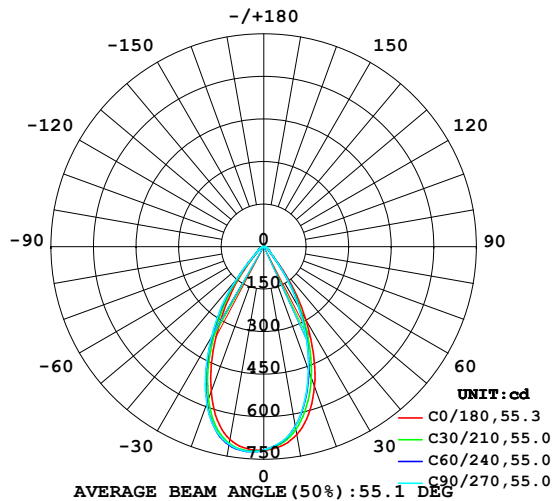


LUMINAIRE PHOTOMETRIC TEST REPORT

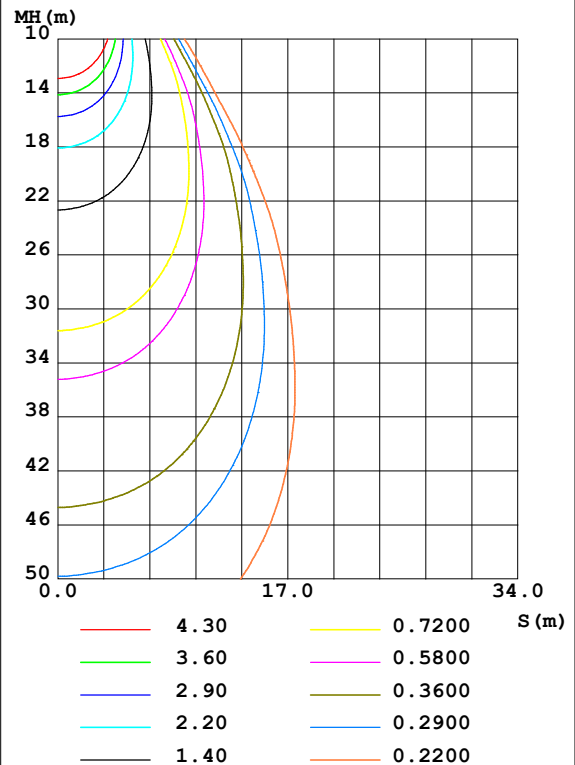
NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 75.82 lm/W
MODEL		I _{max} (cd)	724.6	S/MH (C0/180)	0.86	
NOMINAL POWER(W)	9	LOR(%)	100.0	S/MH (C90/270)	0.92	
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	638.09	η UP,DN (C0-180)	0.0,45.5	
NOMINAL FLUX(lm)	638.093	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,54.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	120	η down (%)	100.0	CIBSE SHR MAX	0.90	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 5.620m [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	672.4	649.1	643.2	661.1	689.9	707.0	707.7	693.2	0- 10	66.70	66.70	10.5,10.5
20	524.0	479.1	461.5	494.0	543.4	577.9	588.5	564.9	10- 20	171.3	238.0	37.3,37.3
30	295.8	258.6	247.8	265.4	311.3	353.5	368.8	341.7	20- 30	190.9	428.9	67.2,67.2
40	90.35	79.40	77.44	86.37	107.6	135.5	145.9	115.4	30- 40	124.3	553.2	86.7,86.7
50	27.96	27.81	28.13	29.86	31.89	34.37	34.55	30.47	40- 50	42.87	596.1	93.4,93.4
60	16.19	16.43	16.98	18.49	19.34	19.18	18.79	17.16	50- 60	20.88	617.0	96.7,96.7
70	7.560	7.854	8.329	9.030	9.430	9.314	8.810	7.982	60- 70	12.47	629.5	98.6,98.6
80	3.404	3.434	3.710	4.289	4.645	4.581	4.251	3.742	70- 80	6.645	636.1	99.7,99.7
90	0.0776	0.0777	0.0750	0.0751	0.2128	0.2877	0.2337	0.1156	80- 90	1.979	638.1	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): 580.49 lm

%lum = 91.0%

%lamp = 91.0%

Conical surface Flux(120deg): 616.99 lm

%lum = 96.7%

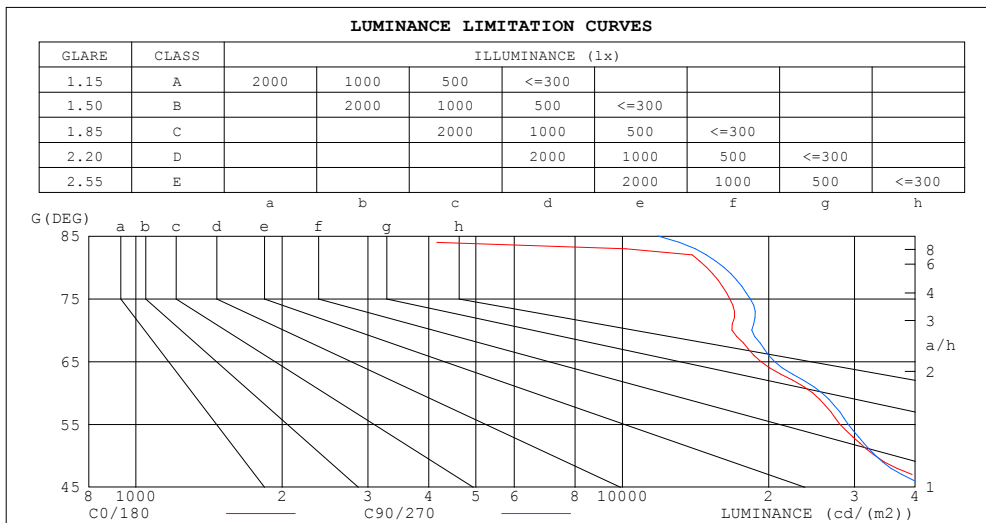
%lamp = 96.7%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-06-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:5.620m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	679	11835
80	14900	16187
75	16621	18303
70	16802	18451
65	19265	20557
60	24608	25723
55	27991	29129
50	33069	33153
45	46693	43234

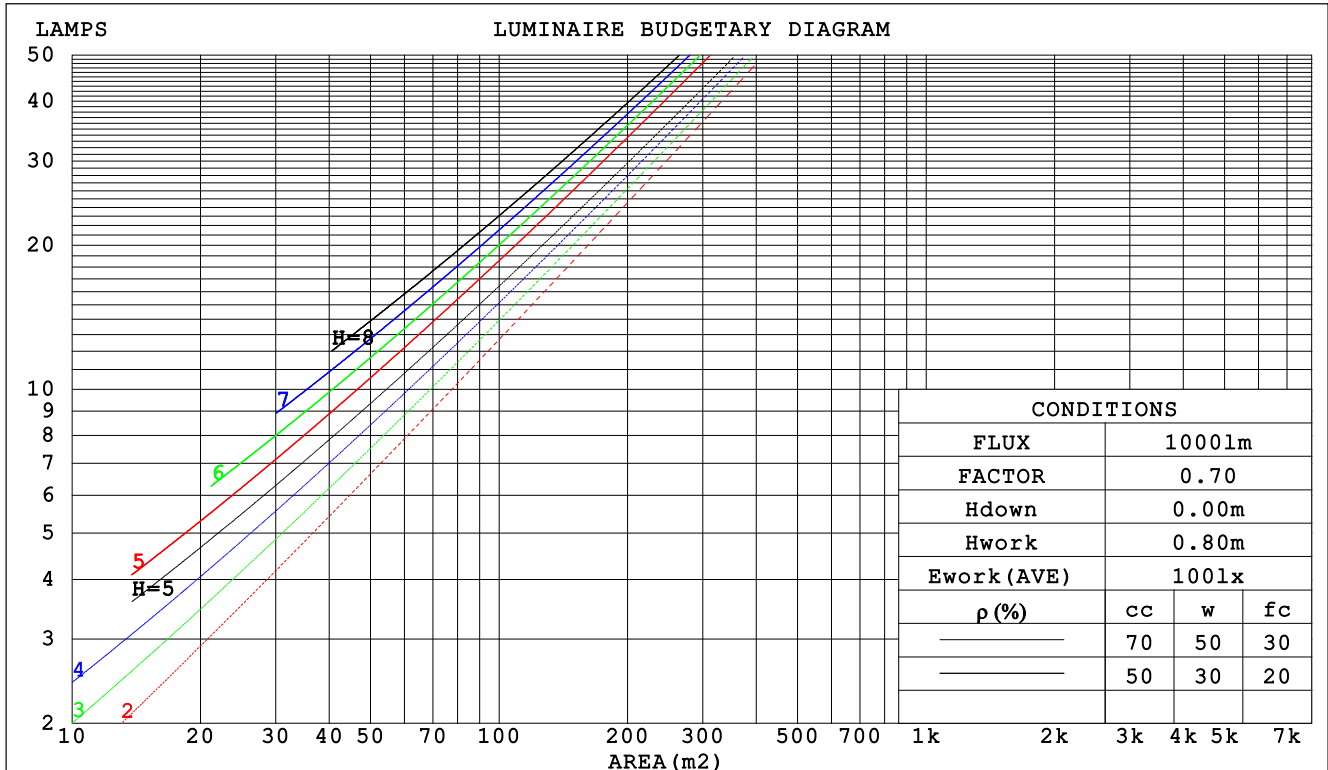
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:#41MM	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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.02	.97	.94	.00	.96	.93	.97	.93	.90	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.82	.80	.78
4.0	.88	.82	.77	.86	.81	.77	.84	.80	.76	.82	.78	.75	.80	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.69	.76	.72	.69	.67
6.0	.77	.70	.66	.76	.70	.66	.74	.69	.65	.73	.68	.65	.71	.67	.64	.63
7.0	.72	.66	.61	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.59
8.0	.68	.61	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.58	.54	.63	.57	.53	.62	.57	.53	.61	.57	.53	.61	.56	.53	.52
10.0	.60	.54	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.58	.53	.50	.49



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:#41MM	Shielding 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	.194	.110	.035	.187	.107	.034	.174	.100	.032	.163	.094	.030	.152	.088	.028		
2.0	.185	.101	.031	.179	.099	.030	.168	.094	.029	.158	.089	.028	.149	.084	.027		
3.0	.175	.093	.028	.170	.091	.027	.161	.087	.026	.152	.083	.026	.144	.080	.025		
4.0	.165	.086	.025	.161	.084	.025	.153	.081	.024	.146	.078	.024	.139	.076	.023		
5.0	.157	.080	.023	.153	.079	.023	.146	.076	.022	.140	.074	.022	.134	.071	.021		
6.0	.149	.075	.021	.146	.074	.021	.140	.071	.021	.134	.070	.020	.128	.068	.020		
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.123	.064	.019		
8.0	.135	.066	.019	.132	.065	.018	.128	.064	.018	.123	.062	.018	.119	.061	.018		
9.0	.129	.062	.017	.127	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017		
10.0	.123	.059	.016	.121	.059	.016	.117	.057	.016	.114	.056	.016	.110	.055	.016		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.085	.058	.054	.050	.019	.017	.016		
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013		
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010		
4.0	.136	.099	.071	.117	.086	.061	.080	.060	.043	.046	.035	.026	.015	.011	.008		
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007		
6.0	.120	.078	.048	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006		
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.022	.011	.012	.007	.004		
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: RAD25R-09-DTW-UNV-50-WT					TYPE:DTW CRI90					WEIGHT:				
SPEC.:50D					DIM.:					SERIAL No.:1				
MFR.:					SUR.:#41MM					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					23.4	24.4	23.7	24.6	24.8	23.0	24.0	23.2	24.2	24.3
3H					23.7	24.6	23.9	24.8	25.0	23.3	24.3	23.6	24.5	24.7
4H					23.8	24.7	24.1	24.9	25.1	23.6	24.4	23.8	24.7	24.9
6H					23.9	24.7	24.2	25.0	25.2	23.7	24.5	24.0	24.8	25.0
8H					23.9	24.7	24.3	25.0	25.3	23.7	24.5	24.1	24.8	25.1
12H					23.9	24.7	24.2	24.9	25.2	23.8	24.5	24.1	24.8	25.1
4H 2H					23.4	24.3	23.7	24.5	24.8	23.0	23.9	23.3	24.1	24.4
3H					23.8	24.6	24.1	24.9	25.1	23.5	24.3	23.9	24.6	24.9
4H					24.1	24.7	24.4	25.0	25.4	23.9	24.6	24.2	24.9	25.2
6H					24.3	24.9	24.6	25.2	25.6	24.1	24.7	24.5	25.1	25.4
8H					24.3	24.9	24.7	25.2	25.6	24.2	24.8	24.6	25.1	25.5
12H					24.3	24.8	24.7	25.2	25.6	24.2	24.7	24.6	25.1	25.5
8H 4H					24.1	24.7	24.5	25.0	25.4	23.9	24.5	24.3	24.8	25.2
6H					24.4	24.8	24.8	25.2	25.7	24.3	24.7	24.7	25.1	25.5
8H					24.5	24.9	24.9	25.3	25.8	24.4	24.8	24.8	25.2	25.7
12H					24.5	24.9	25.0	25.3	25.8	24.5	24.8	24.9	25.3	25.7
12H 4H					24.1	24.6	24.5	25.0	25.4	23.9	24.4	24.3	24.8	25.2
6H					24.4	24.8	24.8	25.2	25.6	24.3	24.7	24.7	25.1	25.5
8H					24.5	24.9	25.0	25.3	25.8	24.4	24.8	24.9	25.2	25.7
Variations with the observer position at spacings:														
S = 1.0H					+ 1.9 / - 1.7					+ 1.3 / - 1.3				
1.5H					+ 3.5 / - 1.4					+ 2.6 / - 1.0				
2.0H					+ 1.3 / - 0.9					+ 0.9 / - 0.8				

CIE Pub.117, 638.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:

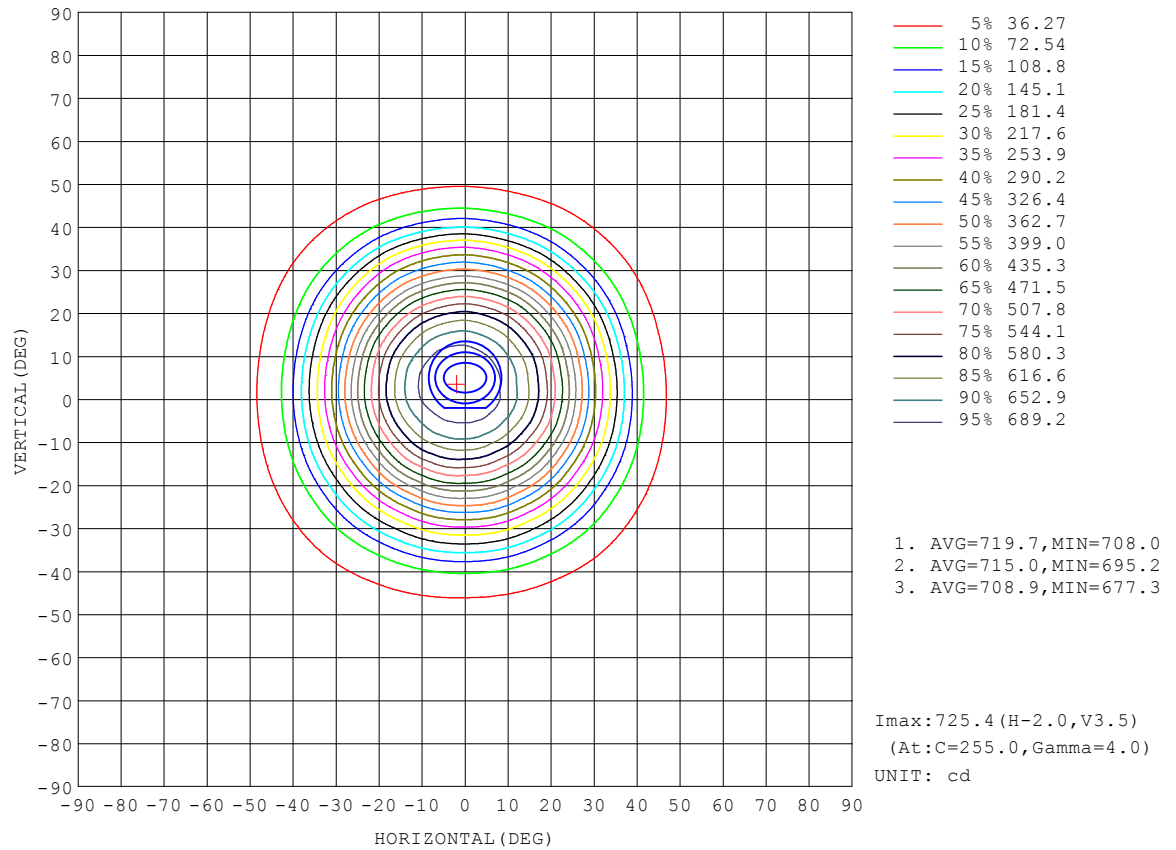
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	83	76	72	83	76	72	82	76	72	68
0.80	91	84	80	90	84	80	89	84	80	76
1.00	96	90	86	95	89	85	94	89	85	81
1.25	101	95	91	99	94	90	97	93	90	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	109	112	110	108	108	106	105	97
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:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:

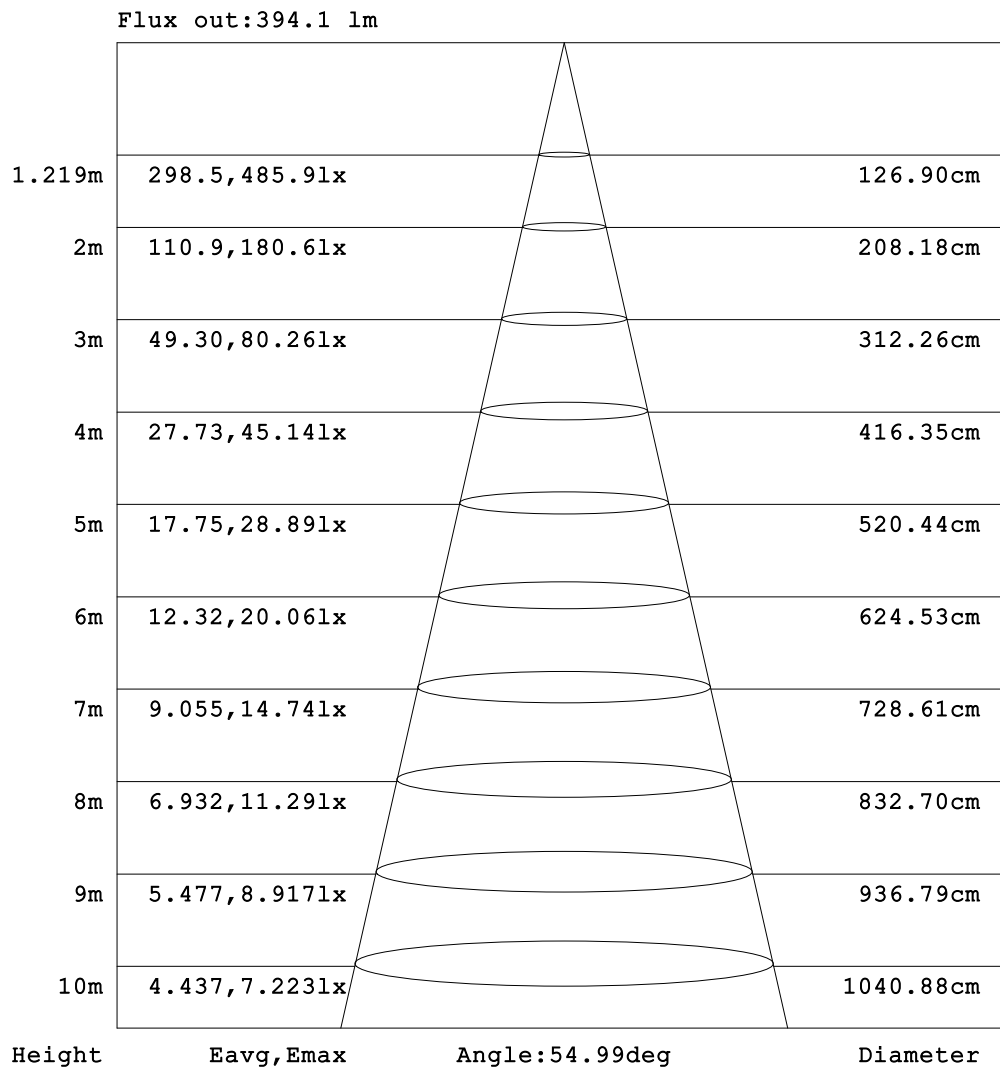


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

AAI Figure

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:



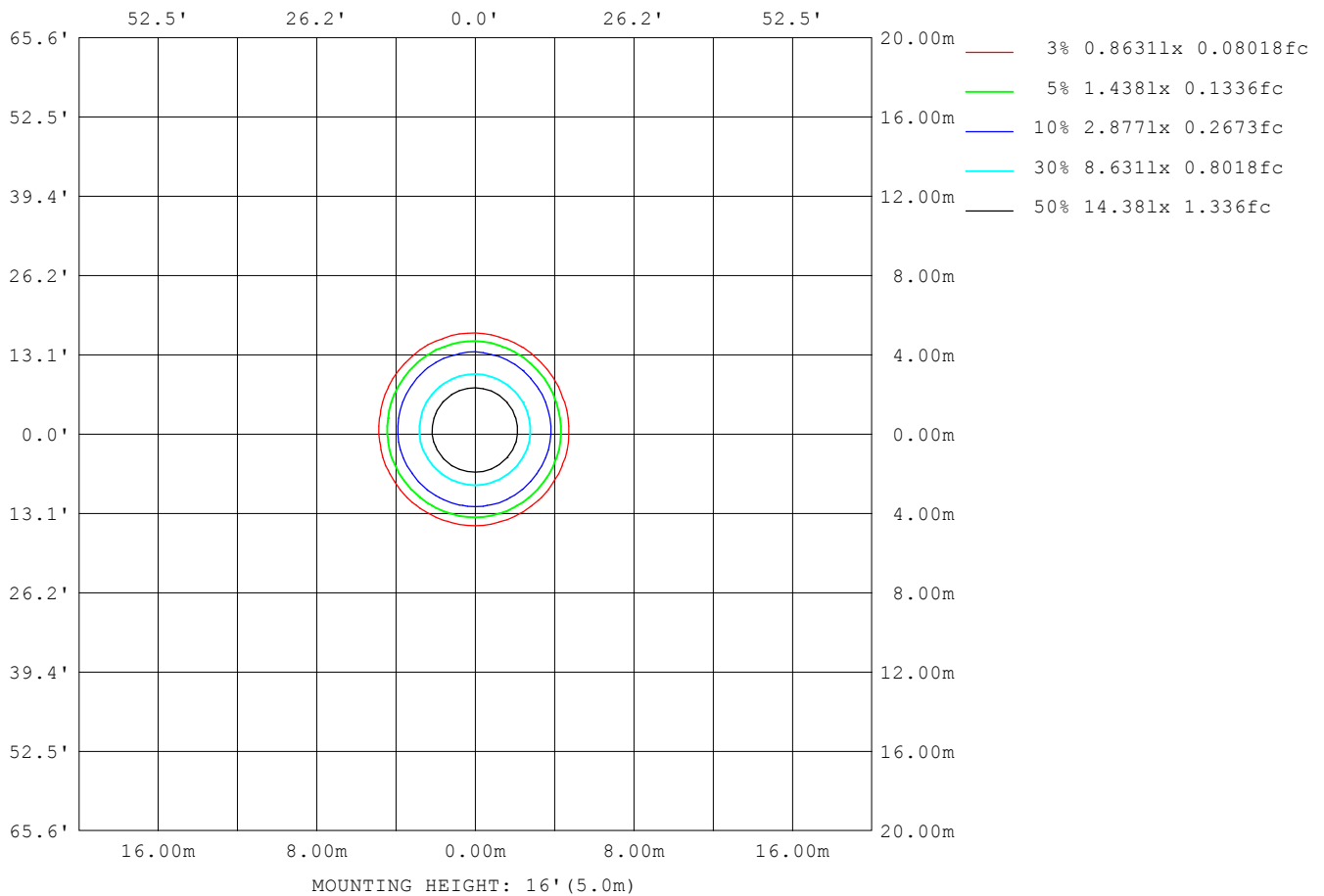
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:#41MM	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

LED Avg.L Report

NAME: RAD25R-09-DTW-UNV-50-WT	TYPE:DTW CRI90	WEIGHT:
SPEC.:50D	DIM.:	SERIAL No.:1
MFR.:	SUR.:Φ41MM	Shielding Angle:

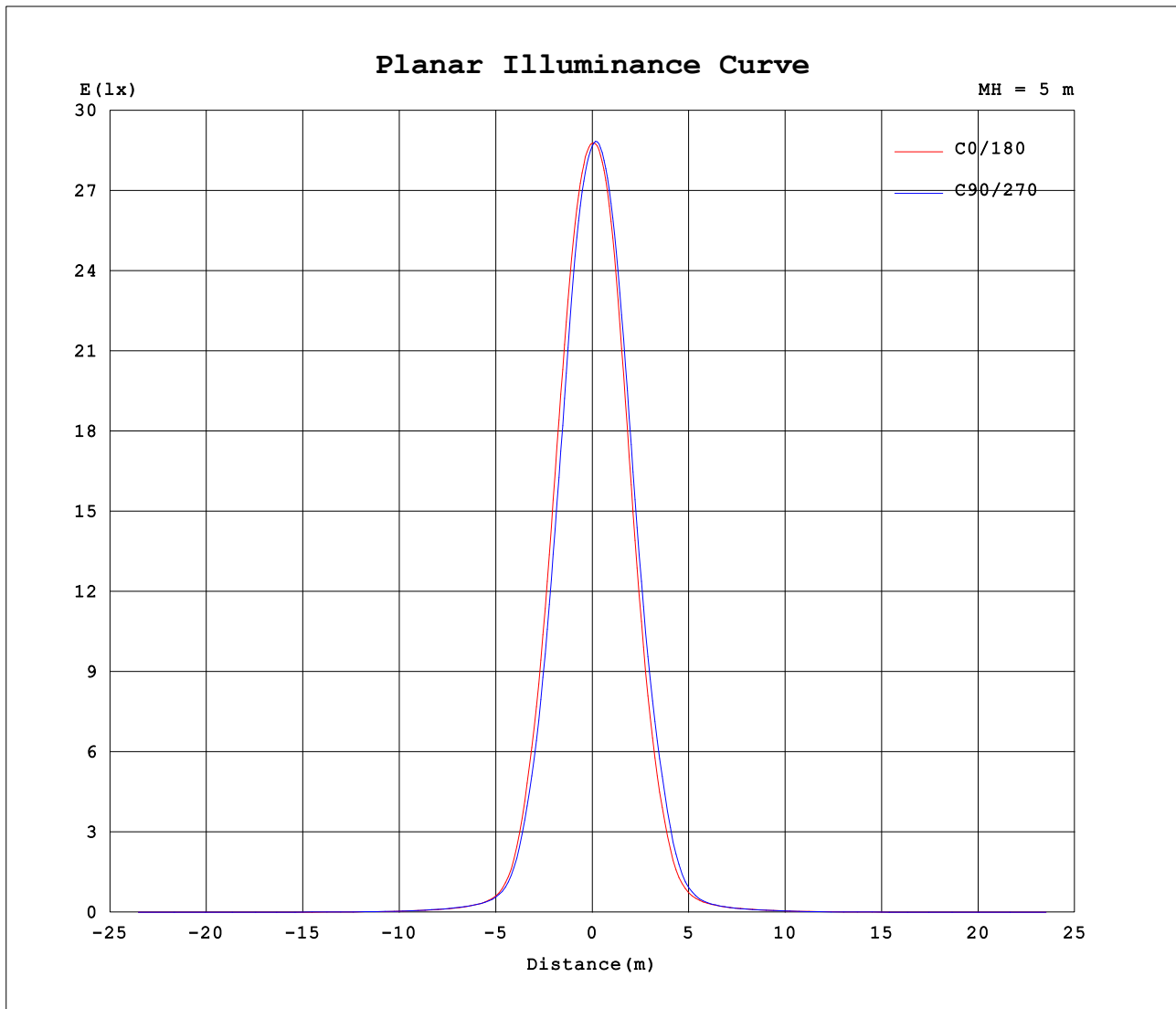
AvgL	cd/m2
L_0~180 (65) av	22003
L_0~180 (75) av	18664
L_0~180 (85) av	6234
L_90~270 (65) av	22020
L_90~270 (75) av	18618
L_90~270 (85) av	15224
L_45 (65) av	21973
L_45 (75) av	18653
L_45 (85) av	15598

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-06-10

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2025-06-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 5.620m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

```

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.620m [K=1.0000]
Remarks:

```