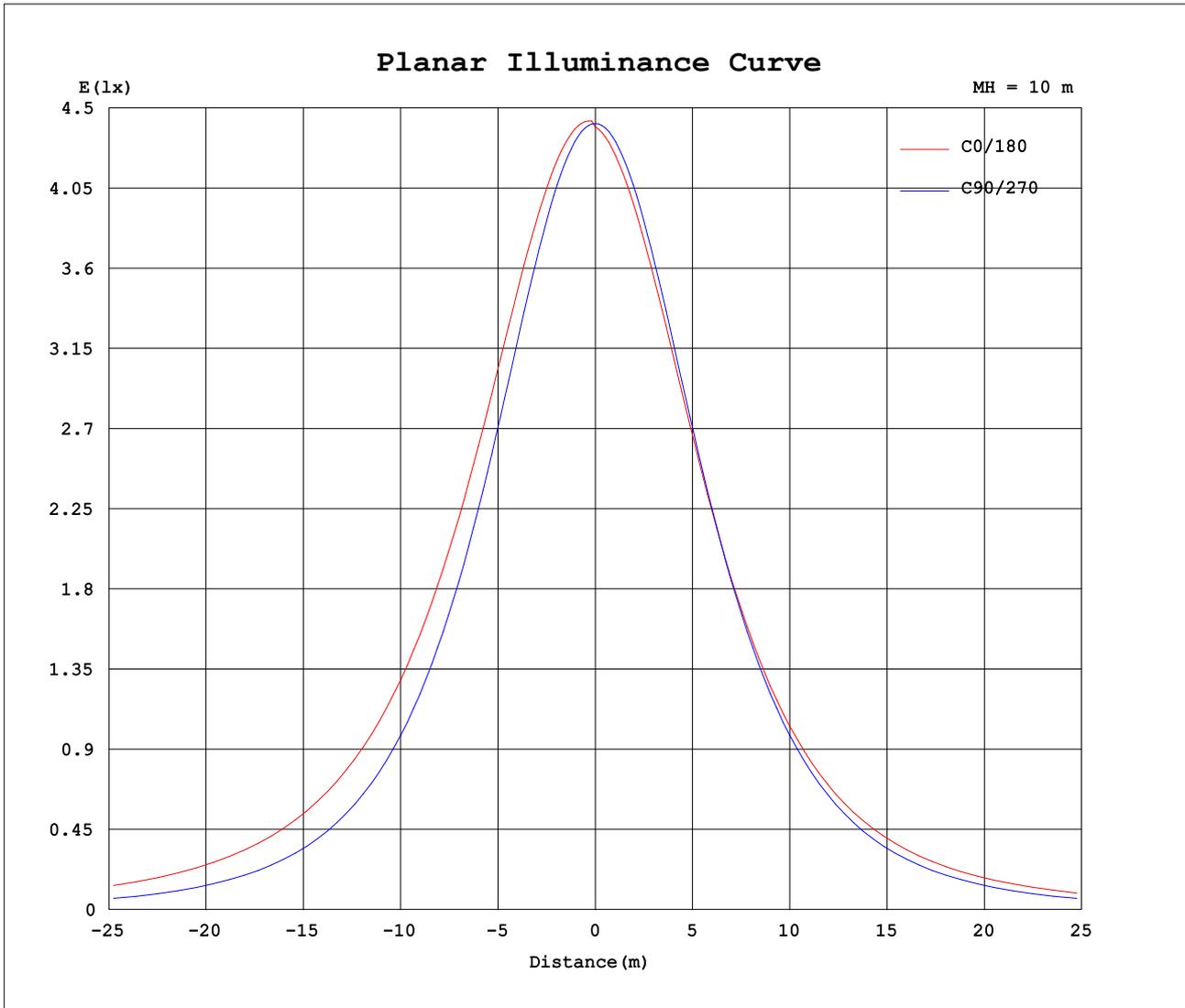
Test:U:120.0V I:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-12W-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: NOON	SUR.:	PROTECTION ANGLE:



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

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:0.1020A P:12.25W PF:990.0 Lamp Flux:1761.41x1 lm		
NAME: T8-3FT-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	442	441	440	441															
5	445	439	432	439															
10	445	432	422	432															
15	442	421	409	421															
20	437	405	395	405															
25	428	385	378	385															
30	416	362	359	362															
35	401	336	338	336															
40	384	307	315	307															
45	365	277	292	277															
50	344	245	267	245															
55	322	211	242	211															
60	299	177	217	177															
65	276	143	194	143															
70	252	109	171	109															
75	228	74.9	150	74.9															
80	204	43.8	130	43.8															
85	182	18.7	113	18.7															
90	161	7.06	96.9	7.06															
95	141	6.84	82.9	6.84															
100	123	4.46	70.8	4.46															
105	101	4.28	57.0	4.28															
110	57.4	4.50	28.7	4.50															
115	43.9	4.71	24.5	4.71															
120	55.3	4.95	5.87	4.95															
125	10.6	5.17	6.00	5.17															
130	5.52	5.37	6.12	5.37															
135	5.72	5.60	6.30	5.60															
140	5.94	5.83	6.49	5.83															
145	6.13	6.01	6.63	6.01															
150	6.31	6.22	6.73	6.22															
155	6.48	6.41	6.84	6.41															
160	6.66	6.59	6.95	6.59															
165	6.84	6.76	7.07	6.76															
170	7.00	6.84	7.17	6.84															
175	7.09	6.92	7.21	6.92															
180	7.27	6.94	7.23	6.94															

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: