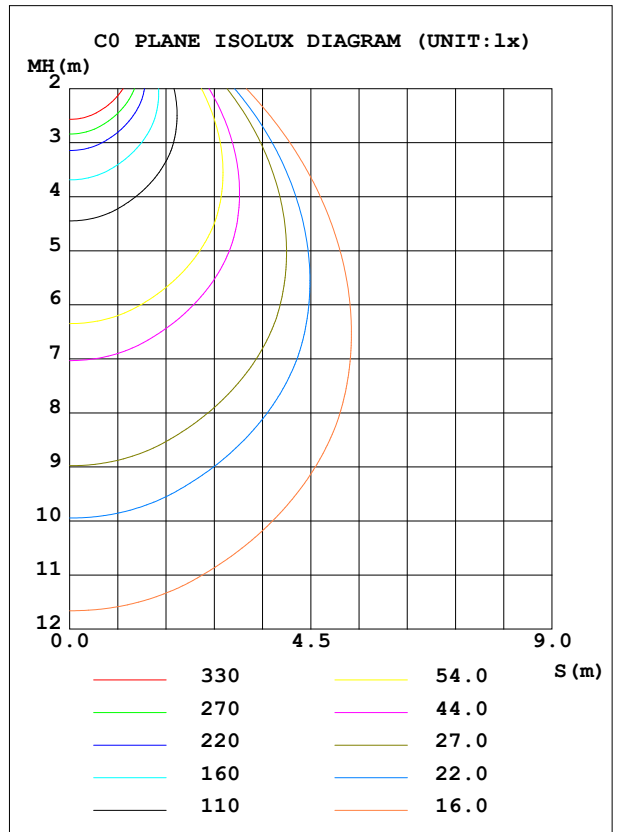
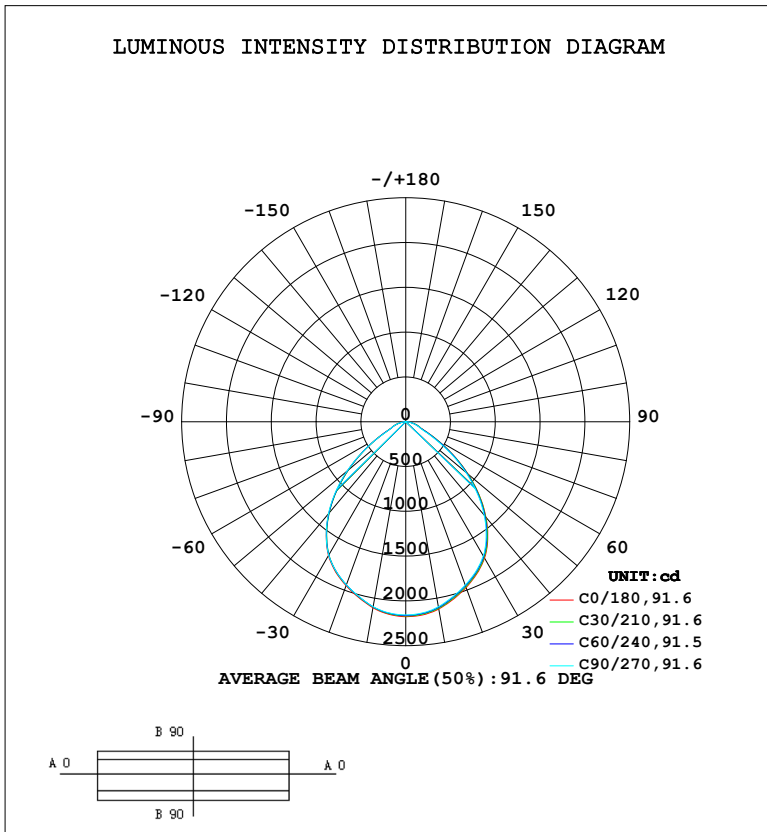


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.12V I:0.1676A P:36.143W PF:0.9795 Freq:50.00Hz		
Lamp Flux:4355.33x1 lm		
NAME: HYD-219C-40W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.50 lm/W			
MODEL		I _{max} (cd)	2175	S/MH (C0/180)	1.19
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.19
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	4355.3	η UP, DN (C0-180)	0.0, 50.5
NOMINAL FLUX (lm)	4355.33	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	η down (%)	100.0	CIBSE SHR MAX	1.30



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [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	2123	2110	2098	2089	2109	2098	2096	2092	0- 10	203.3	203.3	4.67,4.67
20	1969	1956	1941	1933	1947	1938	1937	1937	10- 20	571.2	774.4	17.8,17.8
30	1758	1747	1730	1719	1725	1714	1720	1722	20- 30	850.0	1624	37.3,37.3
40	1394	1385	1363	1347	1337	1328	1344	1354	30- 40	970.9	2595	59.6,59.6
50	905.8	899.8	873.8	855.6	840.3	833.7	854.5	869.4	40- 50	859.3	3455	79.3,79.3
60	402.0	402.2	358.0	368.3	355.1	349.3	345.0	375.7	50- 60	542.5	3997	91.8,91.8
70	160.0	157.6	147.4	148.8	149.2	144.5	144.4	151.0	60- 70	223.2	4220	96.9,96.9
80	70.16	65.33	52.73	57.45	61.67	54.23	50.57	59.94	70- 80	109.3	4330	99.4,99.4
90	3.410	0.8705	0.2609	0.3458	0.7684	0.9145	0.6566	0.8206	80- 90	25.65	4355	100,100
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		

Conical surface Flux(90deg): 3053.8 lm

%lum = 70.1%

%lamp = 70.1%

Conical surface Flux(120deg): 3997.2 lm

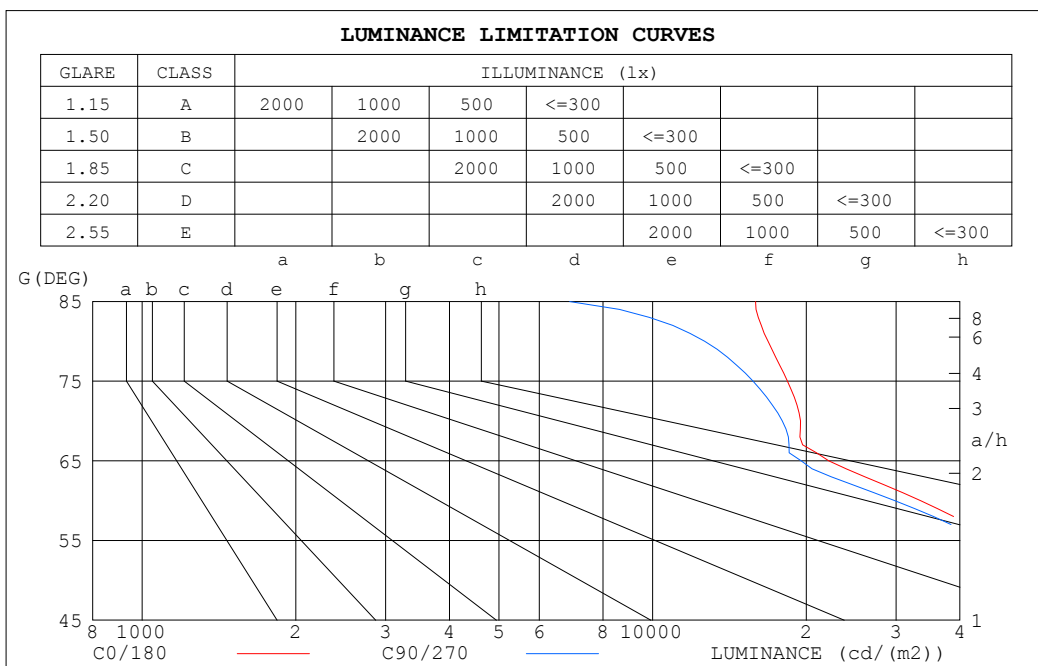
%lum = 91.8%

%lamp = 91.8%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



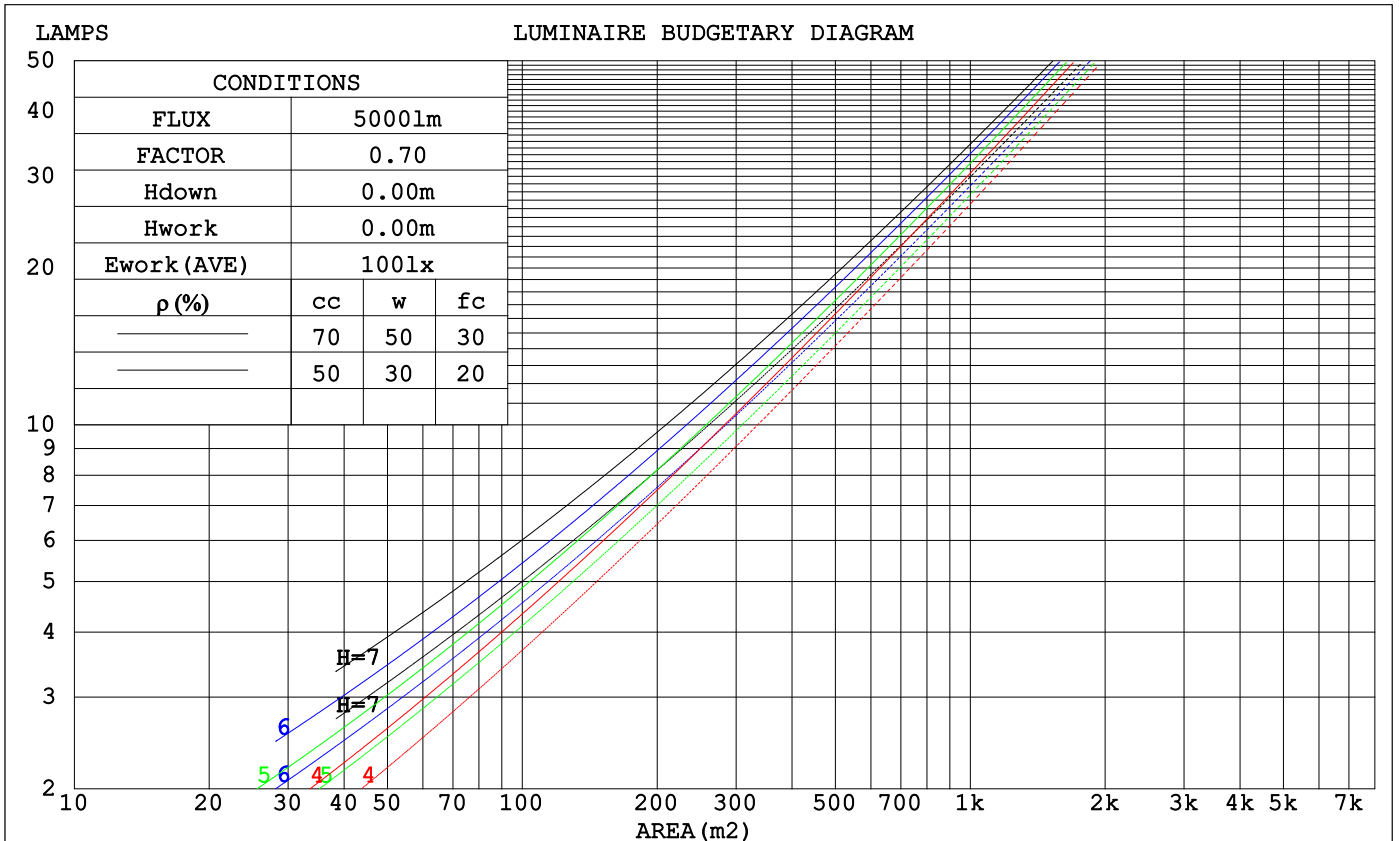
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	15909	6880
80	16836	12652
75	18373	15728
70	19487	17958
65	22130	19555
60	33503	29834
55	46797	44064
50	58717	56641
45	68376	66517

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.86	.94	.89	.85	.91	.86	.83	.87	.84	.81	.85	.82	.79	.77
3.0	.86	.79	.74	.85	.78	.73	.82	.76	.72	.79	.74	.71	.77	.73	.69	.67
4.0	.78	.70	.64	.76	.69	.64	.74	.68	.63	.72	.66	.62	.70	.65	.61	.59
5.0	.70	.62	.57	.69	.62	.56	.67	.61	.56	.65	.60	.55	.64	.59	.55	.53
6.0	.64	.56	.50	.63	.55	.50	.61	.55	.50	.60	.54	.49	.58	.53	.49	.47
7.0	.58	.51	.45	.58	.50	.45	.56	.49	.45	.55	.49	.44	.54	.48	.44	.42
8.0	.54	.46	.41	.53	.46	.40	.52	.45	.40	.51	.45	.40	.49	.44	.40	.38
9.0	.50	.42	.37	.49	.42	.37	.48	.41	.37	.47	.41	.36	.46	.40	.36	.35
10.0	.46	.39	.34	.45	.38	.34	.44	.38	.33	.44	.38	.33	.43	.37	.33	.32



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.248	.141	.045	.241	.137	.044	.228	.131	.042	.216	.125	.040	.205	.119	.038	
2.0	.239	.131	.040	.234	.129	.040	.222	.124	.038	.212	.119	.037	.202	.114	.036	
3.0	.227	.121	.036	.222	.119	.036	.212	.115	.035	.203	.111	.034	.194	.108	.033	
4.0	.214	.111	.033	.209	.110	.032	.201	.106	.032	.193	.103	.031	.185	.101	.031	
5.0	.201	.103	.030	.197	.101	.030	.190	.099	.029	.182	.096	.029	.176	.094	.028	
6.0	.190	.095	.027	.186	.094	.027	.179	.092	.027	.173	.090	.026	.167	.088	.026	
7.0	.179	.088	.025	.175	.087	.025	.169	.086	.025	.164	.084	.024	.158	.082	.024	
8.0	.169	.082	.023	.166	.082	.023	.160	.080	.023	.155	.079	.023	.150	.077	.022	
9.0	.160	.077	.022	.157	.077	.021	.152	.075	.021	.147	.074	.021	.143	.073	.021	
10.0	.151	.073	.020	.149	.072	.020	.144	.071	.020	.140	.070	.020	.136	.069	.020	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.080	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.141	.089	.051	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.023	.070	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

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	25.7	27.0	25.9	27.2	27.4	25.4	26.8	25.7	27.0	27.2
3H	25.9	27.2	26.2	27.4	27.6	25.7	26.9	26.0	27.1	27.3
4H	26.1	27.2	26.4	27.5	27.7	25.8	26.9	26.1	27.2	27.4
6H	26.2	27.3	26.5	27.5	27.8	25.8	26.9	26.2	27.2	27.4
8H	26.2	27.3	26.6	27.5	27.8	25.8	26.9	26.2	27.1	27.4
12H	26.3	27.2	26.6	27.5	27.8	25.8	26.8	26.1	27.1	27.4
4H 2H	25.8	26.9	26.1	27.2	27.4	25.6	26.7	25.9	26.9	27.2
3H	26.2	27.2	26.5	27.4	27.7	25.9	26.9	26.3	27.2	27.5
4H	26.4	27.3	26.8	27.6	27.9	26.1	27.0	26.5	27.3	27.6
6H	26.6	27.4	27.0	27.8	28.1	26.2	27.0	26.6	27.4	27.7
8H	26.7	27.4	27.1	27.8	28.2	26.3	27.0	26.7	27.4	27.7
12H	26.8	27.4	27.2	27.8	28.2	26.3	26.9	26.7	27.3	27.7
8H 4H	26.4	27.2	26.8	27.5	27.9	26.2	26.9	26.6	27.3	27.6
6H	26.8	27.4	27.2	27.8	28.2	26.4	27.0	26.8	27.4	27.8
8H	26.9	27.4	27.4	27.9	28.3	26.4	27.0	26.9	27.4	27.8
12H	27.0	27.5	27.5	27.9	28.4	26.4	26.9	26.9	27.3	27.8
12H 4H	26.4	27.1	26.8	27.5	27.9	26.1	26.8	26.6	27.2	27.6
6H	26.8	27.3	27.2	27.7	28.2	26.4	26.9	26.8	27.3	27.8
8H	26.9	27.4	27.4	27.8	28.3	26.5	26.9	26.9	27.4	27.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.6 / - 0.8					+ 0.7 / - 0.9				
1.5H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				
2.0H	+ 1.5 / - 2.0					+ 1.7 / - 2.2				

CIE Pub.117, 4355 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 5.1$)
Area: 0.024 m²

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:DAMIN
Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

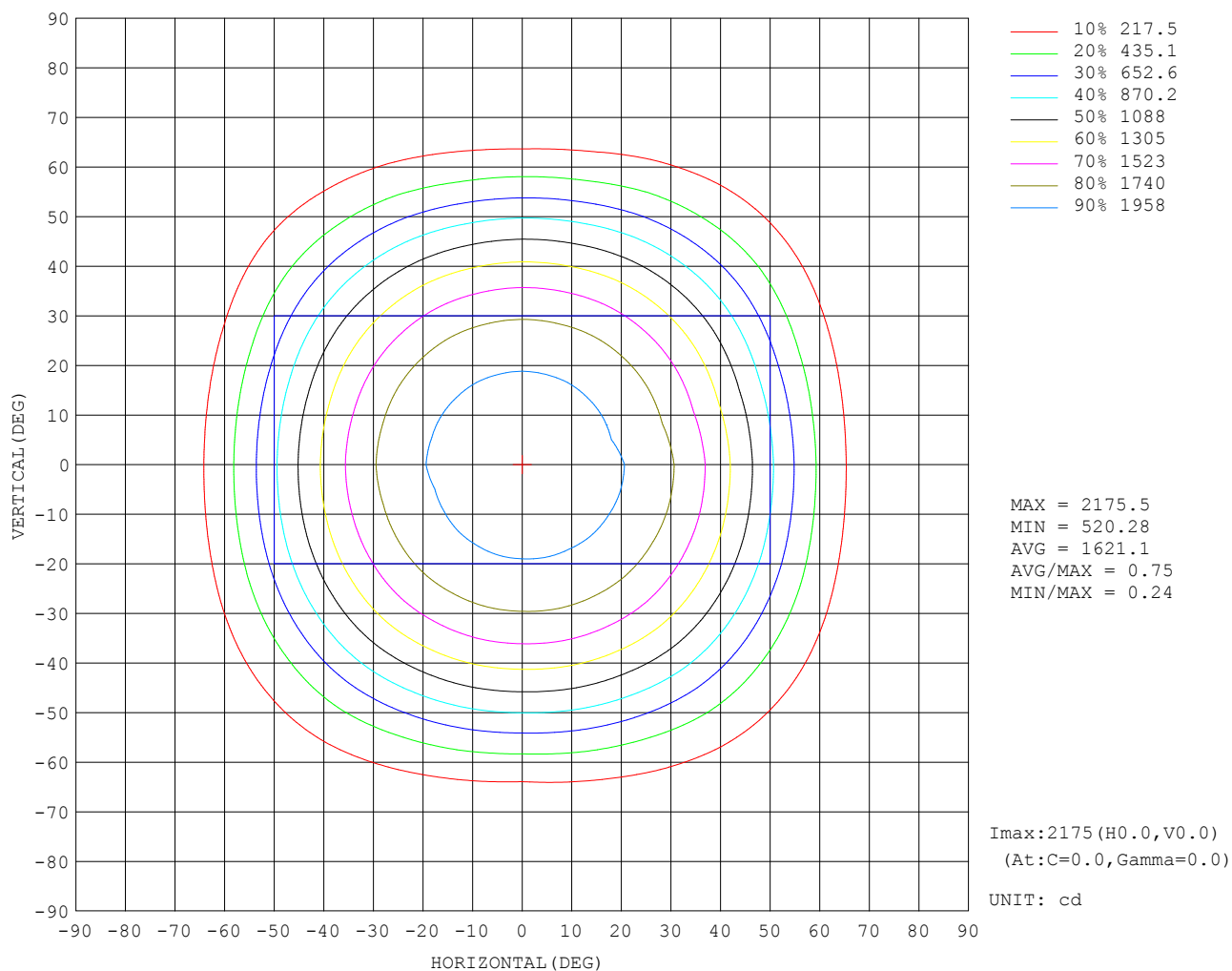
UTILIZATION FACTORS TABLE

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	66	56	50	65	55	49	64	55	49	44
0.80	76	66	60	75	66	60	74	65	59	54
1.00	84	75	69	83	75	69	81	75	68	62
1.25	91	82	77	89	82	76	87	80	75	69
1.50	95	87	82	94	86	81	91	85	80	74
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	99	96	101	97	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
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: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

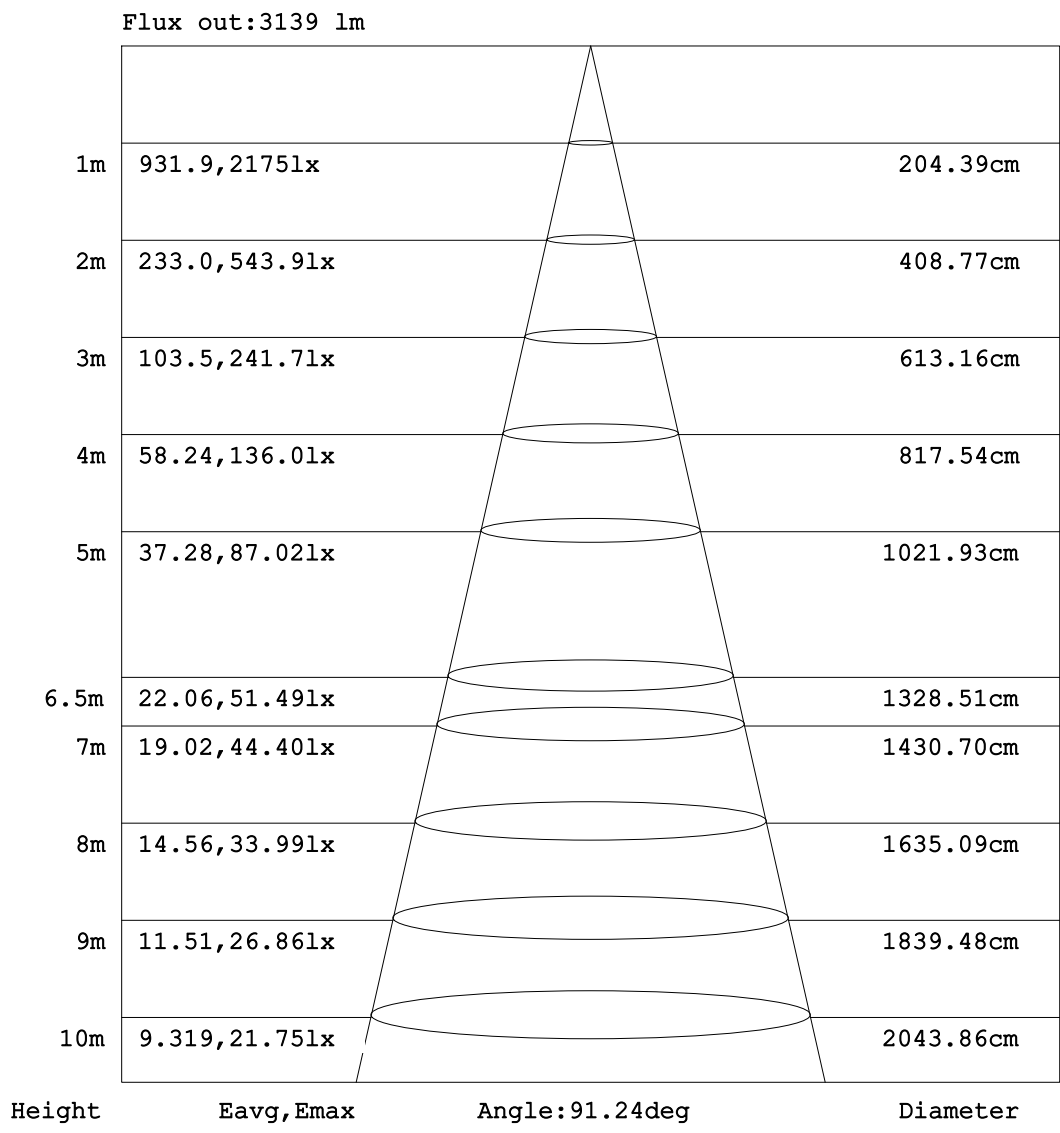
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

AAI Figure

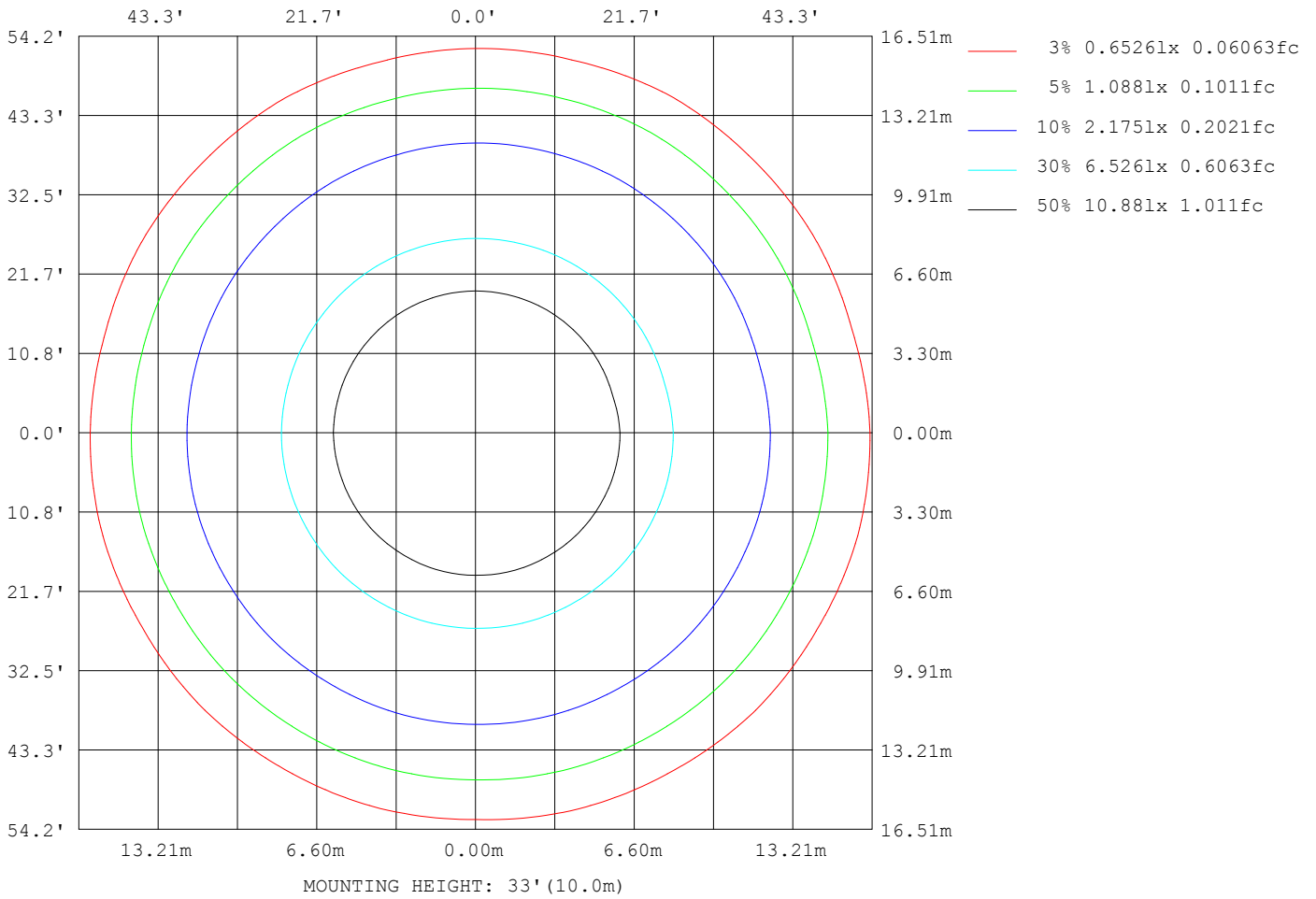


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

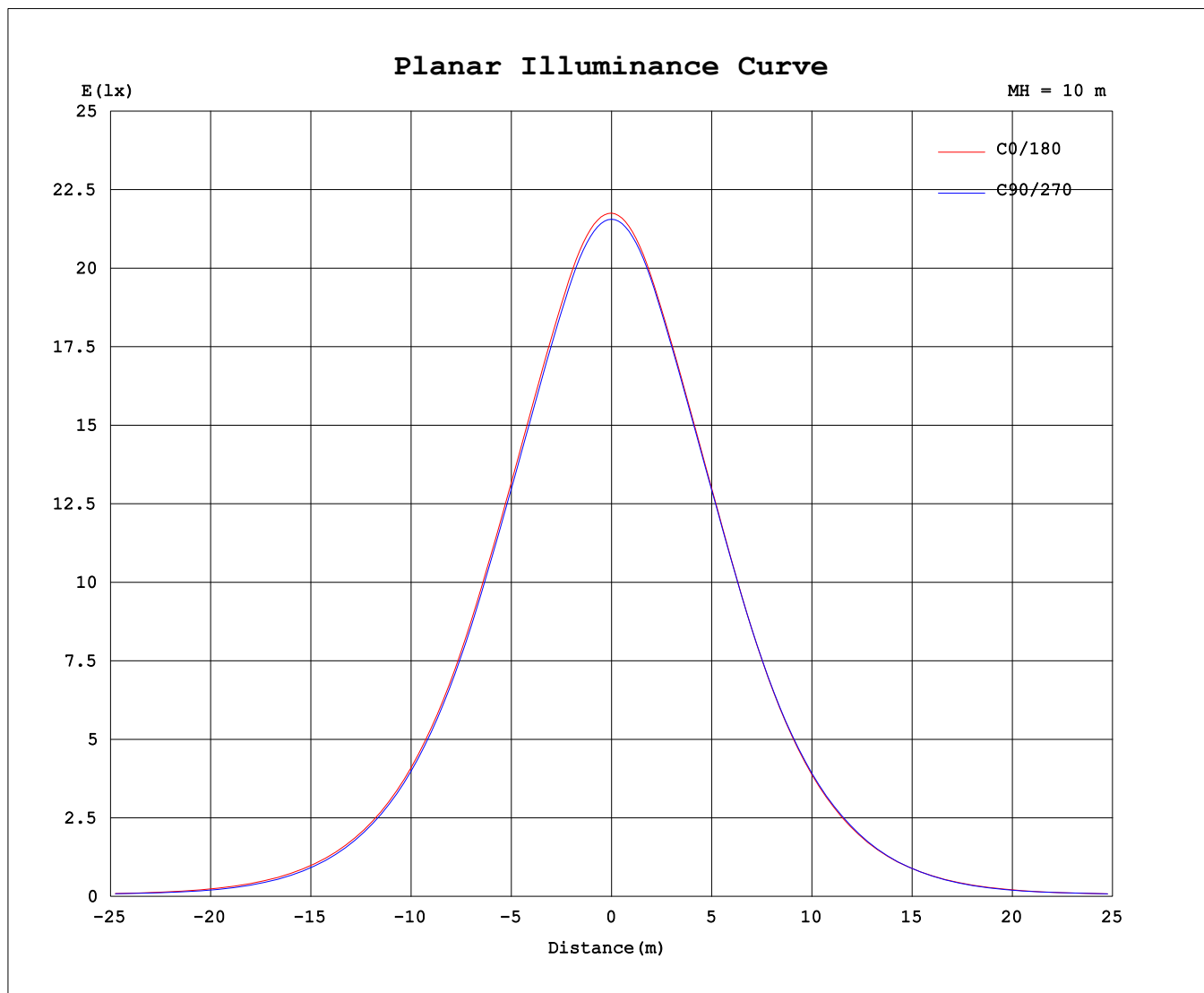
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

