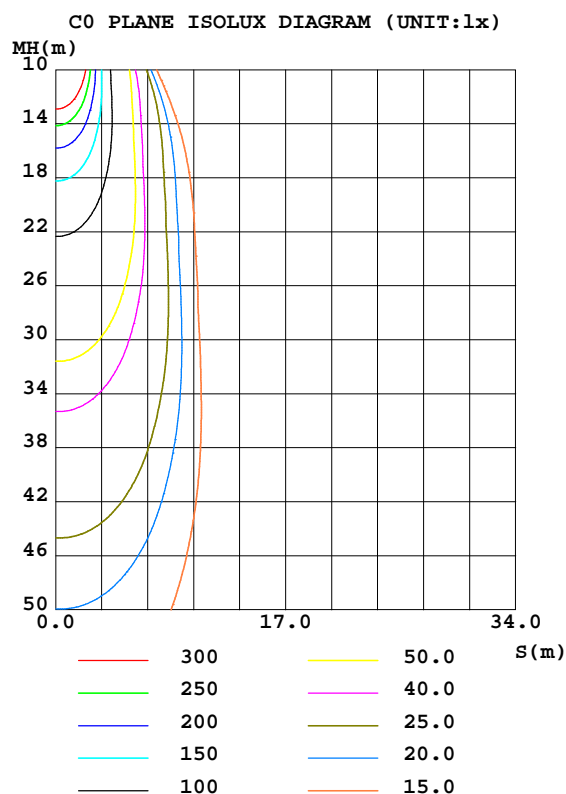
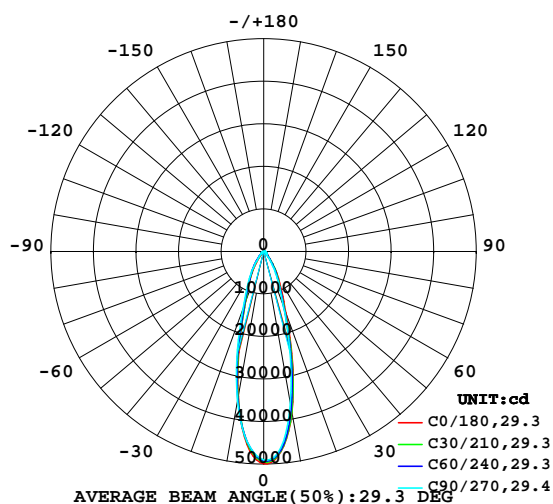


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.57 lm/W			
MODEL	NTB-130C_A30	Imax(cd)	49878	S/MH(C0/180)	0.47
NOMINAL POWER(W)	130	LOR(%)	100.0	S/MH(C90/270)	0.49
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	19253	η UP,DN(C0-180)	0.8,49.0
NOMINAL FLUX(lm)	19253	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.8,49.4
LAMPS INSIDE	1	η up(%)	1.6	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	98.4	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	3842	3797	3635	3497	3464	3487	3555	3618	0- 10	4050	4050	21,21
20	1534	1453	1361	1271	1260	1270	1423	1439	10- 20	6477	10526	54.7,54.7
30	656.5	604.6	529.9	539.0	515.8	574.0	609.5	654.5	20- 30	4070	14596	75.8,75.8
40	172.2	247.2	147.6	208.7	129.4	230.7	183.8	287.6	30- 40	2244	16840	87.5,87.5
50	82.89	90.27	73.88	79.55	74.07	87.00	81.37	105.9	40- 50	946.1	17786	92.4,92.4
60	58.86	56.86	48.89	52.79	52.89	53.13	48.88	57.29	50- 60	595.8	18382	95.5,95.5
70	30.15	29.35	24.04	26.96	26.97	24.49	21.14	26.43	60- 70	387.7	18770	97.5,97.5
80	8.200	7.081	5.005	5.956	6.559	4.662	3.286	5.254	70- 80	156.0	18926	98.3,98.3
90	0.4943	0.5086	0.5030	0.5417	0.4848	0.4726	0.4366	0.4373	80- 90	20.46	18946	98.4,98.4
100	0.7865	0.8279	0.8688	0.9237	0.7794	0.7352	0.6627	0.6683	90-100	6.631	18953	98.4,98.4
110	1.538	1.583	1.710	1.772	1.538	1.378	1.269	1.234	100-110	11.56	18965	98.5,98.5
120	3.153	3.226	3.434	3.539	3.092	2.811	2.603	2.510	110-120	21.44	18986	98.6,98.6
130	6.121	6.208	6.461	6.562	6.006	5.646	5.331	5.147	120-130	38.99	19025	98.8,98.8
140	9.481	9.523	9.745	9.760	9.494	9.098	8.807	8.545	130-140	58.67	19084	99.1,99.1
150	11.81	11.72	11.81	11.76	11.97	11.56	11.37	11.10	140-150	66.02	19150	99.5,99.5
160	12.81	12.59	12.56	12.51	12.91	12.52	12.45	12.20	150-160	56.17	19206	99.8,99.8
170	12.67	12.37	12.32	12.29	12.72	12.27	12.28	12.04	160-170	35.48	19241	99.9,99.9
180	12.30	12.14	12.32	12.00	12.35	12.11	12.34	11.98	170-180	11.64	19253	100,100
DEG	LUMINOUS INTENSITY: #10cd									UNIT: lm		

Conical surface Flux(90deg): 17395 lm

%lum = 90.3%

%lamp = 90.3%

Conical surface Flux(120deg): 18382 lm

%lum = 95.5%

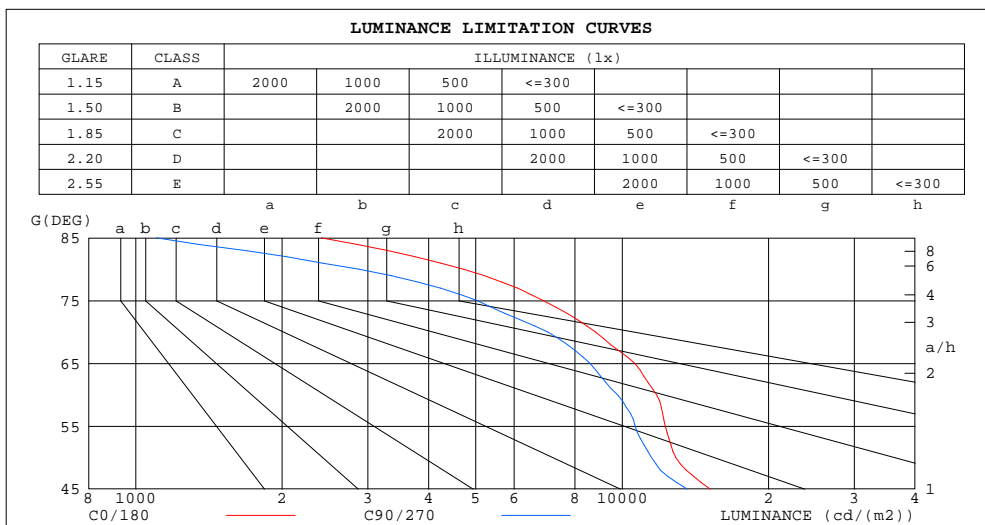
%lamp = 95.5%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30

LUMINANCE LIMITATION CURVES

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2410	1104
80	4722	2882
75	6881	5035
70	8814	7028
65	10624	8586
60	11772	9777
55	12264	10636
50	12896	11494
45	15171	13606

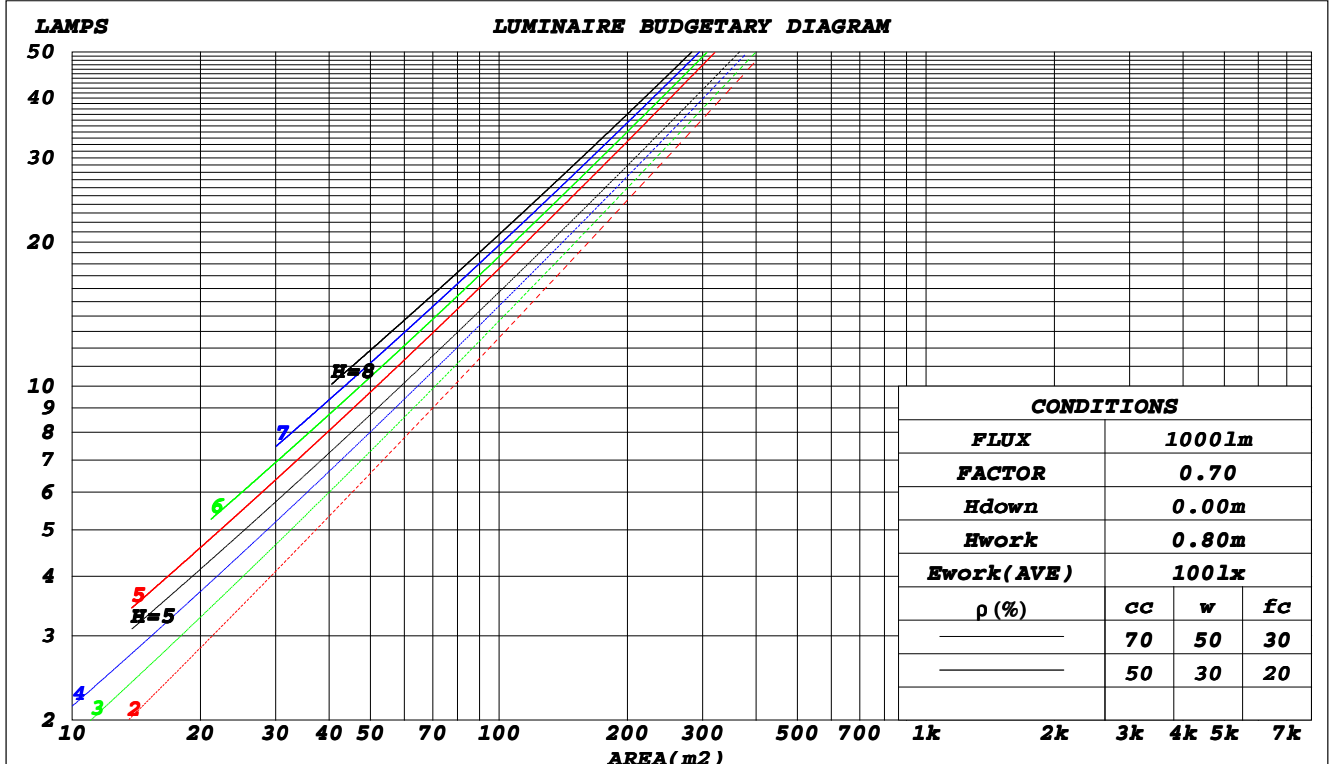
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253xl lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding 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	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.98
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	.99	.99	.97	.96	.95	.94	.92
2.0	1.03	.99	.96	1.01	.98	.95	.98	.95	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.97	.92	.88	.95	.91	.87	.92	.89	.86	.90	.87	.84	.87	.85	.83	.81
4.0	.91	.86	.82	.90	.85	.81	.88	.83	.80	.85	.82	.79	.83	.80	.78	.77
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.75	.81	.78	.75	.80	.76	.74	.72
6.0	.82	.76	.72	.81	.76	.72	.79	.75	.71	.78	.74	.71	.76	.73	.70	.69
7.0	.78	.72	.68	.77	.72	.68	.76	.71	.68	.74	.70	.67	.73	.70	.67	.65
8.0	.74	.69	.65	.74	.68	.65	.72	.68	.64	.71	.67	.64	.70	.67	.64	.62
9.0	.71	.66	.62	.70	.65	.62	.69	.65	.62	.68	.64	.61	.68	.64	.61	.60
10.0	.68	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.59	.65	.61	.59	.57



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

WEC AND CCEC

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding 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	.175	.100	.032	.168	.096	.030	.154	.089	.028	.142	.082	.026	.131	.076	.024		
2.0	.166	.091	.028	.160	.088	.027	.148	.083	.026	.138	.077	.024	.128	.073	.023		
3.0	.156	.083	.025	.151	.081	.024	.141	.077	.023	.132	.072	.022	.124	.069	.021		
4.0	.147	.076	.022	.142	.075	.022	.134	.071	.021	.126	.068	.020	.119	.065	.020		
5.0	.139	.071	.020	.135	.069	.020	.127	.066	.020	.121	.064	.019	.114	.061	.018		
6.0	.131	.066	.019	.128	.065	.019	.121	.062	.018	.115	.060	.018	.110	.058	.017		
7.0	.124	.061	.017	.121	.060	.017	.116	.058	.017	.110	.057	.016	.105	.055	.016		
8.0	.118	.058	.016	.116	.057	.016	.110	.055	.016	.106	.053	.015	.101	.052	.015		
9.0	.113	.054	.015	.110	.054	.015	.106	.052	.015	.101	.051	.015	.097	.049	.014		
10.0	.108	.052	.014	.105	.051	.014	.101	.050	.014	.097	.048	.014	.094	.047	.014		

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	.203	.203	.203	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.183	.170	.157	.157	.146	.135	.107	.100	.094	.062	.058	.054	.020	.019	.018	
2.0	.168	.145	.126	.144	.125	.109	.098	.086	.076	.057	.050	.044	.018	.016	.014	
3.0	.155	.126	.103	.133	.109	.089	.091	.075	.063	.053	.044	.037	.017	.014	.012	
4.0	.144	.111	.086	.124	.096	.075	.085	.067	.053	.049	.039	.031	.016	.013	.010	
5.0	.135	.099	.073	.116	.086	.064	.080	.060	.045	.046	.035	.027	.015	.012	.009	
6.0	.127	.090	.064	.109	.078	.055	.075	.055	.039	.044	.032	.023	.014	.010	.008	
7.0	.120	.082	.056	.103	.071	.049	.071	.050	.035	.041	.029	.021	.013	.010	.007	
8.0	.114	.076	.050	.098	.066	.043	.068	.046	.031	.039	.027	.018	.013	.009	.006	
9.0	.108	.071	.045	.093	.061	.039	.065	.043	.028	.038	.025	.017	.012	.008	.006	
10.0	.103	.066	.041	.089	.057	.036	.062	.040	.025	.036	.024	.015	.012	.008	.005	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

UGR(Unified Glare Rating) Table

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm										
NAME: NTB-130C_A30					TYPE:LED			WEIGHT:		
SPEC.:130C_A30					DIM.:			SERIAL No.:		
MFR.: ICEPIPE					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	17.9	18.8	18.2	19.0	19.2	17.1	18.0	17.3	18.1	18.3
3H	18.6	19.4	18.9	19.6	19.9	17.7	18.5	17.9	18.7	18.9
4H	18.8	19.6	19.1	19.8	20.1	17.8	18.6	18.1	18.8	19.0
6H	18.9	19.6	19.2	19.9	20.2	17.8	18.5	18.1	18.8	19.1
8H	18.9	19.6	19.2	19.9	20.1	17.8	18.5	18.1	18.7	19.0
12H	18.9	19.5	19.2	19.8	20.1	17.7	18.4	18.1	18.7	19.0
4H 2H	18.2	18.9	18.4	19.2	19.4	17.4	18.2	17.7	18.4	18.7
3H	19.0	19.6	19.3	19.9	20.2	18.1	18.8	18.5	19.1	19.4
4H	19.3	19.9	19.6	20.2	20.5	18.3	18.9	18.7	19.3	19.6
6H	19.4	19.9	19.8	20.3	20.7	18.4	18.9	18.8	19.3	19.6
8H	19.4	19.9	19.8	20.3	20.7	18.3	18.8	18.8	19.2	19.6
12H	19.4	19.8	19.8	20.2	20.7	18.3	18.7	18.7	19.1	19.6
8H 4H	19.3	19.8	19.7	20.2	20.6	18.4	18.9	18.8	19.3	19.7
6H	19.5	19.9	19.9	20.3	20.7	18.5	18.9	18.9	19.3	19.7
8H	19.5	19.8	19.9	20.3	20.8	18.4	18.8	18.9	19.2	19.7
12H	19.5	19.8	19.9	20.2	20.7	18.4	18.7	18.9	19.2	19.7
12H 4H	19.2	19.7	19.7	20.1	20.5	18.4	18.8	18.8	19.2	19.6
6H	19.4	19.8	19.9	20.2	20.7	18.4	18.8	18.9	19.2	19.7
8H	19.4	19.8	19.9	20.2	20.7	18.4	18.7	18.9	19.2	19.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.8 / - 1.0					+ 0.8 / - 1.0				
1.5H	+ 1.6 / - 0.8					+ 1.2 / - 0.9				
2.0H	+ 0.4 / - 0.4					+ 0.5 / - 0.6				

CIE Pub.117 Corrected 19253 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.3)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

UTILIZATION FACTORS TABLE

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

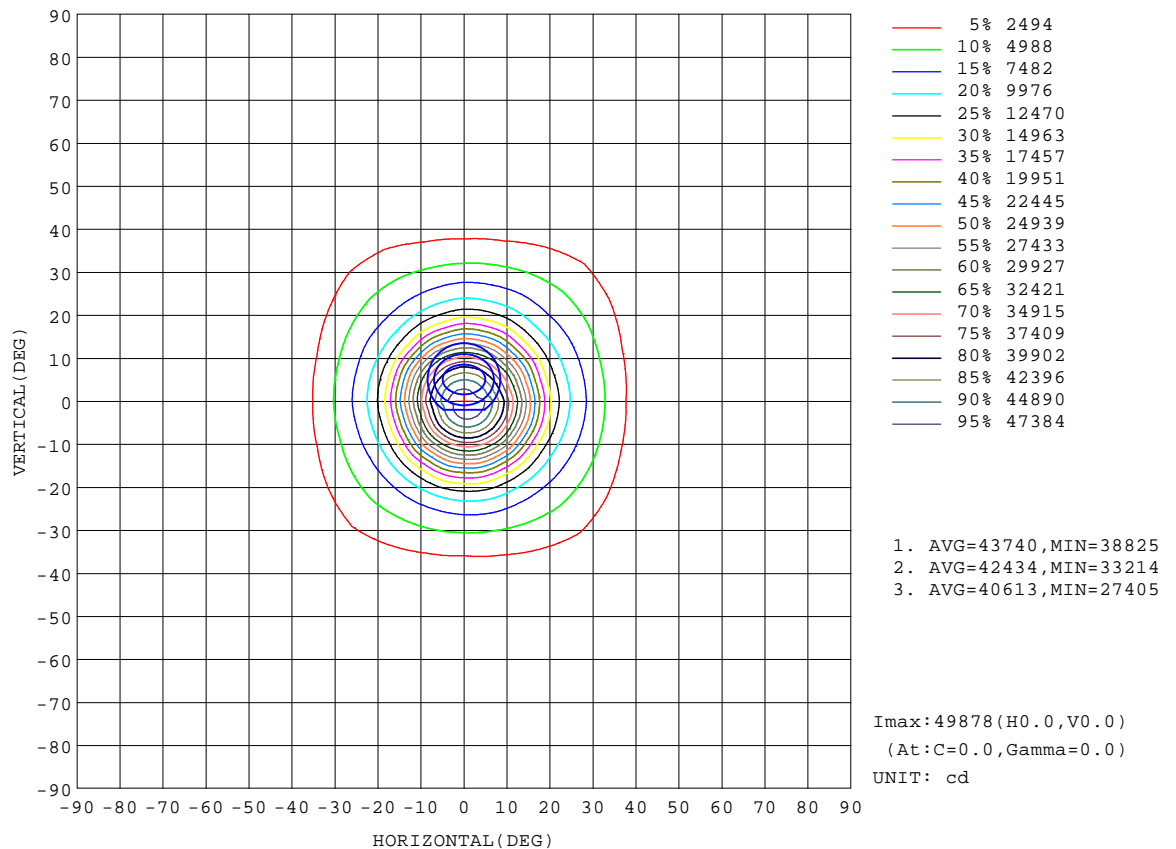
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	83	77	73	82	76	72	69
0.80	91	85	81	91	85	81	89	84	80	76
1.00	96	90	86	95	90	86	93	89	85	81
1.25	101	95	91	99	94	91	97	93	90	85
1.50	104	98	95	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	102	99	96	90
2.50	109	104	101	107	103	100	103	100	98	91
3.00	110	107	104	108	105	102	105	102	100	93
4.00	113	110	107	110	108	106	106	104	103	95
5.00	114	111	109	112	110	108	107	106	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

ISOCANDELA DIAGRAM

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



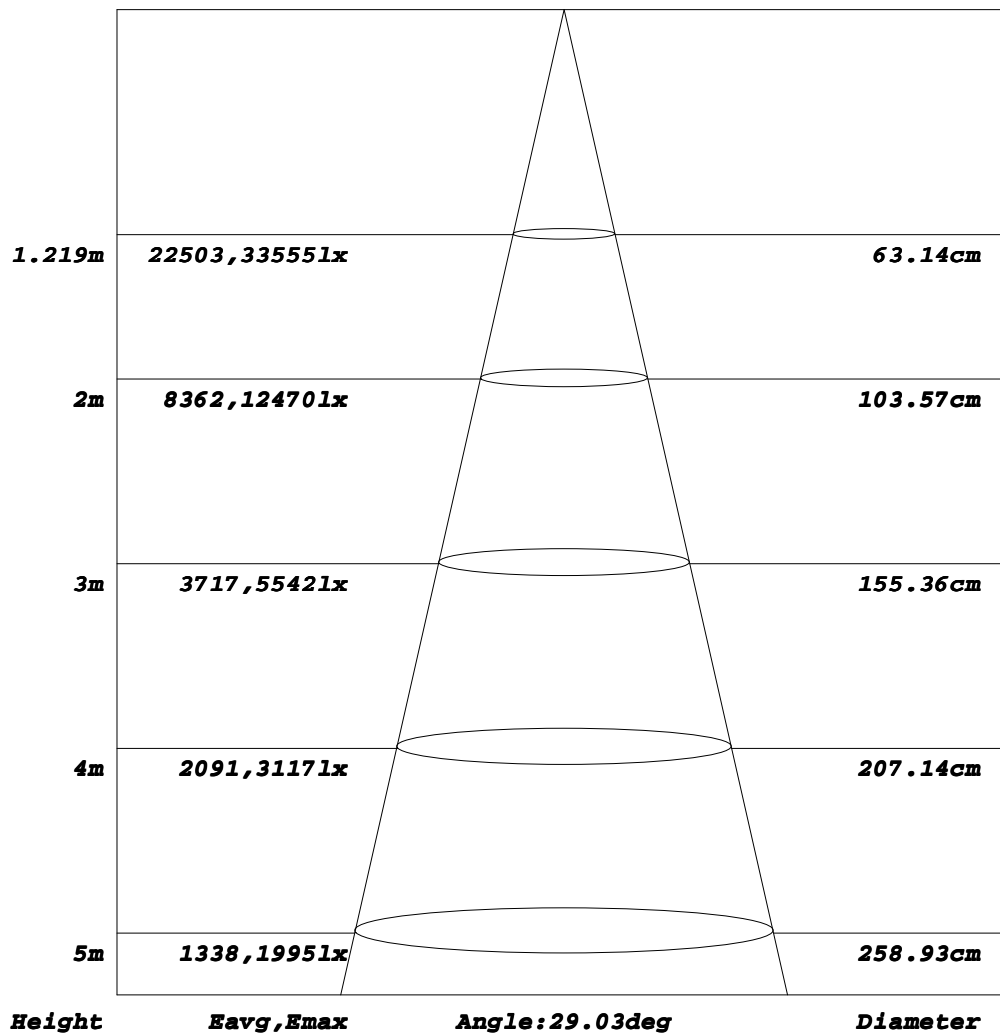
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

AAI Figure

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Flux out:7545 lm



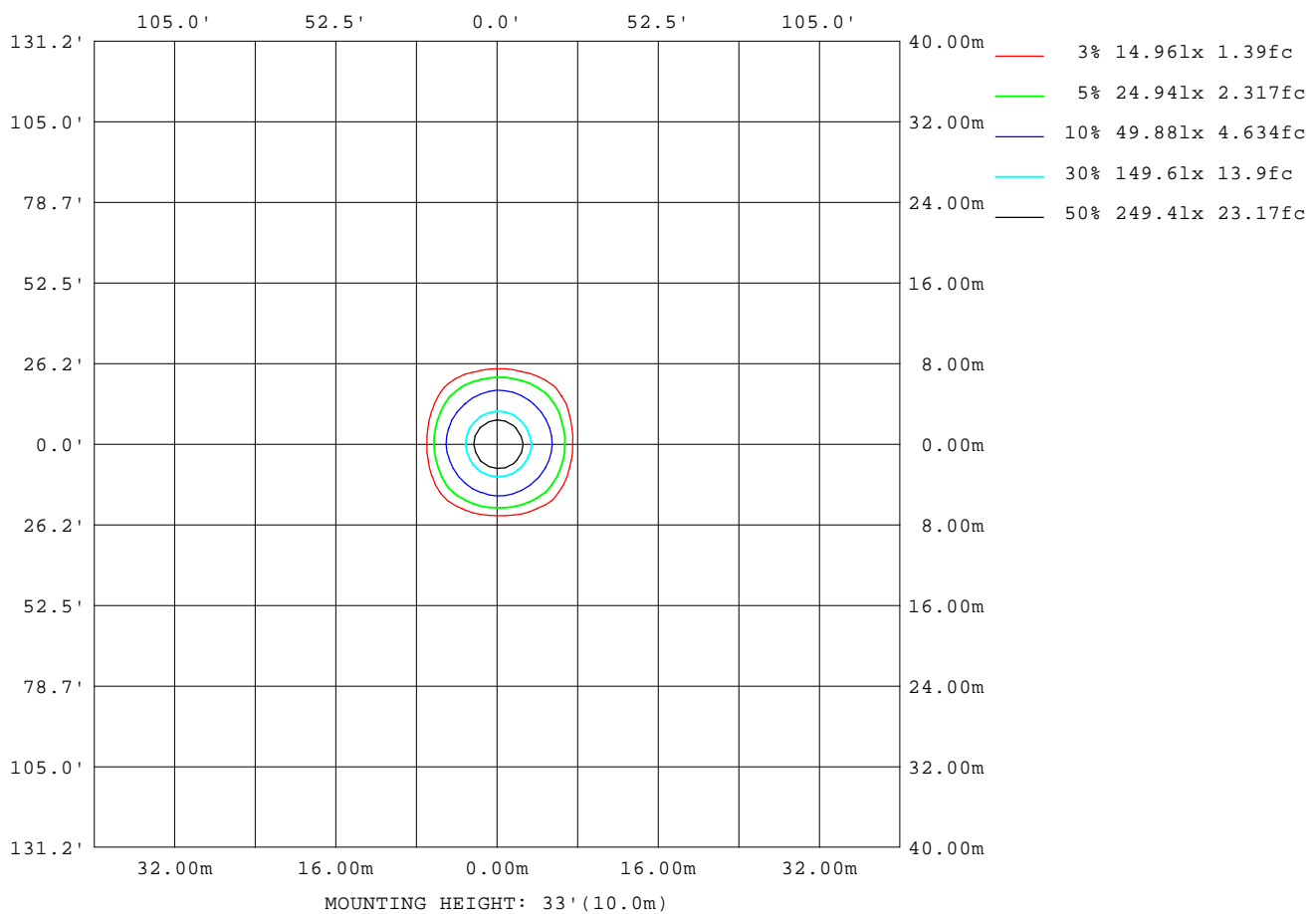
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30

ISOLUX DIAGRAM

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

LED Avg.L Report

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

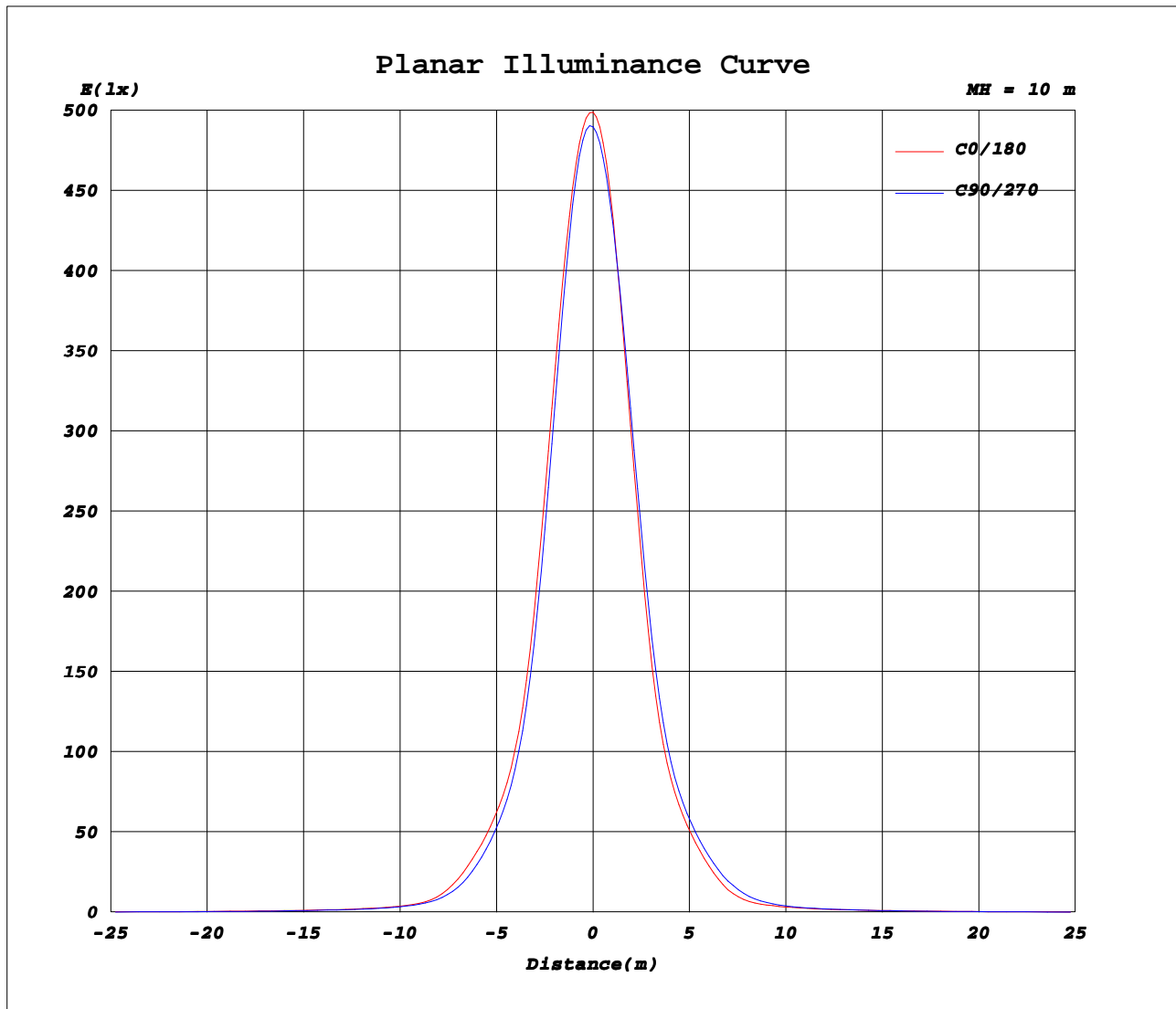
AvgL	cd/m2
L_0~180(65)av	10089
L_0~180(75)av	6469
L_0~180(85)av	1997
L_90~270(65)av	8391
L_90~270(75)av	4548
L_90~270(85)av	901
L_45(65)av	9677
L_45(75)av	5625
L_45(85)av	1303

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--1

UNIT: #10cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	4988	4968	4950	4936	4923	4909	4897	4886	4876	4861	4856	4849	4988	4968	4950	4936	4923	4909	4897
5	4724	4720	4708	4702	4680	4661	4635	4608	4569	4541	4494	4452	4559	4524	4509	4489	4488	4481	4489
10	3842	3837	3818	3797	3750	3701	3635	3585	3529	3497	3426	3378	3464	3453	3475	3487	3520	3527	3555
15	2612	2620	2546	2544	2460	2449	2364	2339	2241	2236	2143	2127	2204	2185	2242	2234	2304	2317	2390
20	1534	1525	1446	1453	1404	1414	1361	1349	1302	1271	1229	1214	1260	1260	1254	1270	1327	1358	1423
25	979	939	904	879	866	869	846	814	798	775	770	781	812	806	818	814	844	881	918
30	656	642	624	605	572	548	530	529	530	539	522	501	516	521	550	574	583	590	609
35	375	384	397	406	357	313	283	297	320	349	316	270	255	272	329	381	385	357	355
40	172	186	227	247	202	162	148	155	181	209	172	134	129	136	175	231	229	194	184
45	107	108	126	145	121	101	96.2	97.6	109	122	103	91.0	92.7	92.3	104	135	138	117	111
50	82.9	82.7	84.3	90.3	82.1	74.8	73.9	73.5	77.2	79.6	74.7	72.0	74.1	73.8	77.2	87.0	89.7	82.4	81.4
55	70.3	69.1	69.7	69.9	65.5	61.0	61.0	60.2	62.6	64.9	63.2	61.5	63.9	63.2	64.8	67.5	67.9	63.9	64.6
60	58.9	56.9	56.6	56.9	52.5	49.7	48.9	48.5	50.4	52.8	52.1	50.9	52.9	52.3	52.6	53.1	51.4	48.5	48.9
65	44.9	43.4	43.3	43.0	39.1	36.5	36.3	35.9	37.0	40.3	39.4	38.5	40.4	38.7	39.2	39.0	36.1	34.1	34.6
70	30.1	30.1	30.0	29.3	26.3	24.5	24.0	24.0	24.8	27.0	26.8	26.5	27.0	26.1	26.2	24.5	23.0	21.0	21.1
75	17.8	18.1	17.9	16.7	14.7	13.5	13.0	13.0	13.4	14.8	15.3	15.4	15.7	15.0	14.5	12.8	11.4	10.5	10.5
80	8.20	8.37	7.78	7.08	6.04	5.43	5.01	5.06	5.24	5.96	6.16	6.49	6.56	6.30	5.47	4.66	3.85	3.28	3.29
85	2.10	2.24	1.94	1.67	1.23	1.07	0.96	0.97	1.00	1.21	1.30	1.40	1.38	1.31	1.03	0.77	0.65	0.60	0.61
90	0.49	0.51	0.51	0.51	0.51	0.50	0.50	0.52	0.53	0.54	0.54	0.53	0.48	0.48	0.48	0.47	0.46	0.45	0.44
95	0.59	0.60	0.62	0.63	0.63	0.63	0.64	0.66	0.68	0.69	0.69	0.68	0.59	0.58	0.58	0.57	0.56	0.54	0.52
100	0.79	0.79	0.81	0.83	0.84	0.85	0.87	0.89	0.92	0.92	0.93	0.92	0.78	0.76	0.75	0.74	0.71	0.69	0.66
105	1.09	1.10	1.12	1.13	1.16	1.18	1.22	1.24	1.27	1.27	1.29	1.28	1.09	1.06	1.02	0.99	0.96	0.93	0.90
110	1.54	1.55	1.56	1.58	1.62	1.66	1.71	1.74	1.76	1.77	1.79	1.80	1.54	1.48	1.43	1.38	1.33	1.30	1.27
115	2.19	2.19	2.21	2.24	2.29	2.35	2.41	2.44	2.48	2.49	2.54	2.55	2.17	2.10	2.02	1.95	1.88	1.84	1.80
120	3.15	3.16	3.19	3.23	3.29	3.36	3.43	3.47	3.52	3.54	3.60	3.61	3.09	3.01	2.90	2.81	2.72	2.66	2.60
125	4.49	4.50	4.53	4.57	4.66	4.73	4.81	4.86	4.91	4.93	5.00	5.02	4.39	4.29	4.17	4.06	3.94	3.86	3.78
130	6.12	6.13	6.16	6.21	6.30	6.37	6.46	6.50	6.55	6.56	6.63	6.66	6.01	5.90	5.76	5.65	5.52	5.44	5.33
135	7.85	7.86	7.88	7.93	8.01	8.09	8.18	8.22	8.25	8.25	8.30	8.33	7.79	7.66	7.52	7.40	7.28	7.20	7.09
140	9.48	9.48	9.48	9.52	9.59	9.67	9.75	9.77	9.78	9.76	9.80	9.83	9.49	9.36	9.22	9.10	8.99	8.91	8.81
145	10.8	10.8	10.8	10.8	10.8	10.9	11.0	11.0	11.0	10.9	11.0	11.0	10.9	10.8	10.6	10.5	10.4	10.4	10.3
150	11.8	11.8	11.7	11.7	11.7	11.8	11.8	11.8	11.8	11.8	11.8	11.8	12.0	11.8	11.7	11.6	11.5	11.4	11.4
155	12.5	12.4	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.6	12.4	12.3	12.2	12.2	12.1	12.1
160	12.8	12.8	12.6	12.6	12.5	12.6	12.6	12.6	12.5	12.5	12.5	12.6	12.9	12.7	12.6	12.5	12.5	12.5	12.4
165	12.9	12.9	12.7	12.6	12.5	12.5	12.5	12.6	12.5	12.5	12.5	12.6	13.0	12.7	12.6	12.5	12.5	12.5	12.5
170	12.7	12.7	12.5	12.4	12.3	12.3	12.3	12.4	12.3	12.3	12.3	12.3	12.7	12.5	12.4	12.3	12.3	12.3	12.3
175	12.3	12.4	12.2	12.1	12.1	12.1	12.2	12.2	12.1	12.0	12.0	12.0	12.4	12.3	12.2	12.0	12.1	12.1	12.1
180	12.3	12.3	12.2	12.1	12.1	12.3	12.3	12.3	12.1	12.0	11.9	12.0	12.4	12.2	12.2	12.1	12.2	12.2	12.3

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.4V I:0.6050A P:129.6W PF:0.9764 Lamp Flux:19253x1 lm		
NAME: NTB-130C_A30	TYPE:LED	WEIGHT:
SPEC.:130C_A30	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: #10cd

C(DEC) γ (DEC)	285	300	315	330	345														
0	4886	4876	4861	4856	4849														
5	4492	4509	4516	4547	4573														
10	3565	3603	3618	3675	3714														
15	2402	2450	2441	2514	2516														
20	1430	1466	1439	1478	1470														
25	915	930	910	937	953														
30	627	644	654	658	648														
35	374	418	451	437	398														
40	198	245	288	259	196														
45	117	145	171	145	111														
50	83.7	95.8	106	92.8	83.7														
55	65.6	71.8	76.7	73.0	69.4														
60	49.7	54.1	57.3	57.5	56.9														
65	35.2	38.0	41.2	42.4	42.6														
70	21.8	24.1	26.4	28.3	29.0														
75	10.9	12.1	14.0	15.9	16.9														
80	3.47	4.20	5.25	6.45	7.56														
85	0.61	0.69	0.89	1.34	1.88														
90	0.43	0.44	0.44	0.44	0.44														
95	0.52	0.52	0.53	0.52	0.52														
100	0.66	0.66	0.67	0.66	0.65														
105	0.89	0.89	0.89	0.88	0.88														
110	1.25	1.23	1.23	1.22	1.22														
115	1.78	1.74	1.74	1.72	1.72														
120	2.56	2.52	2.51	2.48	2.48														
125	3.73	3.66	3.65	3.60	3.59														
130	5.27	5.18	5.15	5.08	5.06														
135	7.01	6.91	6.86	6.78	6.75														
140	8.72	8.61	8.54	8.47	8.45														
145	10.2	10.1	10.0	9.94	9.94														
150	11.3	11.2	11.1	11.1	11.1														
155	12.0	11.9	11.8	11.8	11.8														
160	12.4	12.3	12.2	12.2	12.2														
165	12.4	12.3	12.3	12.3	12.3														
170	12.2	12.1	12.0	12.1	12.2														
175	12.0	11.9	11.9	11.9	12.0														
180	12.2	12.1	12.0	12.0	11.9														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:KAR
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: NTB-130C_A30

Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	49878	49684	49501	49359	49228	49091	48973	48864	48764	48612
3.0	49072	48997	48849	48764	48630	48524	48344	48136	47859	47624
6.0	45932	45889	45768	45717	45458	45191	44850	44541	44150	43844
9.0	40637	40568	40384	40252	39847	39369	38793	38321	37837	37490
12.0	33578	33489	33322	33063	32404	31941	31205	30687	30012	29757
15.0	26115	26199	25459	25444	24597	24492	23636	23386	22406	22365
18.0	19056	19049	18351	18256	17646	17681	17051	16863	16118	15972
21.0	13842	13694	13086	13022	12751	12742	12373	12102	11658	11384
24.0	10614	10211	9775	9615	9478	9515	9254	8914	8694	8449
27.0	8405	8085	7793	7512	7319	7290	7081	6869	6777	6666
30.0	6565	6425	6242	6046	5720	5480	5299	5290	5297	5390
33.0	4871	4862	4837	4815	4394	3966	3708	3792	3974	4215
36.0	3243	3355	3588	3697	3191	2736	2469	2577	2867	3169
39.0	2011	2154	2566	2743	2275	1835	1656	1754	2034	2315
42.0	1367	1428	1754	1999	1612	1307	1213	1259	1443	1677
45.0	1073	1078	1265	1447	1210	1012	962.1	975.8	1090	1219
48.0	906.5	908.3	958.6	1070	942.3	824.2	802.5	801.1	864.3	904.6
51.0	800.6	789.9	805.0	844.8	777.6	716.6	710.6	705.7	739.7	757.5
54.0	727.0	712.4	722.6	727.8	681.8	633.4	631.5	627.8	651.7	673.2
57.0	660.0	644.0	643.4	644.4	603.4	565.3	566.8	557.2	576.4	597.4
60.0	588.6	569.2	565.8	568.6	525.3	497.1	488.9	485.4	504.1	527.9
63.0	502.9	491.1	486.1	485.8	446.0	414.3	410.0	406.2	428.3	453.0
66.0	427.9	406.6	405.9	403.7	362.8	341.9	338.5	336.1	345.9	379.8
69.0	327.9	326.2	326.3	323.5	288.3	269.8	264.7	263.7	272.7	294.7
72.0	249.6	252.3	250.3	238.2	214.0	198.2	190.2	192.5	199.3	219.0
75.0	178.1	181.0	178.8	167.0	147.4	134.5	130.3	130.2	134.5	147.6
78.0	117.4	119.7	113.8	105.1	90.81	83.52	79.04	79.46	81.26	89.07
81.0	66.27	68.75	62.41	56.80	47.01	41.47	37.86	38.22	39.89	46.93
84.0	29.71	31.22	27.10	23.79	18.37	15.82	14.02	14.14	14.83	17.92
87.0	9.890	10.64	8.935	7.475	6.435	6.428	6.347	6.321	6.252	6.303
90.0	4.943	5.071	5.057	5.086	5.071	5.041	5.030	5.170	5.307	5.417
93.0	5.436	5.479	5.612	5.723	5.737	5.717	5.745	5.913	6.128	6.250
96.0	6.254	6.324	6.468	6.615	6.673	6.676	6.755	6.955	7.197	7.309
99.0	7.401	7.470	7.657	7.792	7.923	7.972	8.134	8.332	8.608	8.688
102.0	8.944	9.008	9.210	9.349	9.546	9.671	9.956	10.13	10.41	10.47
105.0	10.94	10.96	11.18	11.31	11.62	11.83	12.19	12.40	12.66	12.70
108.0	13.43	13.47	13.64	13.82	14.17	14.54	14.93	15.20	15.41	15.51
111.0	16.48	16.56	16.69	16.94	17.33	17.81	18.30	18.58	18.83	18.95
114.0	20.37	20.40	20.61	20.86	21.37	21.89	22.53	22.79	23.17	23.26
117.0	25.32	25.37	25.60	25.92	26.47	27.10	27.75	28.16	28.56	28.71
120.0	31.53	31.61	31.90	32.26	32.94	33.57	34.34	34.74	35.24	35.39
123.0	39.15	39.20	39.57	40.00	40.72	41.41	42.24	42.67	43.19	43.37
126.0	47.96	48.05	48.40	48.81	49.68	50.40	51.27	51.75	52.24	52.40
129.0	57.78	57.86	58.21	58.66	59.52	60.26	61.16	61.60	62.09	62.22
132.0	68.11	68.19	68.47	68.94	69.82	70.60	71.49	71.91	72.34	72.39
135.0	78.52	78.59	78.81	79.27	80.10	80.88	81.79	82.15	82.48	82.46
138.0	88.52	88.58	88.69	89.13	89.89	90.71	91.51	91.81	91.97	91.88
141.0	97.72	97.79	98.11	98.72	99.51	100.2	100.4	100.4	100.4	100.3
144.0	105.8	105.8	105.5	105.8	106.3	107.0	107.5	107.7	107.5	107.3
147.0	112.6	112.5	112.0	112.4	113.1	113.1	113.5	113.6	113.3	113.1
150.0	118.1	118.0	117.2	117.2	117.3	117.8	118.1	118.1	117.8	117.6
153.0	122.4	122.2	121.2	121.0	120.9	121.5	121.6	121.5	121.1	121.0
156.0	125.6	125.3	124.1	123.8	123.5	124.0	124.0	123.9	123.4	123.3
159.0	127.6	127.3	125.9	125.6	125.0	125.4	125.4	125.4	124.9	124.8
162.0	128.7	128.4	126.8	126.3	125.6	125.8	125.8	126.0	125.5	125.4
165.0	128.8	128.6	126.8	126.1	125.1	125.4	125.5	125.7	125.2	125.1
168.0	127.8	127.8	125.8	124.8	123.9	124.3	124.4	124.6	124.1	124.0
171.0	126.0	126.0	124.0	123.0	122.0	122.5	122.7	123.1	122.5	122.3
174.0	123.9	124.0	122.4	121.6	120.8	121.5	121.8	122.2	121.2	120.7
177.0	122.7	122.8	121.7	121.3	120.0	122.0	122.5	122.3	120.8	120.0
180.0	123.0	122.8	121.7	121.4	121.3	122.6	123.2	122.6	120.9	120.0
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	48556	48492	49878	49684	49501	49359	49228	49091	48973	48864
3.0	47274	46971	48180	47849	47657	47450	47351	47246	47234	47201
6.0	43288	42832	43844	43512	43398	43247	43297	43278	43423	43456
9.0	36828	36272	37156	36985	37126	37173	37489	37535	37788	37844
12.0	29040	28716	29446	29444	29787	29951	30316	30466	30789	30975
15.0	21432	21269	22040	21853	22421	22341	23035	23167	23902	24017
18.0	15228	15109	15664	15531	15812	15739	16493	16641	17564	17692
21.0	11056	11008	11426	11352	11270	11404	11986	12276	12910	13075
24.0	8357	8486	8820	8747	8774	8786	9133	9535	9945	9919
27.0	6613	6618	6885	6849	7053	7053	7270	7525	7849	7886
30.0	5221	5011	5158	5215	5505	5740	5831	5898	6095	6270

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30

Photometric Data Table [cd]

33.0	3917	3557	3503	3655	4097	4556	4604	4449	4490	4691
36.0	2810	2322	2175	2321	2921	3459	3501	3186	3142	3316
39.0	1941	1503	1435	1512	1999	2563	2559	2198	2090	2248
42.0	1377	1110	1094	1112	1370	1849	1858	1549	1467	1565
45.0	1027	910.0	927.2	923.4	1039	1345	1379	1171	1113	1175
48.0	822.7	782.8	801.2	805.4	843.5	1001	1036	929.2	899.9	934.0
51.0	719.8	694.6	718.3	710.5	745.8	820.4	842.9	783.1	774.8	796.0
54.0	653.1	632.1	658.5	650.7	674.0	708.2	716.0	671.3	675.5	687.6
57.0	588.1	576.7	601.0	588.6	599.5	617.0	609.4	579.5	586.4	593.7
60.0	520.8	508.8	528.9	522.5	526.0	531.3	513.5	484.9	488.8	497.1
63.0	444.4	435.6	454.3	440.7	446.4	445.5	421.9	396.7	402.2	407.7
66.0	369.4	360.2	372.2	361.3	365.6	362.3	334.1	313.6	319.0	324.2
69.0	292.6	288.2	294.1	285.6	287.8	271.6	255.4	235.6	238.9	243.7
72.0	221.6	218.2	222.4	215.0	213.1	194.9	180.6	161.0	162.8	167.0
75.0	153.4	153.6	156.8	149.9	144.6	128.2	114.1	104.5	105.1	109.0
78.0	94.89	96.62	98.25	94.20	85.79	73.30	64.77	57.19	57.29	60.06
81.0	47.67	51.05	51.77	49.32	41.53	35.27	28.16	24.03	24.01	25.53
84.0	19.05	20.43	20.46	19.21	15.47	11.69	9.073	7.726	7.681	8.156
87.0	6.428	6.993	6.472	6.401	5.397	5.081	4.904	4.734	4.808	4.802
90.0	5.422	5.340	4.848	4.814	4.807	4.726	4.625	4.451	4.366	4.308
93.0	6.231	6.095	5.420	5.332	5.340	5.260	5.150	4.954	4.858	4.796
96.0	7.320	7.178	6.213	6.088	6.073	5.997	5.831	5.591	5.438	5.385
99.0	8.747	8.618	7.331	7.174	7.080	6.959	6.756	6.487	6.275	6.225
102.0	10.59	10.48	8.867	8.638	8.428	8.251	7.980	7.695	7.433	7.378
105.0	12.88	12.84	10.87	10.57	10.18	9.919	9.570	9.299	9.004	8.914
108.0	15.69	15.75	13.41	12.96	12.40	12.05	11.62	11.35	11.03	10.91
111.0	19.21	19.29	16.46	15.89	15.25	14.71	14.26	13.93	13.61	13.41
114.0	23.66	23.74	20.22	19.59	18.76	18.12	17.54	17.15	16.79	16.52
117.0	29.16	29.31	24.96	24.24	23.26	22.51	21.72	21.30	20.82	20.51
120.0	35.95	36.14	30.92	30.11	29.03	28.11	27.21	26.61	26.03	25.63
123.0	44.00	44.24	38.25	37.34	36.12	35.14	34.04	33.35	32.57	32.14
126.0	53.09	53.38	46.89	45.91	44.62	43.52	42.35	41.52	40.64	40.08
129.0	62.91	63.24	56.64	55.59	54.25	53.07	51.85	50.98	50.02	49.33
132.0	73.06	73.40	67.10	65.99	64.61	63.41	62.13	61.31	60.22	59.50
135.0	83.02	83.34	77.86	76.61	75.24	74.04	72.82	71.99	70.89	70.10
138.0	92.30	92.66	88.34	87.02	85.62	84.42	83.27	82.43	81.42	80.52
141.0	100.6	100.9	96.09	96.69	95.32	94.11	93.07	92.22	91.29	90.31
144.0	107.6	108.0	106.7	105.2	103.9	102.7	101.8	101.0	100.1	99.10
147.0	113.3	113.7	114.0	112.3	111.1	109.9	109.1	108.4	107.6	106.6
150.0	117.8	118.3	119.7	118.0	116.8	115.6	115.0	114.3	113.7	112.7
153.0	121.2	121.7	124.0	122.3	121.2	120.0	119.5	118.9	118.4	117.4
156.0	123.5	124.1	127.0	125.2	124.2	123.0	122.7	122.1	121.8	120.8
159.0	124.8	125.4	128.7	126.8	125.9	124.8	124.7	124.2	124.0	123.0
162.0	125.3	125.8	129.6	127.5	126.5	125.6	125.5	125.2	125.0	124.0
165.0	124.9	125.5	129.6	127.2	126.2	125.3	125.3	125.0	124.8	123.8
168.0	123.7	124.3	128.4	126.0	125.0	124.0	124.1	123.9	123.9	122.8
171.0	121.9	122.5	126.6	124.3	123.2	122.1	122.4	122.2	122.2	121.1
174.0	120.2	120.5	124.8	122.8	121.8	120.6	121.1	121.2	121.1	120.1
177.0	119.2	119.4	123.8	122.3	121.5	120.5	121.2	121.9	122.0	120.9
180.0	119.5	119.5	123.5	122.4	122.1	121.1	121.6	122.4	123.4	122.4
G/C	300.0	315.0	330.0	345.0						
0.0	48764	48612	48556	48492						
3.0	47250	47227	47394	47545						
6.0	43675	43798	44138	44442						
9.0	38232	38368	38860	39278						
12.0	31345	31509	32156	32459						
15.0	24498	24408	25137	25161						
18.0	18179	17898	18477	18306						
21.0	13227	13119	13285	13464						
24.0	10070	9876	10119	10309						
27.0	8038	7881	8116	8221						
30.0	6441	6545	6580	6478						
33.0	5043	5292	5212	4925						
36.0	3779	4142	3971	3513						
39.0	2735	3166	2909	2283						
42.0	1963	2349	2042	1490						
45.0	1448	1709	1450	1105						
48.0	1104	1264	1072	918.5						
51.0	901.9	985.8	876.6	801.9						
54.0	759.4	815.5	762.7	718.5						
57.0	643.9	682.7	667.4	646.7						
60.0	541.3	572.9	575.4	569.1						
63.0	440.4	472.8	484.4	485.4						
66.0	351.8	383.6	395.3	397.5						

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

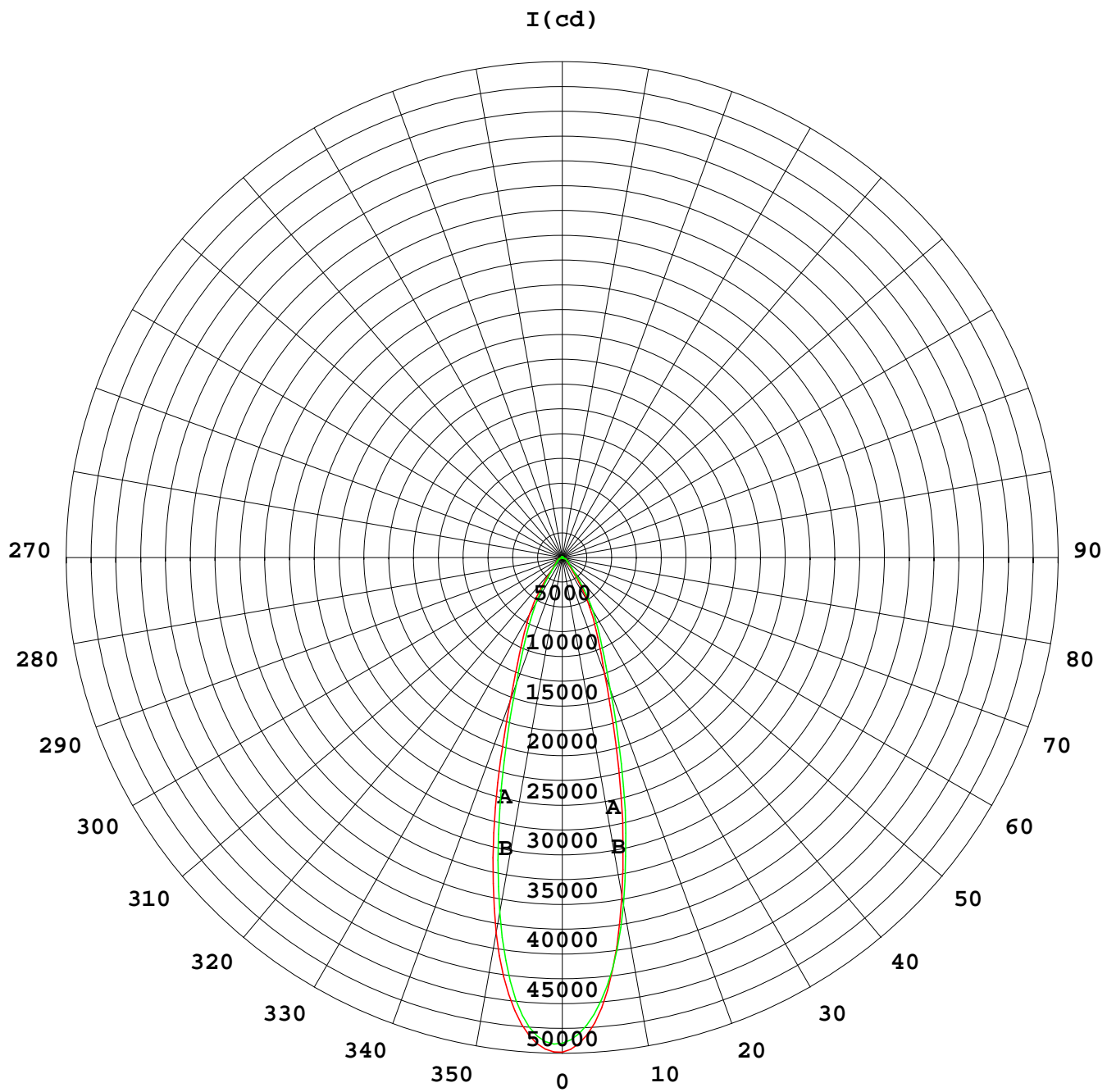
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30

Photometric Data Table [cd]

69.0	268.4	290.8	309.7	315.7
72.0	189.0	211.3	231.7	238.6
75.0	120.7	139.5	159.0	168.5
78.0	69.41	81.11	98.08	108.9
81.0	30.88	40.30	49.87	60.92
84.0	10.10	13.91	20.02	26.52
87.0	4.994	5.198	6.119	8.726
90.0	4.365	4.373	4.394	4.421
93.0	4.860	4.869	4.868	4.776
96.0	5.463	5.492	5.475	5.385
99.0	6.286	6.340	6.299	6.188
102.0	7.404	7.471	7.402	7.295
105.0	8.872	8.929	8.839	8.774
108.0	10.76	10.80	10.68	10.69
111.0	13.19	13.19	13.05	13.10
114.0	16.24	16.17	16.05	16.08
117.0	20.14	20.07	19.85	19.90
120.0	25.19	25.10	24.80	24.83
123.0	31.56	31.44	31.03	30.99
126.0	39.38	39.21	38.68	38.61
129.0	48.51	48.22	47.58	47.41
132.0	58.58	58.17	57.43	57.21
135.0	69.08	68.59	67.76	67.55
138.0	79.47	78.89	78.08	77.85
141.0	89.26	88.60	87.85	87.69
144.0	98.06	97.36	96.71	96.62
147.0	105.6	104.9	104.3	104.4
150.0	111.7	111.0	110.6	110.7
153.0	116.5	115.8	115.5	115.6
156.0	120.1	119.3	119.0	119.2
159.0	122.3	121.5	121.4	121.6
162.0	123.2	122.6	122.7	123.0
165.0	123.1	122.5	122.9	123.5
168.0	122.0	121.5	122.1	122.9
171.0	120.3	119.9	120.6	121.5
174.0	119.2	118.7	119.4	120.0
177.0	119.9	119.0	119.3	119.5
180.0	121.0	119.8	119.7	119.4

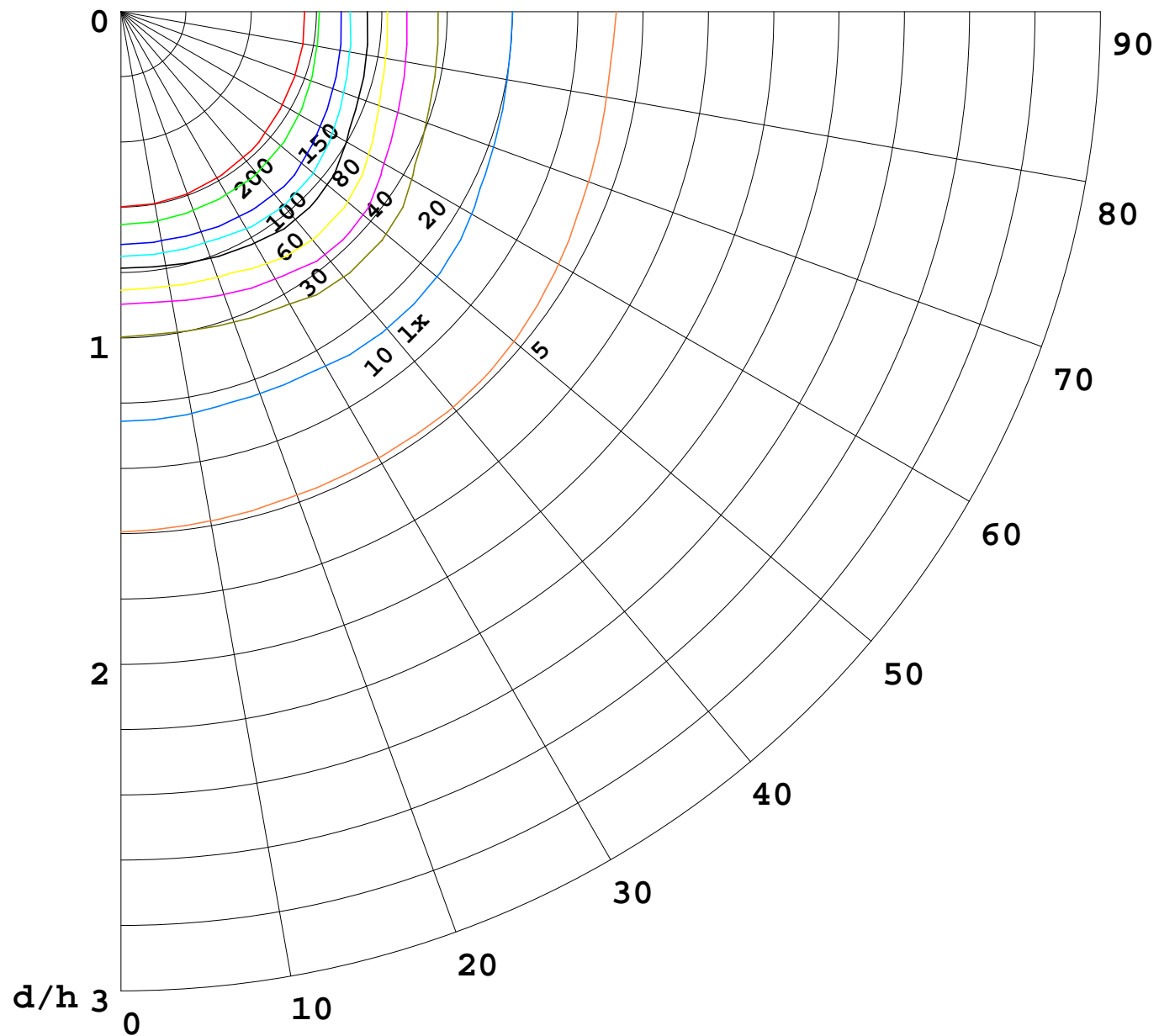
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: KAR
Test Date: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: NTB-130C_A30



1000 lm

$K = 1$



F = 1000 lm
 K = 0.7
 H_{cc} = 0.8 m
 H_{fc} = 0.0 m
 E_{ave} = 100 lx

	P_{cc}	P_w	P_{fc}
—————	70	50	30
—————	50	30	20

