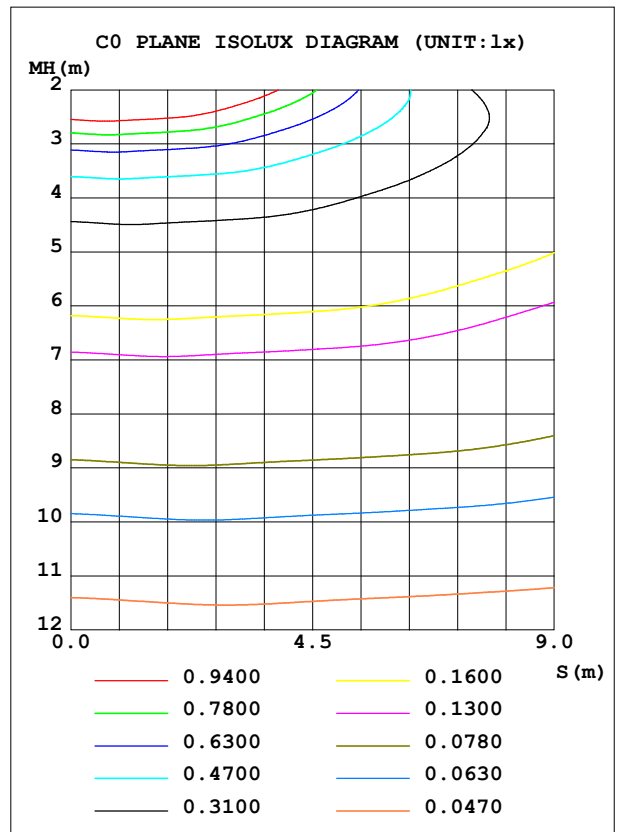
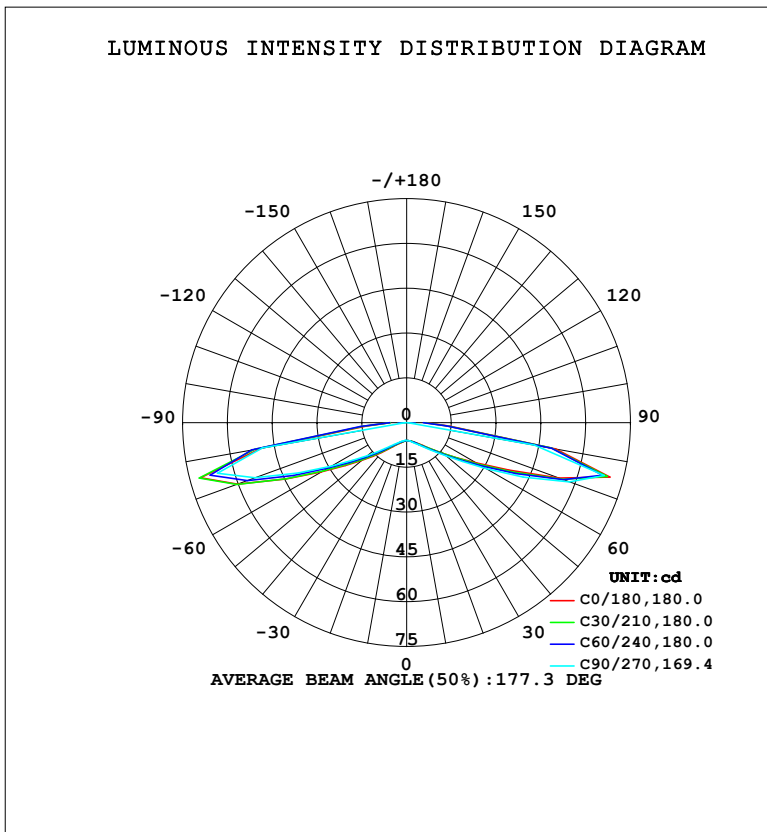


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	72.73	S/MH (C0/180)	3.98
NOMINAL POWER (W)		LOR (%)	158.0	S/MH (C90/270)	4.60
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	173.91	η UP, DN (C0-180)	0.0, 79.0
NOMINAL FLUX (lm)	55.0241	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 79.0
LAMPS INSIDE	2	η up (%)	0.0	CIBSE SHR NOM	2.00
TEST VOLTAGE (V)	220.0	η down (%)	158.0	CIBSE SHR MAX	2.00



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 8.700m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

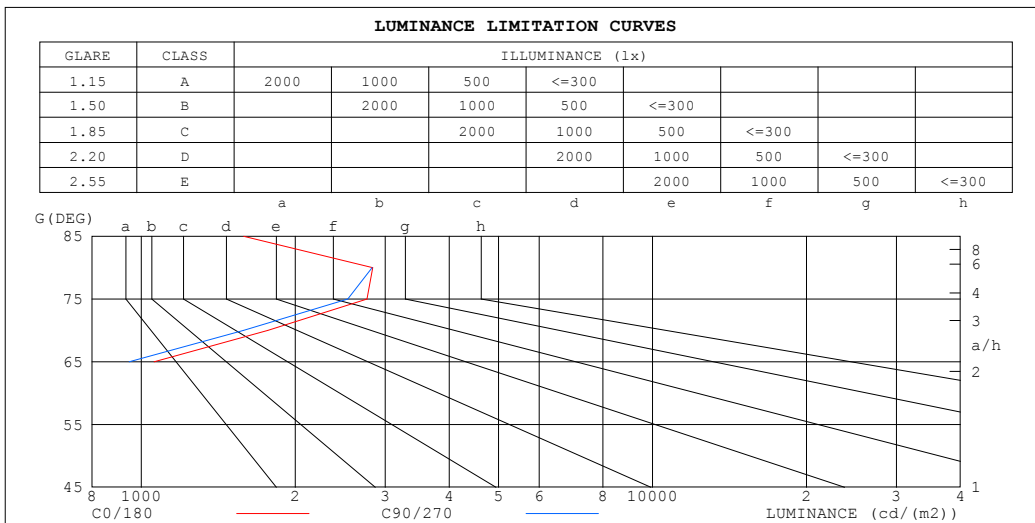
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	6.522	6.431	6.212	6.147	6.256	6.201	6.300	6.343	0- 10	0.5874	0.5874	0.34,0.53
20	7.476	7.315	6.958	6.802	6.922	6.931	7.184	7.286	10- 20	1.896	2.484	1.43,2.26
30	9.356	9.034	8.468	8.084	8.238	8.381	8.702	8.959	20- 30	3.625	6.109	3.51,5.55
40	13.07	12.44	11.45	10.80	10.95	11.20	11.66	12.29	30- 40	6.339	12.45	7.16,11.3
50	19.80	18.64	17.18	15.99	16.24	16.61	17.45	18.71	40- 50	11.19	23.64	13.6,21.5
60	33.18	31.49	29.28	27.06	27.19	28.46	30.95	32.95	50- 60	20.88	44.52	25.6,40.5
70	60.43	58.68	54.13	53.56	54.25	56.04	57.97	61.40	60- 70	42.44	86.96	50,79
80	49.23	52.98	49.08	51.77	50.63	48.92	43.48	48.98	70- 80	65.07	152.0	87.4,138
90	5.509	5.574	0.3818	6.207	6.458	5.858	0.5072	4.898	80- 90	21.88	173.9	100,158
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System:SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1585	74
80	2835	2826
75	2763	2534
70	1767	1583
65	1058	947
60	664	586
55	439	383
50	308	267
45	226	196

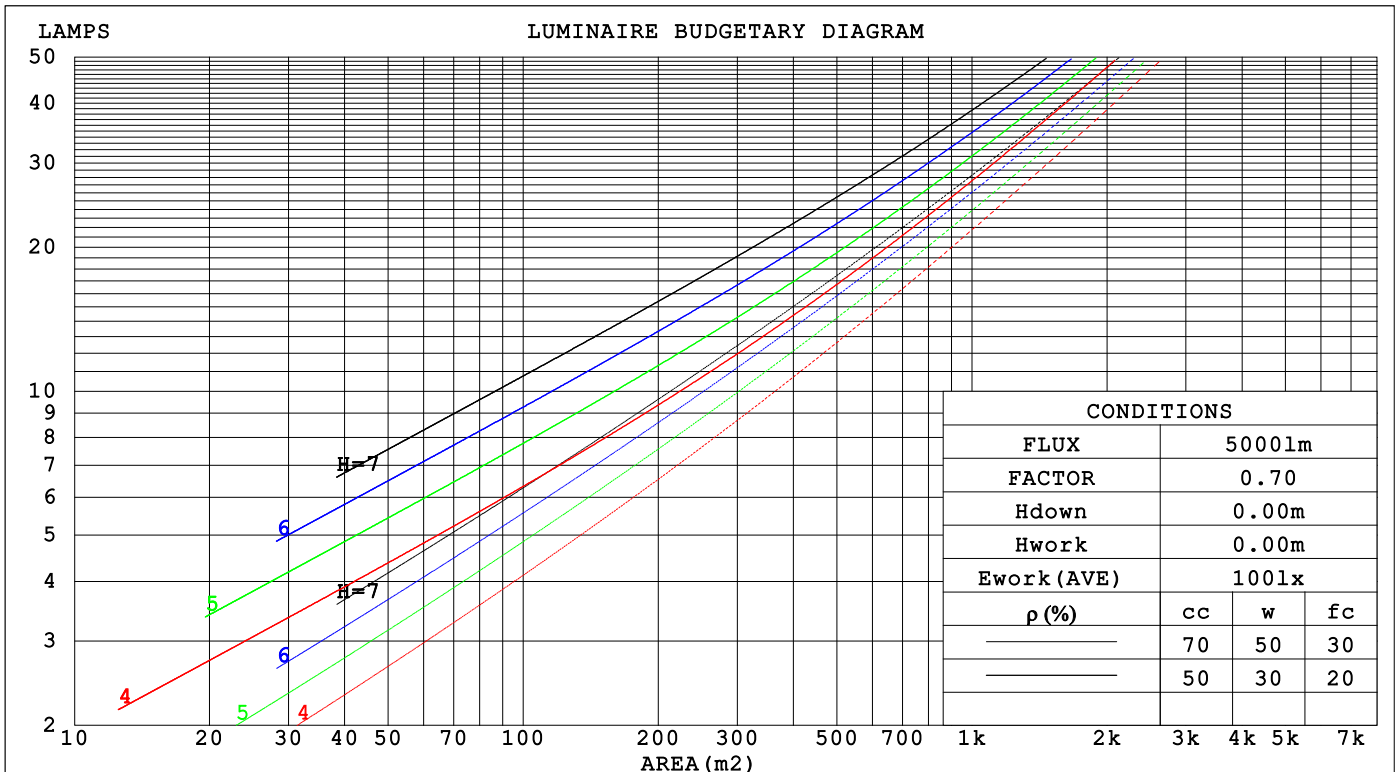
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	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	1.88	1.88	1.88	1.84	1.84	1.84	1.76	1.76	1.76	1.68	1.68	1.68	1.61	1.61	1.61	1.58
1.0	1.40	1.26	1.14	1.36	1.23	1.12	1.28	1.18	1.08	1.21	1.13	1.05	1.15	1.08	1.01	.97
2.0	1.08	.89	.73	1.04	.87	.72	.98	.83	.70	.91	.79	.68	.86	.75	.66	.61
3.0	.86	.66	.49	.83	.64	.49	.78	.61	.47	.73	.58	.46	.68	.55	.45	.40
4.0	.72	.51	.35	.69	.50	.35	.65	.48	.34	.60	.45	.33	.56	.43	.33	.28
5.0	.62	.42	.27	.60	.41	.27	.56	.39	.26	.52	.37	.25	.48	.35	.25	.20
6.0	.54	.35	.21	.52	.34	.21	.49	.33	.21	.46	.31	.20	.43	.30	.20	.15
7.0	.48	.30	.17	.46	.29	.17	.44	.28	.17	.41	.27	.17	.38	.26	.16	.12
8.0	.43	.26	.15	.42	.26	.14	.39	.25	.14	.37	.24	.14	.35	.23	.14	.10
9.0	.39	.23	.12	.38	.23	.12	.36	.22	.12	.34	.21	.12	.32	.20	.12	.08
10.0	.36	.21	.11	.35	.21	.11	.33	.20	.11	.32	.19	.10	.30	.19	.10	.07



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γInterval: 5.0DEG
 Test System:SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	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	.960	.546	.173	.947	.540	.172	.924	.530	.169	.902	.520	.167	.883	.512	.165	
2.0	.800	.439	.135	.789	.435	.134	.767	.427	.133	.747	.419	.131	.729	.412	.130	
3.0	.677	.360	.108	.667	.357	.107	.647	.351	.107	.629	.345	.106	.613	.339	.105	
4.0	.582	.303	.089	.573	.300	.089	.556	.295	.088	.540	.290	.087	.525	.285	.087	
5.0	.509	.259	.075	.501	.257	.075	.486	.253	.074	.471	.249	.074	.458	.245	.074	
6.0	.451	.226	.065	.444	.224	.065	.431	.221	.064	.418	.217	.064	.406	.214	.064	
7.0	.405	.200	.057	.399	.199	.057	.387	.196	.056	.376	.193	.056	.366	.190	.056	
8.0	.368	.180	.051	.362	.178	.050	.352	.176	.050	.342	.173	.050	.332	.171	.050	
9.0	.336	.163	.045	.332	.162	.045	.322	.159	.045	.313	.157	.045	.305	.155	.045	
10.0	.310	.149	.041	.306	.148	.041	.297	.146	.041	.289	.144	.041	.282	.142	.041	

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	.301	.301	.301	.257	.257	.257	.176	.176	.176	.101	.101	.101	.032	.032	.032	
1.0	.317	.243	.175	.272	.208	.151	.186	.143	.104	.107	.083	.061	.034	.027	.020	
2.0	.317	.207	.114	.272	.178	.098	.186	.123	.069	.107	.072	.040	.034	.023	.013	
3.0	.308	.182	.082	.264	.157	.071	.181	.109	.050	.105	.064	.029	.034	.021	.010	
4.0	.294	.164	.064	.253	.142	.056	.174	.099	.039	.100	.058	.023	.032	.019	.008	
5.0	.279	.149	.053	.239	.129	.046	.165	.090	.033	.096	.053	.019	.031	.017	.006	
6.0	.263	.136	.045	.226	.118	.040	.156	.083	.028	.091	.049	.017	.029	.016	.006	
7.0	.248	.126	.040	.214	.109	.035	.148	.077	.025	.086	.045	.015	.028	.015	.005	
8.0	.234	.117	.036	.202	.101	.031	.140	.071	.022	.081	.042	.013	.026	.014	.004	
9.0	.221	.109	.033	.191	.094	.028	.132	.066	.020	.077	.039	.012	.025	.013	.004	
10.0	.209	.102	.030	.181	.088	.026	.125	.062	.019	.073	.037	.011	.024	.012	.004	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System:SALED O-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm										
NAME: NOVA 3D 12V					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.: R		
					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	18.5	20.7	18.8	20.9	21.2	17.9	20.1	18.2	20.3	20.6
3H	26.2	28.3	26.6	28.6	28.8	25.4	27.4	25.7	27.7	28.0
4H	29.2	31.2	29.5	31.5	31.8	28.6	30.6	29.0	30.9	31.2
6H	30.8	32.7	31.2	33.0	33.3	30.6	32.5	31.0	32.8	33.2
8H	30.8	32.7	31.2	33.0	33.4	30.6	32.4	30.9	32.7	33.1
12H	30.9	32.7	31.3	33.0	33.4	30.5	32.3	30.9	32.6	33.0
4H 2H	20.8	22.7	21.1	23.0	23.3	20.4	22.4	20.8	22.7	23.0
3H	27.9	29.7	28.3	30.1	30.4	27.3	29.1	27.6	29.4	29.8
4H	30.8	32.5	31.2	32.9	33.2	30.4	32.1	30.8	32.4	32.8
6H	32.4	33.9	32.8	34.3	34.7	32.2	33.8	32.7	34.2	34.6
8H	32.5	33.9	32.9	34.3	34.8	32.2	33.7	32.7	34.1	34.5
12H	32.5	33.9	33.0	34.3	34.8	32.2	33.6	32.7	34.0	34.5
8H 4H	31.7	33.2	32.1	33.6	34.0	31.4	32.9	31.8	33.3	33.7
6H	33.2	34.5	33.7	34.9	35.4	33.1	34.4	33.6	34.8	35.3
8H	33.3	34.5	33.8	35.0	35.4	33.2	34.4	33.7	34.9	35.3
12H	33.5	34.5	34.0	35.0	35.5	33.3	34.4	33.8	34.8	35.3
12H 4H	31.7	33.1	32.2	33.6	34.0	31.5	32.9	31.9	33.3	33.7
6H	33.3	34.4	33.8	34.9	35.4	33.2	34.4	33.7	34.8	35.3
8H	33.5	34.5	34.0	35.0	35.5	33.4	34.4	33.8	34.9	35.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
2.0H	+ 0.4 / - 0.4					+ 0.3 / - 0.3				

CIE Pub.117, 110.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -7.7)
 Area: 0.1 m2

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γInterval: 5.0DEG
 Test System:SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:

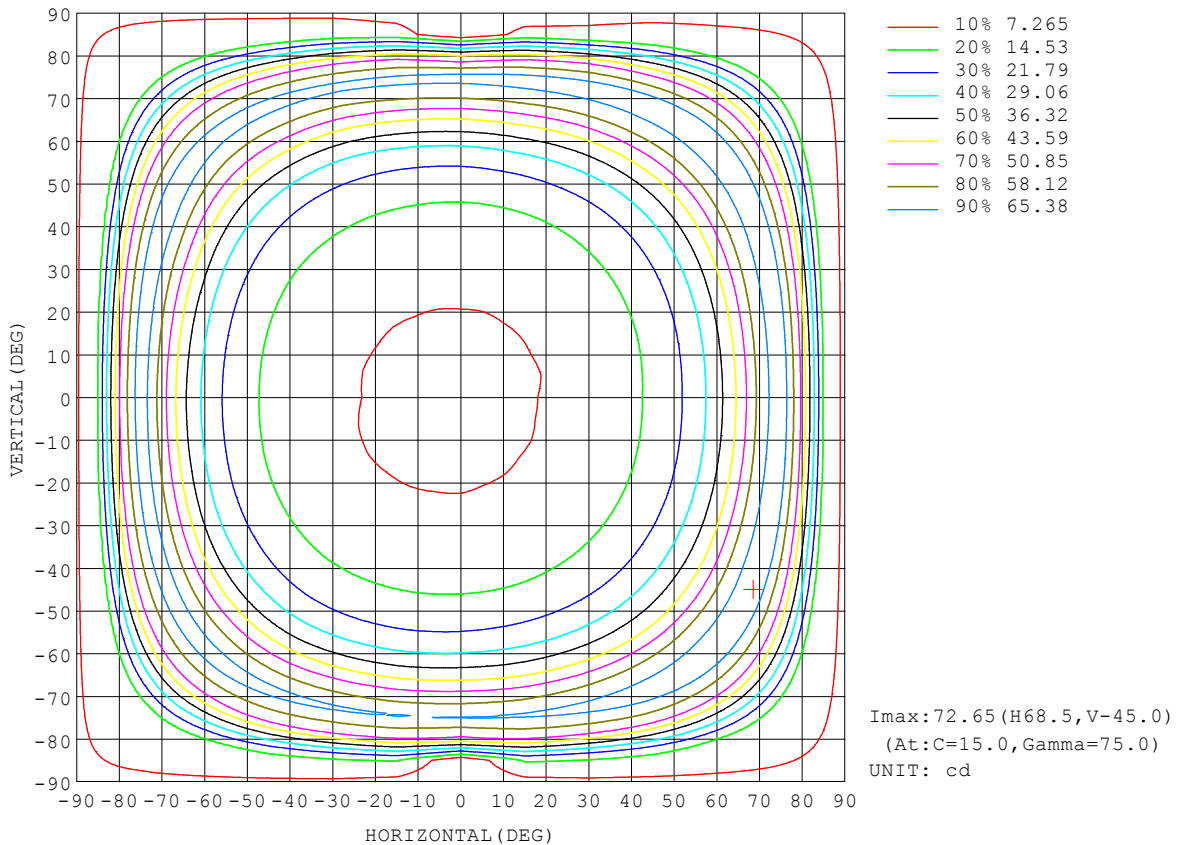
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	62	39	25	61	38	24	59	37	24	11
0.80	73	47	31	71	47	31	67	45	30	15
1.00	82	56	38	80	55	38	75	59	37	20
1.25	93	66	48	90	65	48	84	62	46	29
1.50	102	76	57	99	74	57	92	71	55	37
2.00	117	92	74	113	90	73	105	86	70	52
2.50	127	105	87	123	102	86	115	97	83	64
3.00	135	115	98	131	112	97	122	107	93	74
4.00	146	129	115	142	126	113	133	120	108	89
5.00	154	139	126	149	135	124	140	129	119	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System:SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:

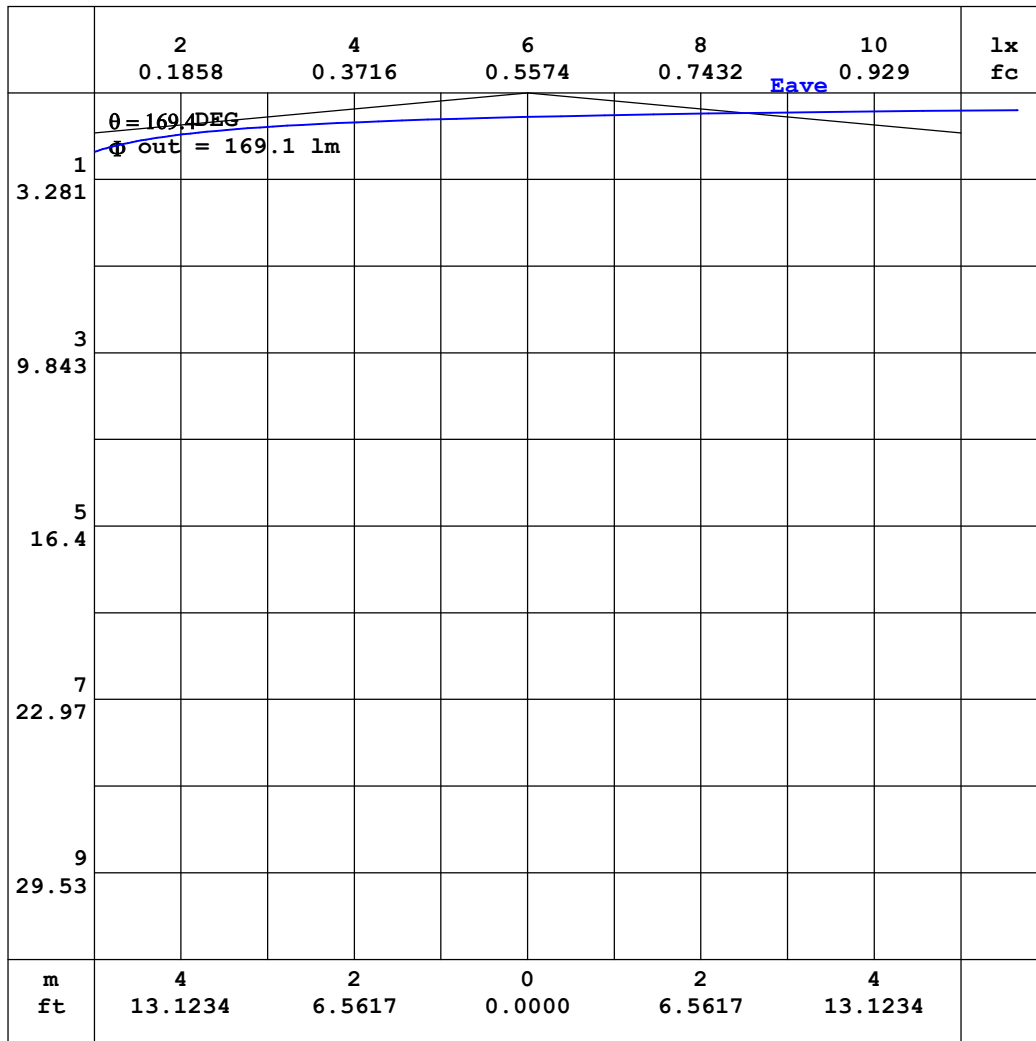


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

AAI CURVES

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.024lx2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:



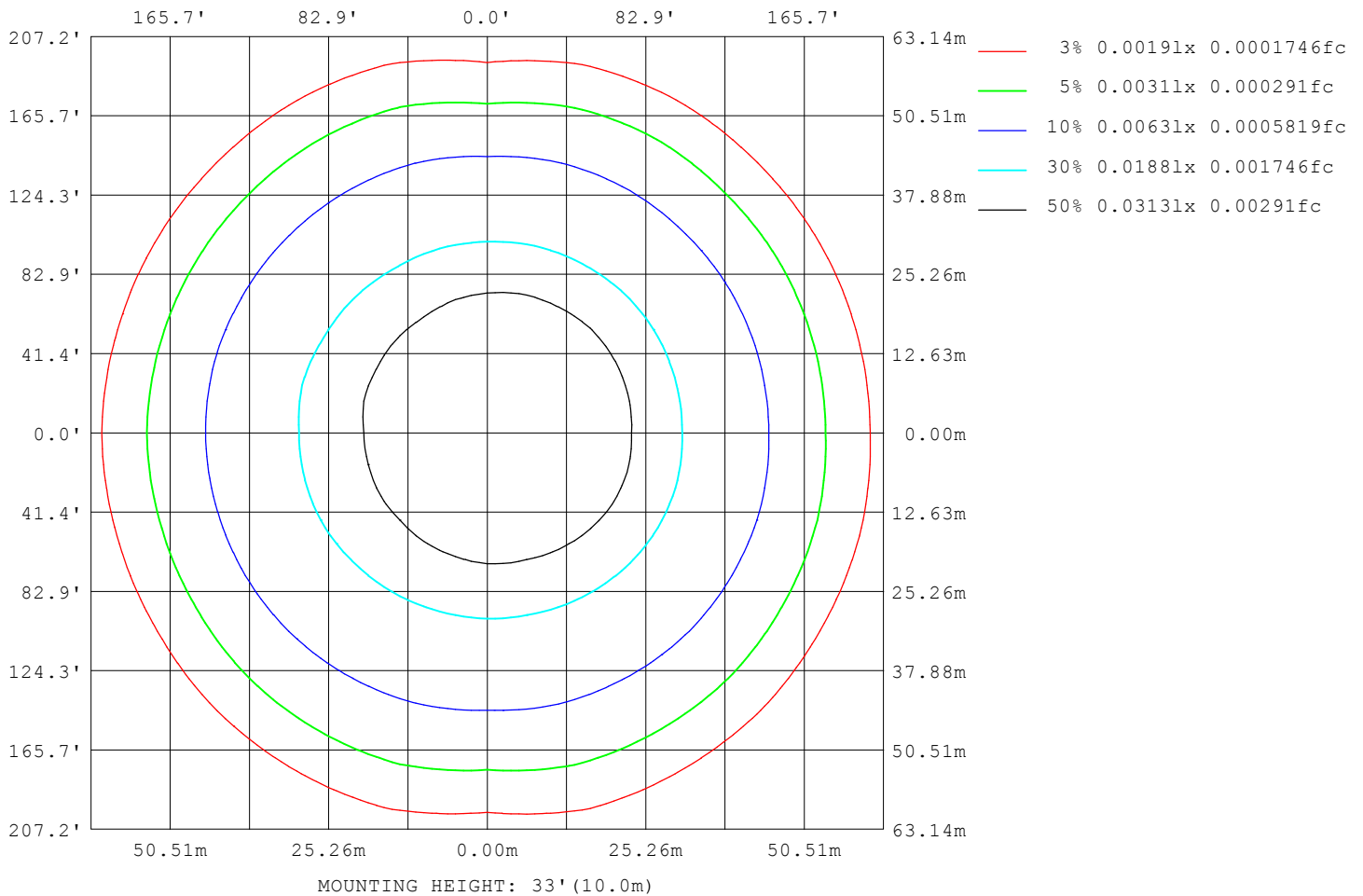
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 8.700m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:11.918V I:0.0907A P:1.0804W PF:1.0000 Freq:0Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:55.0241x2 lm		
NAME: NOVA 3D 12V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: R
	SUR.:	Shielding Angle:

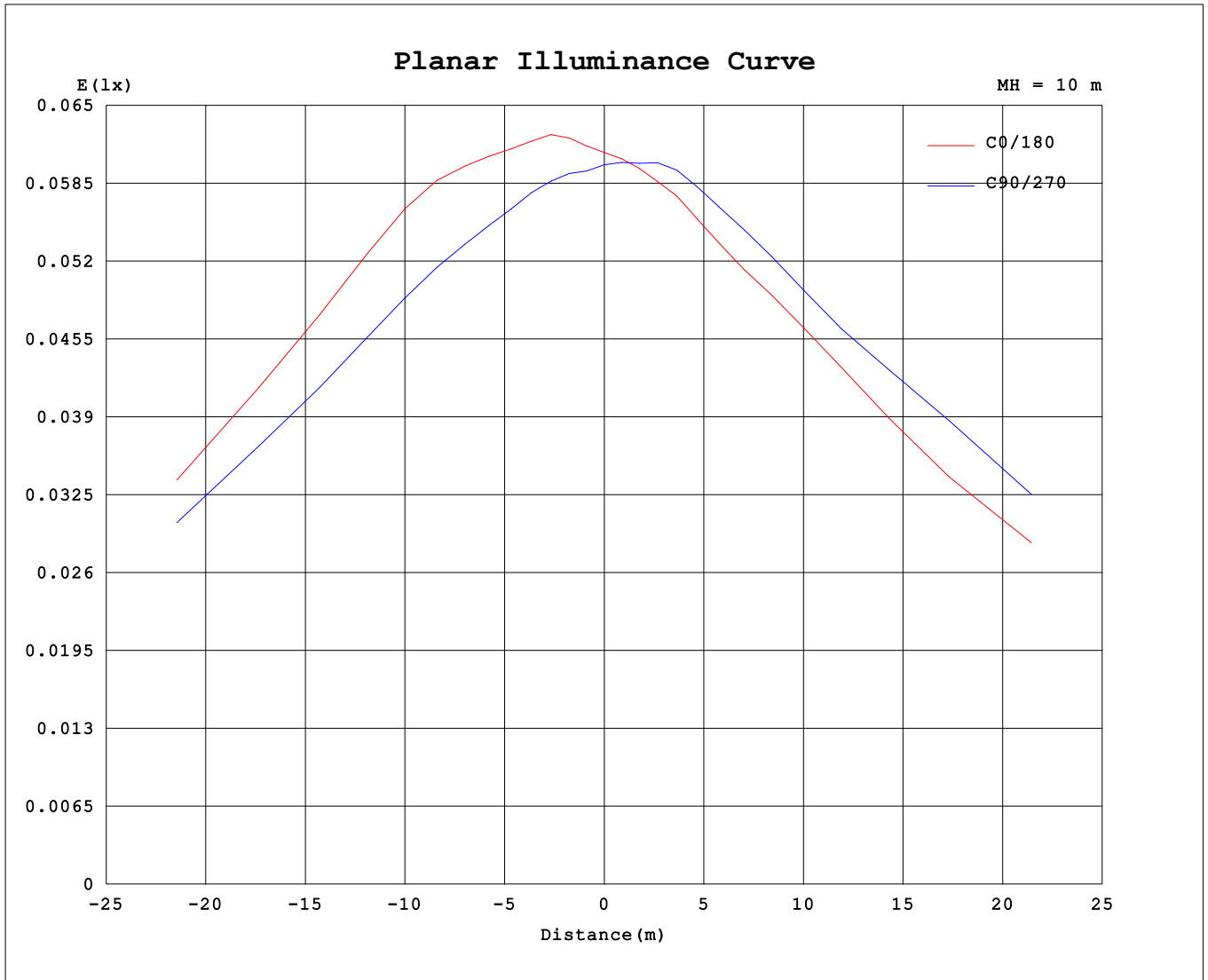
AvgL	cd/m2
L_0~180 (65) av	976
L_0~180 (75) av	2743
L_0~180 (85) av	1627
L_90~270 (65) av	984
L_90~270 (75) av	2590
L_90~270 (85) av	59
L_45 (65) av	987
L_45 (75) av	2688
L_45 (85) av	1622

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System:SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2024-02-20

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System: SALED GO-2000B_V1 SYSTEM V2.00.479
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

