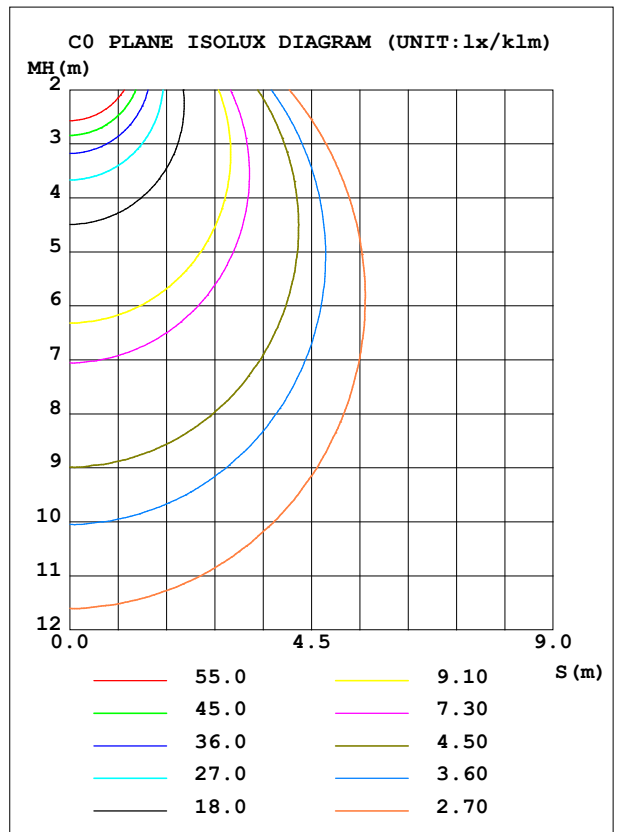
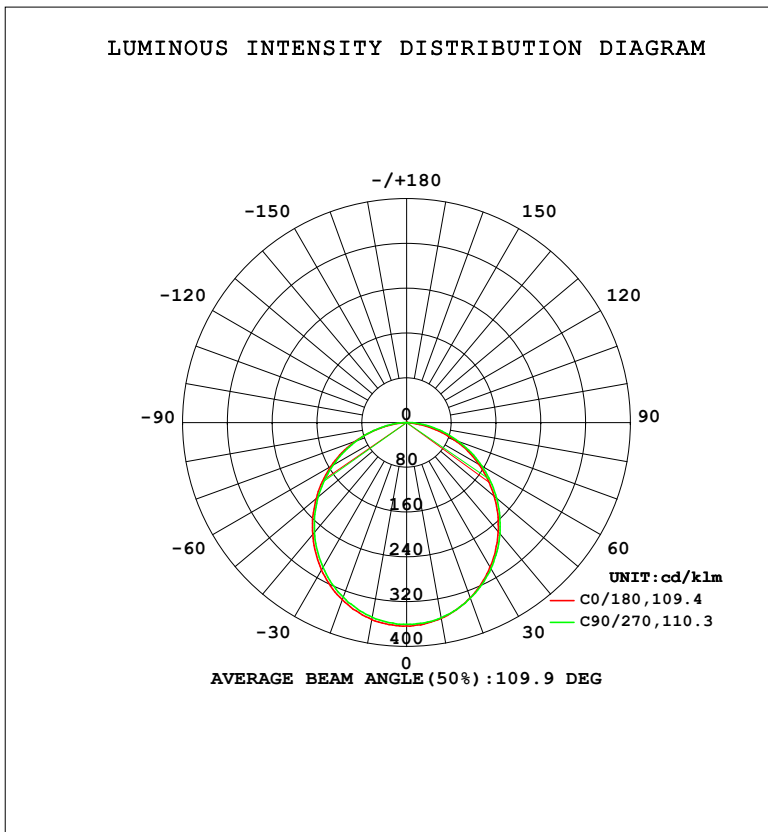


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd/klm)	363.7	S/MH (C0/180)	1.24
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm/klm)	1000.00	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	638.523	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

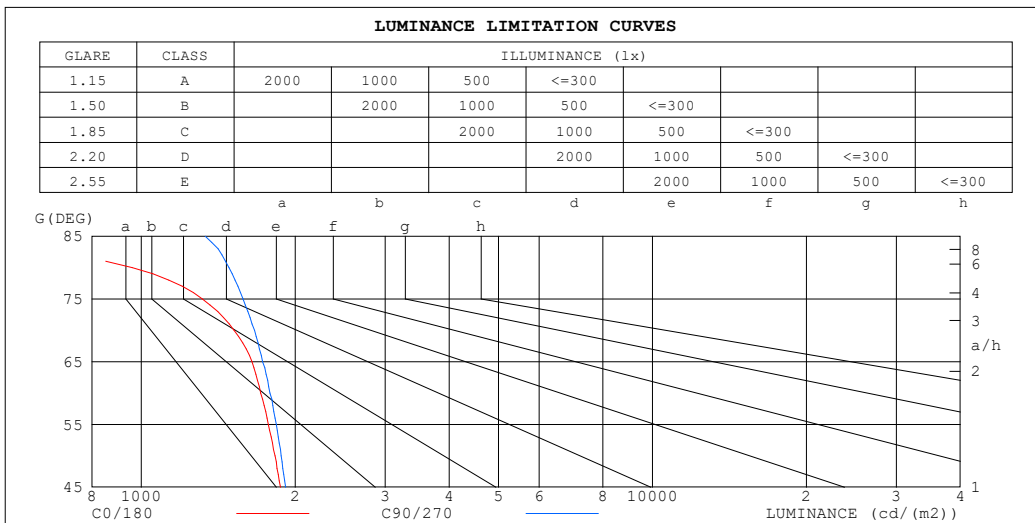
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	355.1	354.2	354.0	353.2	357.6	354.4	353.3	351.4	0- 10	34.11	34.11	3.41,3.41
20	332.7	333.3	333.7	333.2	336.8	333.9	331.7	330.0	10- 20	97.31	131.4	13.1,13.1
30	298.1	299.8	301.6	301.4	304.3	301.3	298.8	295.9	20- 30	146.4	277.8	27.8,27.8
40	255.0	256.9	259.6	258.9	261.2	258.2	256.1	253.6	30- 40	174.9	452.7	45.3,45.3
50	204.4	207.1	210.1	210.1	210.8	208.0	206.2	203.1	40- 50	179.7	632.4	63.2,63.2
60	149.0	152.5	155.4	155.2	155.9	153.0	151.3	148.8	50- 60	161.1	793.5	79.4,79.4
70	90.36	95.64	99.05	98.80	97.71	95.87	94.53	91.91	60- 70	122.8	916.3	91.6,91.6
80	29.02	36.50	44.84	39.97	35.67	36.99	40.44	32.92	70- 80	69.68	986.0	98.6,98.6
90	0.3597	0.3799	0.4239	0.3754	0.2090	0.2299	0.2739	0.2426	80- 90	13.98	1000.0	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/klm									UNIT:lm/klm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3 °C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	161	1334
80	960	1484
75	1316	1581
70	1518	1664
65	1645	1728
60	1712	1786
55	1771	1837
50	1827	1878
45	1872	1915

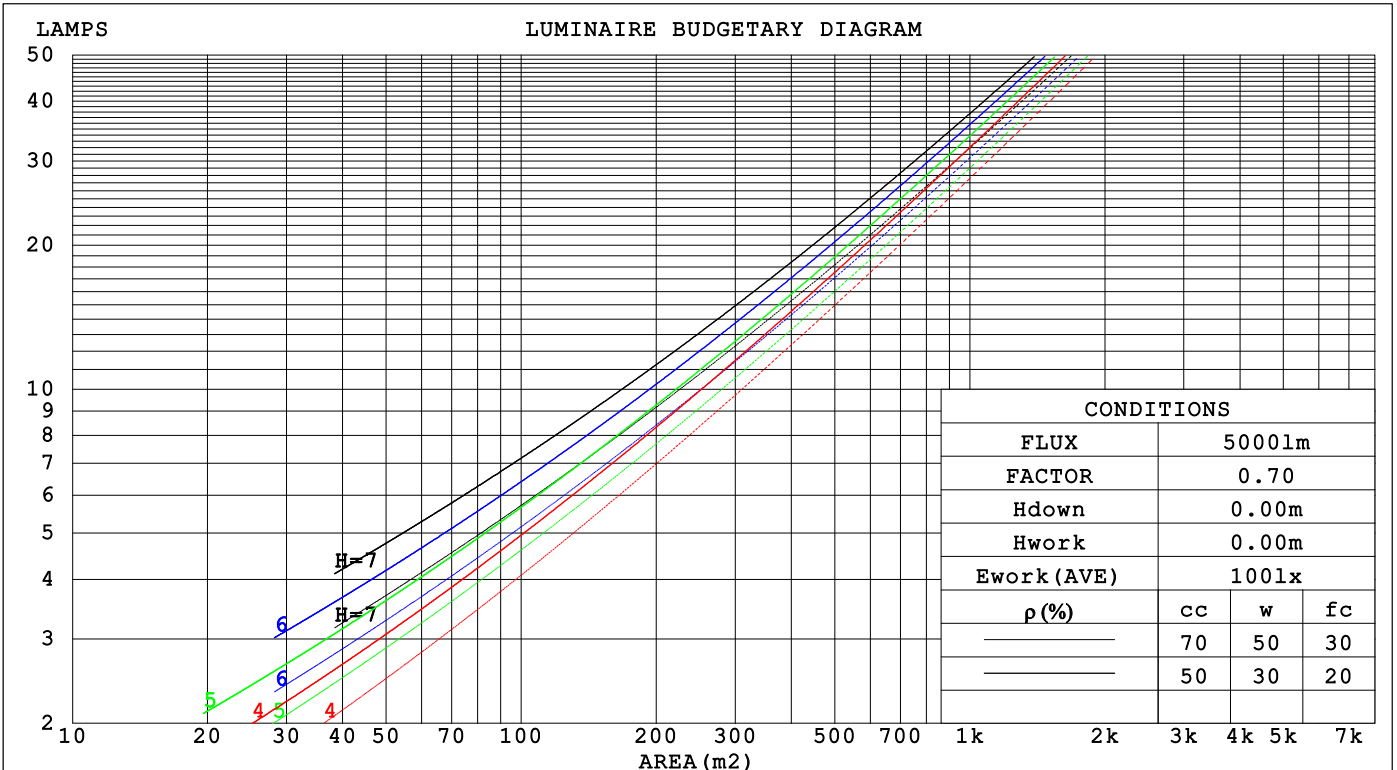
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.04	.00	.96	1.02	.98	.95	.98	.94	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.77	.85	.80	.76	.82	.78	.74	.79	.75	.72	.70
3.0	.80	.72	.65	.78	.71	.64	.75	.69	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.71	.62	.55	.69	.61	.55	.67	.60	.54	.64	.58	.53	.62	.57	.53	.50
5.0	.63	.54	.47	.62	.54	.47	.60	.52	.47	.58	.51	.46	.56	.50	.46	.44
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.42	.36	.49	.42	.36	.48	.41	.36	.46	.40	.36	.34
8.0	.47	.38	.33	.46	.38	.33	.45	.38	.32	.44	.37	.32	.43	.36	.32	.30
9.0	.43	.35	.29	.43	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.26	.37	.31	.26	.36	.31	.26	.24



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	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	.304	.173	.055	.297	.169	.054	.284	.163	.052	.272	.157	.050	.260	.151	.049	
2.0	.288	.158	.048	.282	.155	.048	.270	.150	.047	.260	.146	.046	.250	.141	.045	
3.0	.268	.142	.043	.262	.140	.042	.252	.136	.041	.242	.133	.041	.233	.129	.040	
4.0	.247	.129	.038	.243	.127	.038	.233	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.229	.117	.034	.225	.115	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.030	.209	.105	.030	.201	.103	.030	.195	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.188	.095	.027	.182	.093	.027	.176	.092	.027	
8.0	.185	.090	.025	.182	.090	.025	.176	.088	.025	.171	.086	.025	.166	.085	.025	
9.0	.173	.084	.023	.171	.083	.023	.165	.082	.023	.161	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.022	.151	.075	.021	.147	.074	.021	

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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.141	.099	.065	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.069	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.064	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	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	16.4	17.9	16.7	18.1	18.3	16.6	18.1	16.8	18.3	18.5
3H	17.9	19.3	18.2	19.5	19.7	18.1	19.5	18.4	19.8	20.0
4H	18.4	19.7	18.7	20.0	20.2	18.8	20.1	19.1	20.4	20.6
6H	18.7	19.9	19.0	20.2	20.5	19.3	20.5	19.6	20.8	21.1
8H	18.7	19.9	19.0	20.2	20.5	19.4	20.7	19.8	20.9	21.2
12H	18.7	19.8	19.0	20.1	20.4	19.5	20.7	19.9	21.0	21.3
4H 2H	17.0	18.4	17.4	18.6	18.9	17.2	18.5	17.5	18.7	19.0
3H	18.7	19.9	19.0	20.1	20.5	18.9	20.1	19.3	20.4	20.7
4H	19.3	20.4	19.7	20.7	21.0	19.7	20.8	20.1	21.1	21.4
6H	19.7	20.6	20.1	21.0	21.4	20.3	21.3	20.7	21.6	22.0
8H	19.8	20.6	20.2	21.0	21.4	20.5	21.4	21.0	21.8	22.2
12H	19.7	20.5	20.2	20.9	21.3	20.7	21.5	21.1	21.9	22.3
8H 4H	19.6	20.5	20.0	20.8	21.2	19.9	20.8	20.4	21.2	21.6
6H	20.1	20.8	20.5	21.2	21.7	20.7	21.4	21.1	21.8	22.3
8H	20.2	20.8	20.7	21.3	21.7	21.0	21.6	21.5	22.1	22.5
12H	20.2	20.8	20.7	21.2	21.7	21.2	21.8	21.7	22.2	22.7
12H 4H	19.6	20.4	20.0	20.8	21.2	19.9	20.7	20.4	21.1	21.5
6H	20.1	20.8	20.6	21.2	21.7	20.7	21.4	21.2	21.8	22.2
8H	20.3	20.8	20.7	21.3	21.8	21.1	21.6	21.5	22.1	22.5

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 0.2 / - 0.2	+ 0.2 / - 0.2
1.5H	+ 0.2 / - 0.3	+ 0.2 / - 0.3
2.0H	+ 0.2 / - 0.3	+ 0.2 / - 0.3

CIE Pub.117, 638.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

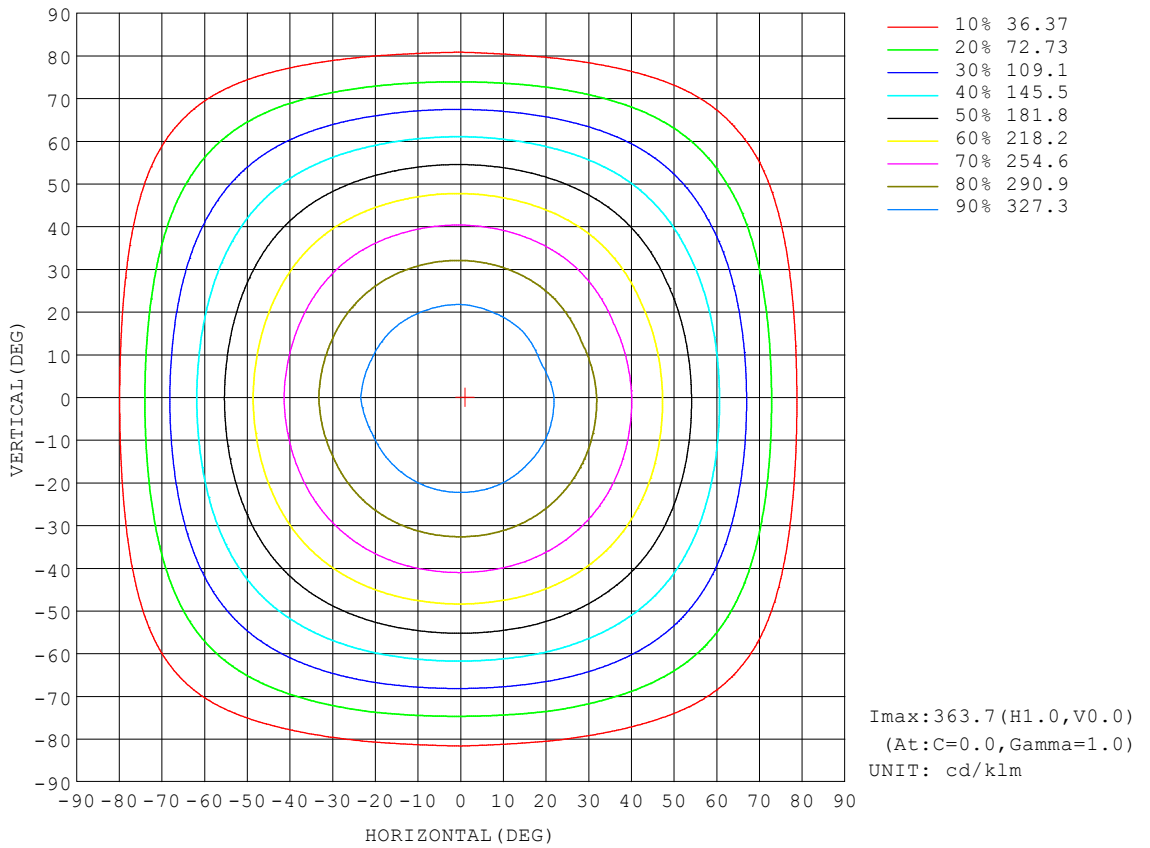
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	46	39	33
0.80	68	56	49	67	56	49	65	55	49	42
1.00	76	65	58	75	65	58	73	66	57	50
1.25	83	73	66	82	72	66	79	71	65	57
1.50	88	79	72	87	78	71	84	76	70	63
2.00	95	87	80	93	86	80	90	83	78	70
2.50	99	91	86	97	90	85	93	87	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

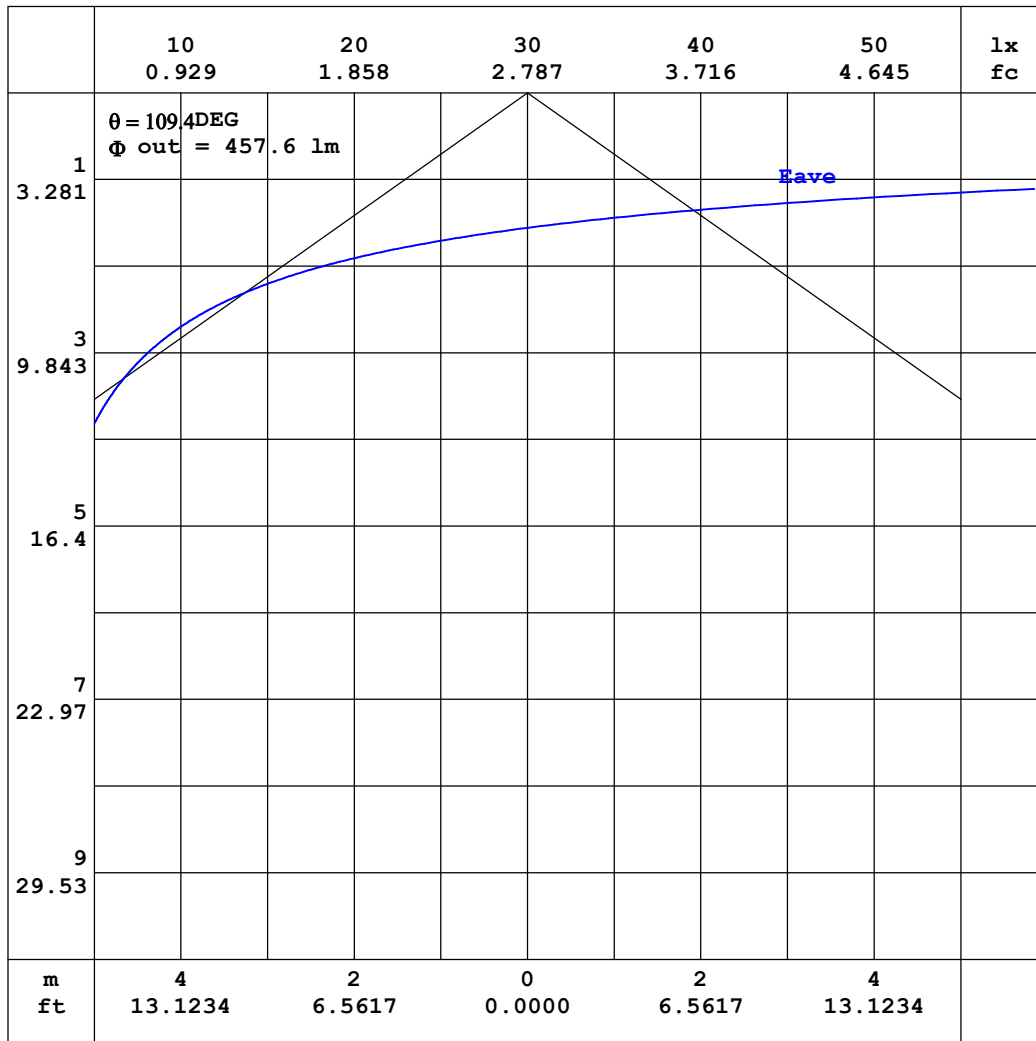


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

AAI CURVES

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



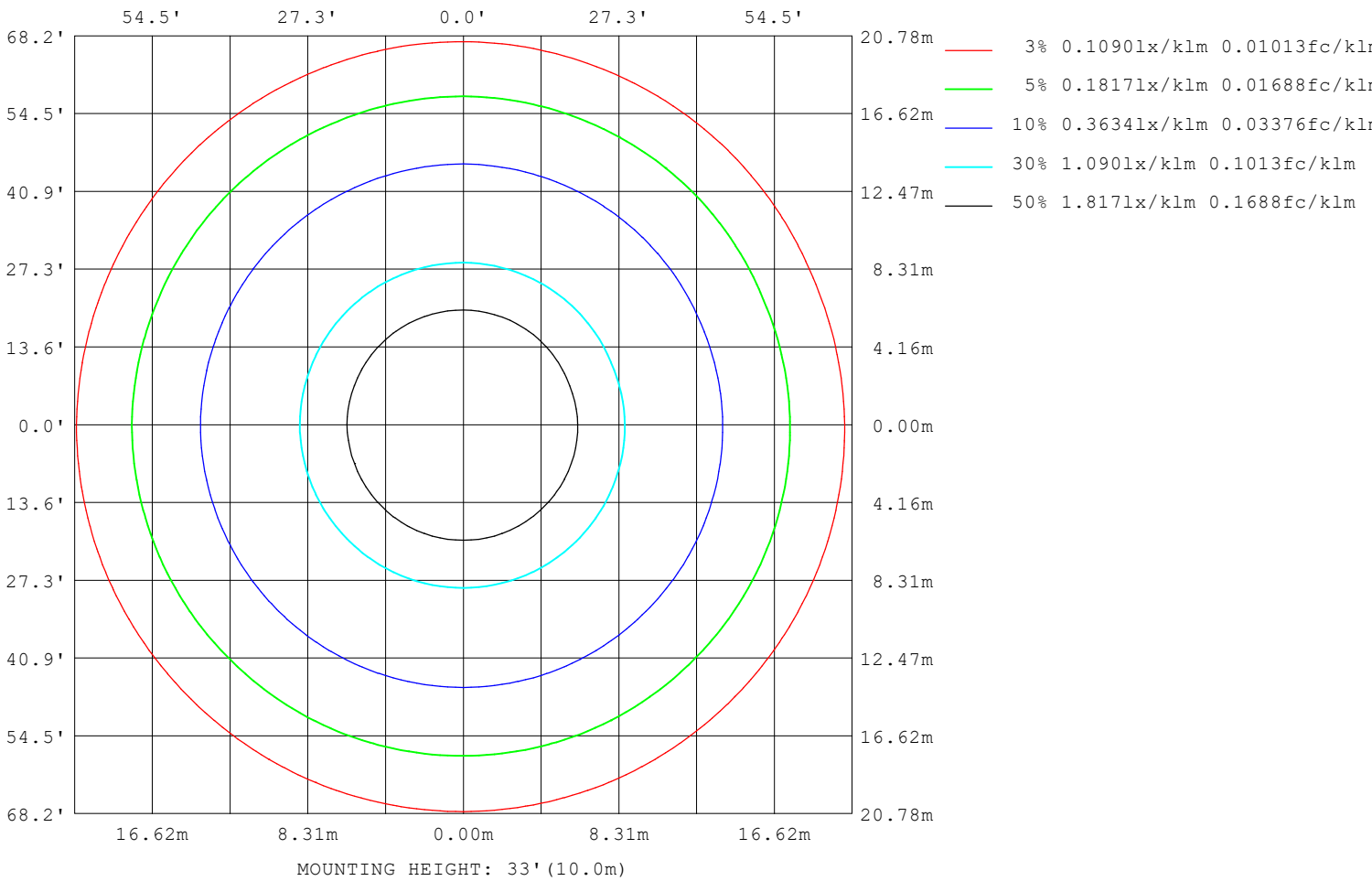
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.86V I:0.0735A P:8.5139W PF:0.9670 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:638.523x1 lm		
NAME: RF-LED-4-S9W-5CCTWH-PL	TYPE:	WEIGHT:
SPEC.: 2700K 80	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

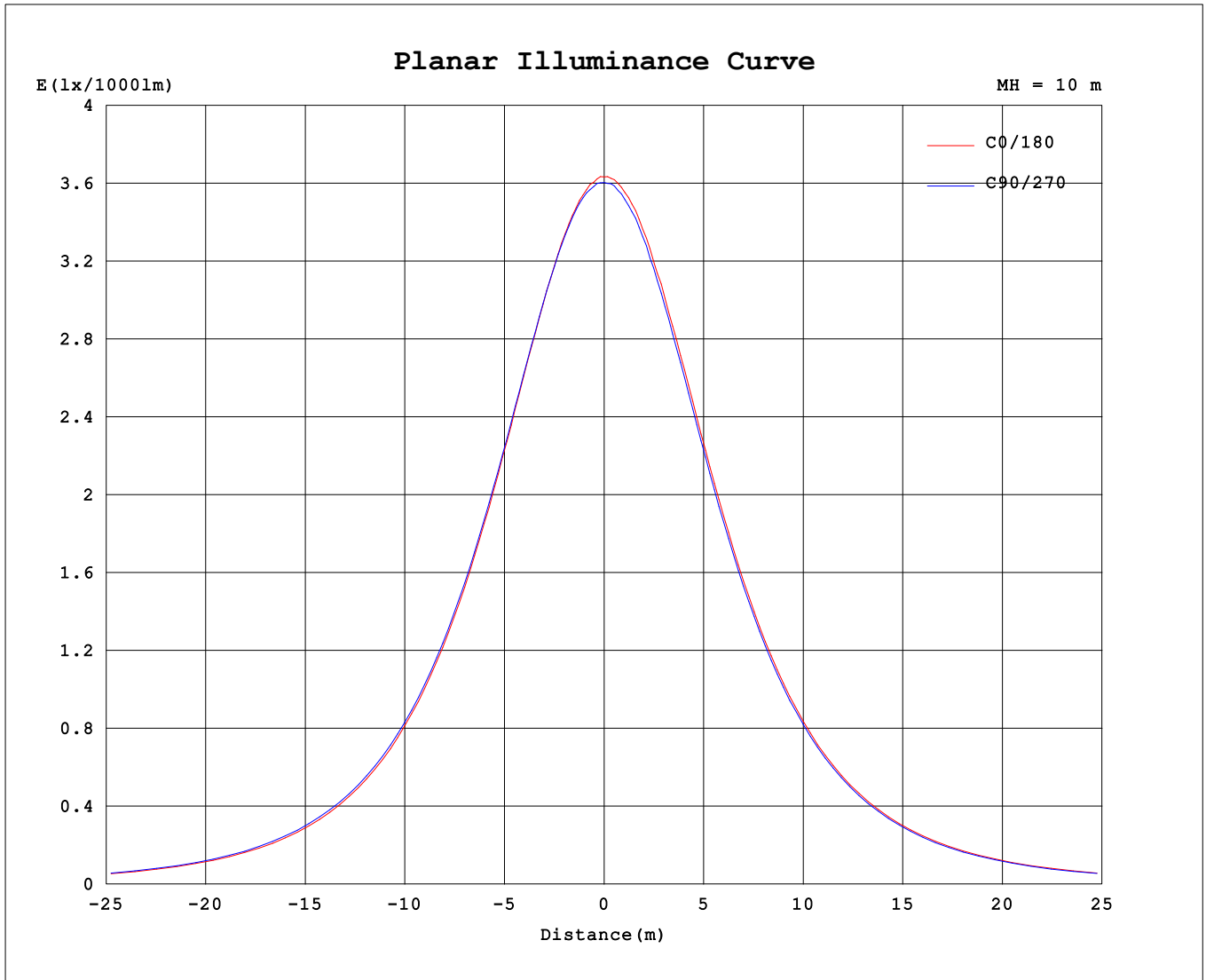
AvgL	cd/m2
L_0~180 (65) av	1689
L_0~180 (75) av	1395
L_0~180 (85) av	308
L_90~270 (65) av	1698
L_90~270 (75) av	1529
L_90~270 (85) av	1197
L_45 (65) av	1687
L_45 (75) av	1466
L_45 (85) av	533

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-06-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

