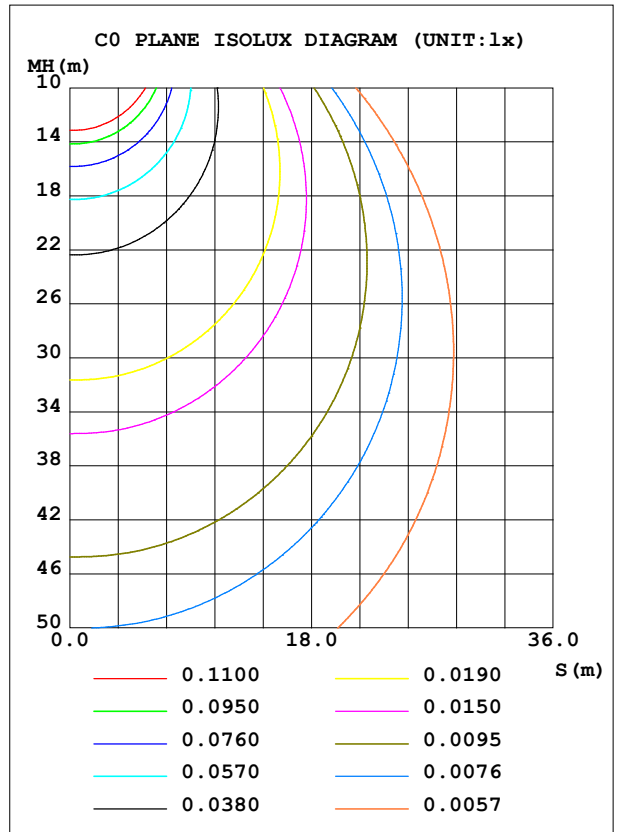
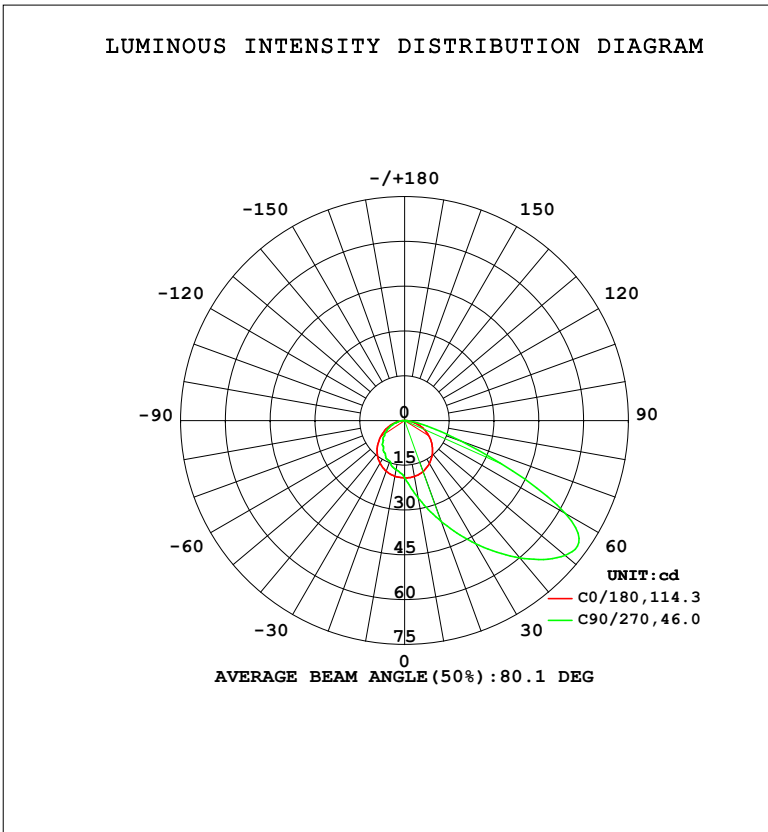


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	LSD09-5CCT-24V-WH	Imax (cd)	71.61	S/MH (C0/180)	1.28
NOMINAL POWER (W)	2,5	LOR (%)	100.0	S/MH (C90/270)	1.05
RATED VOLTAGE (V)	24	TOTAL FLUX (lm)	96.360	η UP, DN (C0-180)	0.0,75.0
NOMINAL FLUX (lm)	96.3602	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,25.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	24	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2024-06-17

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	19.04	23.66	26.28	23.90	18.96	16.98	16.72	16.93	0- 10	1.890	1.890	1.96,1.96
20	18.17	28.96	35.95	29.49	18.07	15.69	14.59	15.79	10- 20	6.044	7.935	8.23,8.23
30	16.66	33.78	47.55	34.81	16.53	13.57	12.90	13.74	20- 30	10.67	18.60	19.3,19.3
40	14.54	36.96	60.04	38.52	14.34	11.47	11.22	11.68	30- 40	15.43	34.03	35.3,35.3
50	11.90	36.86	70.25	38.76	11.61	9.352	9.551	9.594	40- 50	19.44	53.47	55.5,55.5
60	8.935	30.76	62.16	32.45	8.494	7.146	6.955	7.269	50- 60	20.89	74.37	77.2,77.2
70	5.809	15.78	19.98	15.43	5.456	4.561	4.462	4.636	60- 70	15.01	89.38	92.8,92.8
80	2.443	3.559	3.487	3.236	2.352	1.997	2.099	2.039	70- 80	5.882	95.26	98.9,98.9
90	0.0164	0.0276	0.0222	0.0172	0.0063	0.0190	0.0255	0.0172	80- 90	1.101	96.36	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): 43.347 lm

%lum = 45.0%

%lamp = 45.0%

Conical surface Flux(130deg): 83.166 lm

%lum = 86.3%

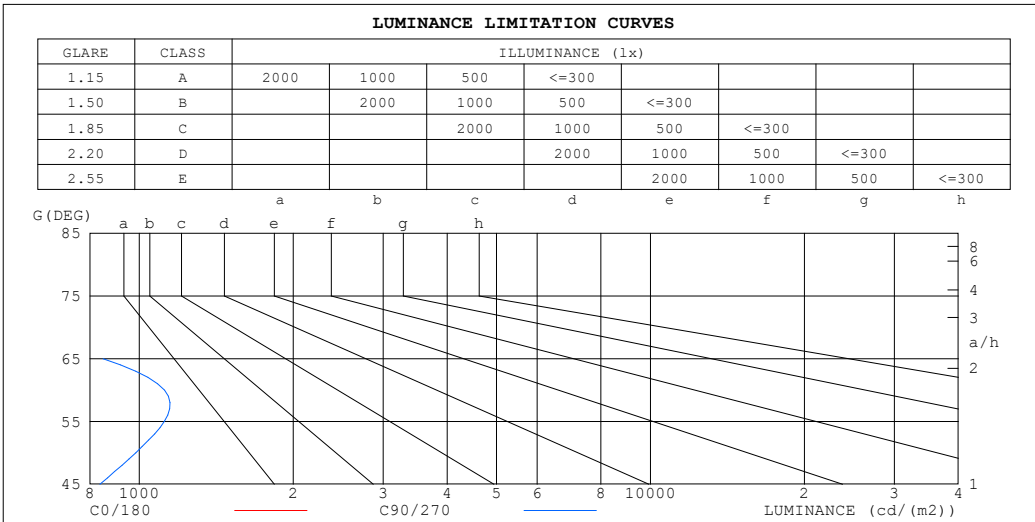
%lamp = 86.3%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3℃
 Operators:
 Test Date:2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	102	66
80	126	181
75	141	322
70	152	526
65	157	850
60	160	1119
55	163	1119
50	165	984
45	168	838

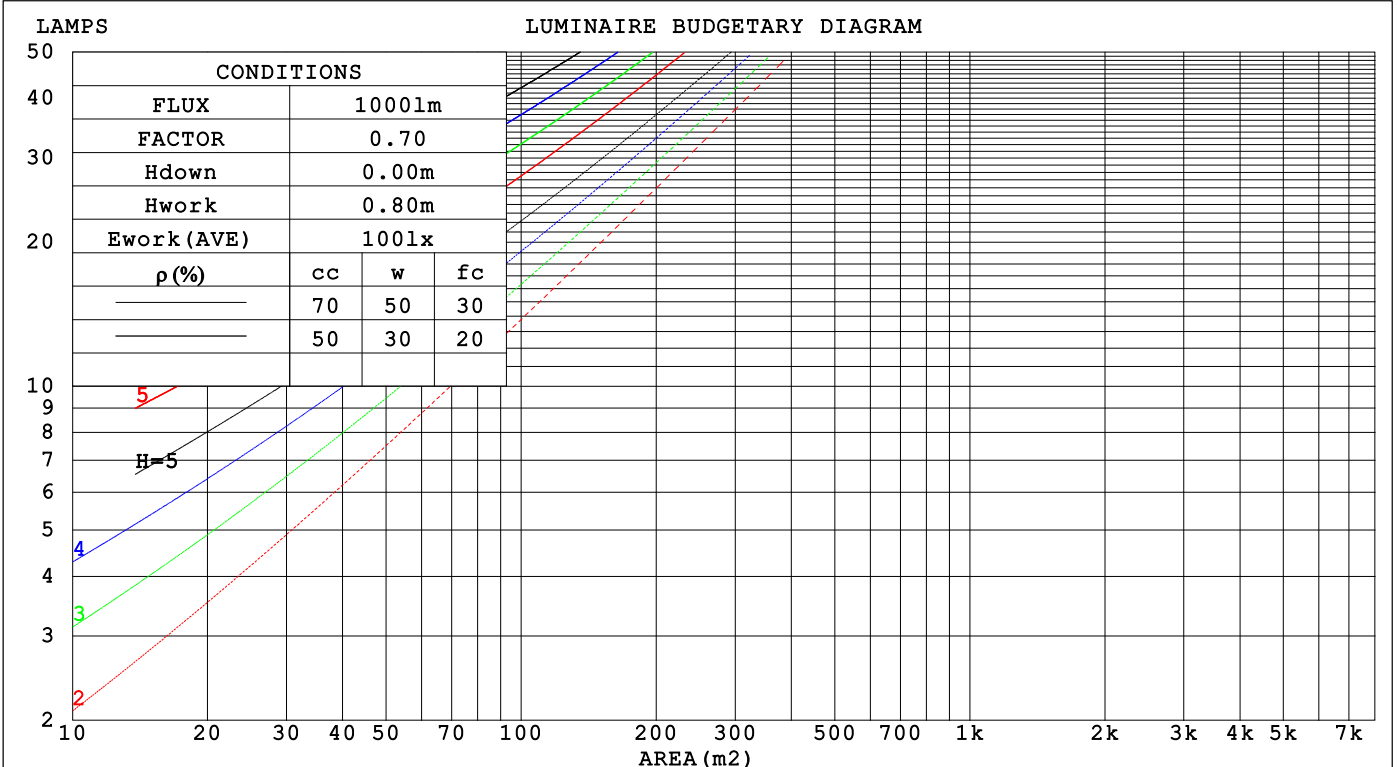
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3°C
 Operators:
 Test Date: 2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	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 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	1.03	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.89	.82	.76	.87	.81	.75	.84	.78	.73	.80	.76	.71	.77	.73	.70	.68
3.0	.77	.68	.61	.75	.67	.61	.72	.65	.60	.70	.64	.59	.67	.62	.58	.55
4.0	.67	.58	.51	.66	.57	.50	.63	.56	.50	.61	.54	.49	.59	.53	.48	.46
5.0	.59	.50	.43	.58	.49	.42	.56	.48	.42	.54	.47	.41	.52	.46	.41	.39
6.0	.53	.43	.36	.52	.43	.36	.50	.42	.36	.48	.41	.35	.46	.40	.35	.33
7.0	.47	.38	.31	.46	.37	.31	.45	.37	.31	.43	.36	.31	.42	.35	.30	.28
8.0	.42	.33	.27	.42	.33	.27	.40	.33	.27	.39	.32	.27	.38	.31	.27	.25
9.0	.39	.30	.24	.38	.30	.24	.37	.29	.24	.36	.29	.24	.35	.28	.24	.22
10.0	.35	.27	.21	.35	.27	.21	.34	.26	.21	.33	.26	.21	.32	.26	.21	.19



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	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	.317	.180	.057	.310	.177	.056	.297	.170	.054	.284	.164	.053	.273	.158	.051	
2.0	.305	.167	.051	.299	.164	.051	.287	.159	.050	.276	.155	.048	.266	.150	.047	
3.0	.285	.152	.045	.279	.149	.045	.269	.146	.044	.259	.142	.043	.250	.138	.043	
4.0	.264	.137	.040	.259	.135	.040	.249	.132	.039	.241	.129	.039	.233	.126	.038	
5.0	.244	.124	.036	.240	.123	.036	.231	.120	.035	.223	.118	.035	.216	.116	.035	
6.0	.226	.113	.032	.222	.112	.032	.215	.110	.032	.208	.108	.032	.201	.106	.031	
7.0	.210	.104	.029	.207	.103	.029	.200	.101	.029	.194	.099	.029	.188	.098	.029	
8.0	.196	.096	.027	.193	.095	.027	.187	.093	.027	.181	.092	.026	.176	.090	.026	
9.0	.183	.089	.025	.180	.088	.025	.175	.087	.025	.170	.085	.024	.165	.084	.024	
10.0	.172	.082	.023	.169	.082	.023	.164	.081	.023	.160	.079	.023	.156	.078	.022	

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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.020	.017	.015	
2.0	.174	.132	.096	.149	.113	.083	.102	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.167	.114	.072	.143	.099	.063	.098	.069	.044	.057	.040	.026	.018	.013	.008	
4.0	.160	.101	.056	.138	.088	.049	.095	.061	.034	.055	.036	.020	.018	.012	.007	
5.0	.153	.091	.045	.132	.079	.039	.091	.055	.028	.053	.032	.016	.017	.011	.005	
6.0	.147	.083	.037	.126	.072	.033	.087	.050	.023	.050	.030	.014	.016	.010	.005	
7.0	.140	.076	.032	.120	.066	.028	.083	.046	.020	.048	.027	.012	.016	.009	.004	
8.0	.133	.070	.027	.115	.061	.024	.079	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.127	.066	.024	.109	.057	.021	.076	.040	.015	.044	.024	.009	.014	.008	.003	
10.0	.121	.061	.022	.104	.053	.019	.072	.037	.013	.042	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm										
NAME: LSD09-5CCT-24V-WH					TYPE:			WEIGHT:		
SPEC.: 4000K					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	17.0	18.6	17.3	18.9	19.1	24.6	26.2	24.9	26.4	26.7
3H	17.9	19.4	18.2	19.7	19.9	25.6	27.1	25.9	27.3	27.6
4H	18.2	19.6	18.5	19.9	20.2	25.7	27.1	26.0	27.4	27.6
6H	18.4	19.7	18.7	20.0	20.3	25.7	27.0	26.0	27.3	27.6
8H	18.4	19.7	18.8	20.0	20.3	25.6	26.9	26.0	27.2	27.5
12H	18.4	19.7	18.8	20.0	20.3	25.6	26.8	25.9	27.1	27.4
4H 2H	19.3	20.8	19.7	21.0	21.3	24.7	26.1	25.0	26.4	26.6
3H	20.2	21.4	20.5	21.7	22.0	25.8	27.0	26.2	27.3	27.7
4H	20.5	21.6	20.8	21.9	22.3	26.0	27.1	26.4	27.4	27.8
6H	20.6	21.6	21.0	22.0	22.4	26.0	27.0	26.4	27.4	27.7
8H	20.7	21.6	21.1	22.0	22.4	26.0	26.9	26.4	27.3	27.7
12H	20.7	21.5	21.1	21.9	22.3	26.0	26.8	26.4	27.2	27.6
8H 4H	20.9	21.8	21.3	22.2	22.6	25.9	26.9	26.4	27.2	27.6
6H	21.1	21.9	21.6	22.3	22.7	26.0	26.8	26.5	27.2	27.6
8H	21.2	21.9	21.7	22.3	22.8	26.0	26.7	26.5	27.1	27.6
12H	21.3	21.8	21.7	22.3	22.8	26.0	26.6	26.5	27.0	27.5
12H 4H	20.9	21.7	21.3	22.1	22.5	25.9	26.8	26.3	27.1	27.5
6H	21.1	21.8	21.6	22.3	22.7	26.0	26.7	26.5	27.1	27.6
8H	21.2	21.8	21.7	22.3	22.8	26.0	26.6	26.5	27.0	27.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.4 / - 0.4					+ 0.1 / - 0.1				
1.5H	+ 0.4 / - 0.3					+ 0.6 / - 0.5				
2.0H	+ 1.1 / - 1.5					+ 1.4 / - 2.5				

CIE Pub.117, 96.36 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -8.1)
 Area: 0.111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3℃
 Operators:
 Test Date:2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

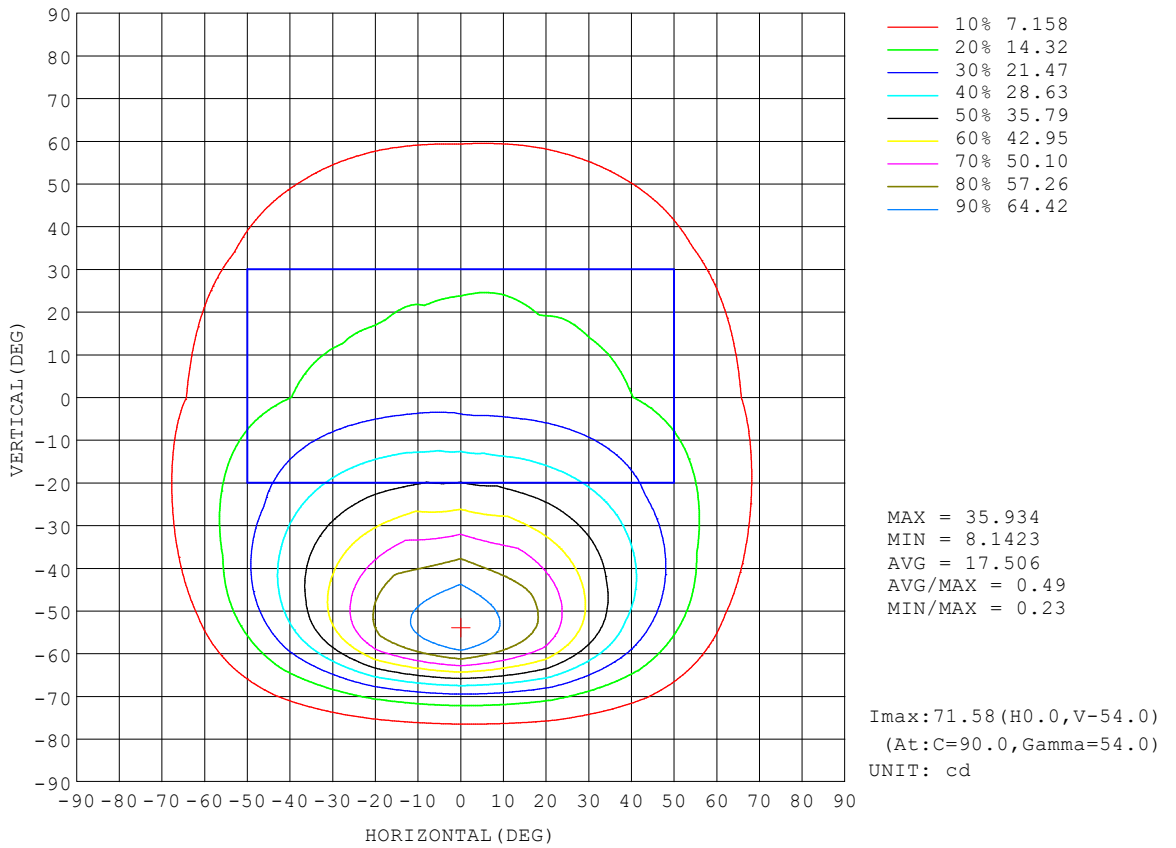
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	51	39	31	51	38	31	49	38	31	24
0.80	62	50	41	61	49	41	59	48	41	33
1.00	72	60	52	71	59	51	68	61	51	43
1.25	80	68	61	78	68	60	75	66	59	51
1.50	85	75	67	84	74	66	80	72	65	57
2.00	93	84	77	91	83	76	88	80	75	67
2.50	97	89	83	95	88	82	91	85	80	71
3.00	101	94	88	99	92	87	95	89	85	76
4.00	106	100	95	103	98	93	99	94	91	82
5.00	108	103	99	106	101	97	101	97	94	85
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: 24.3°C
 Operators:
 Test Date: 2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

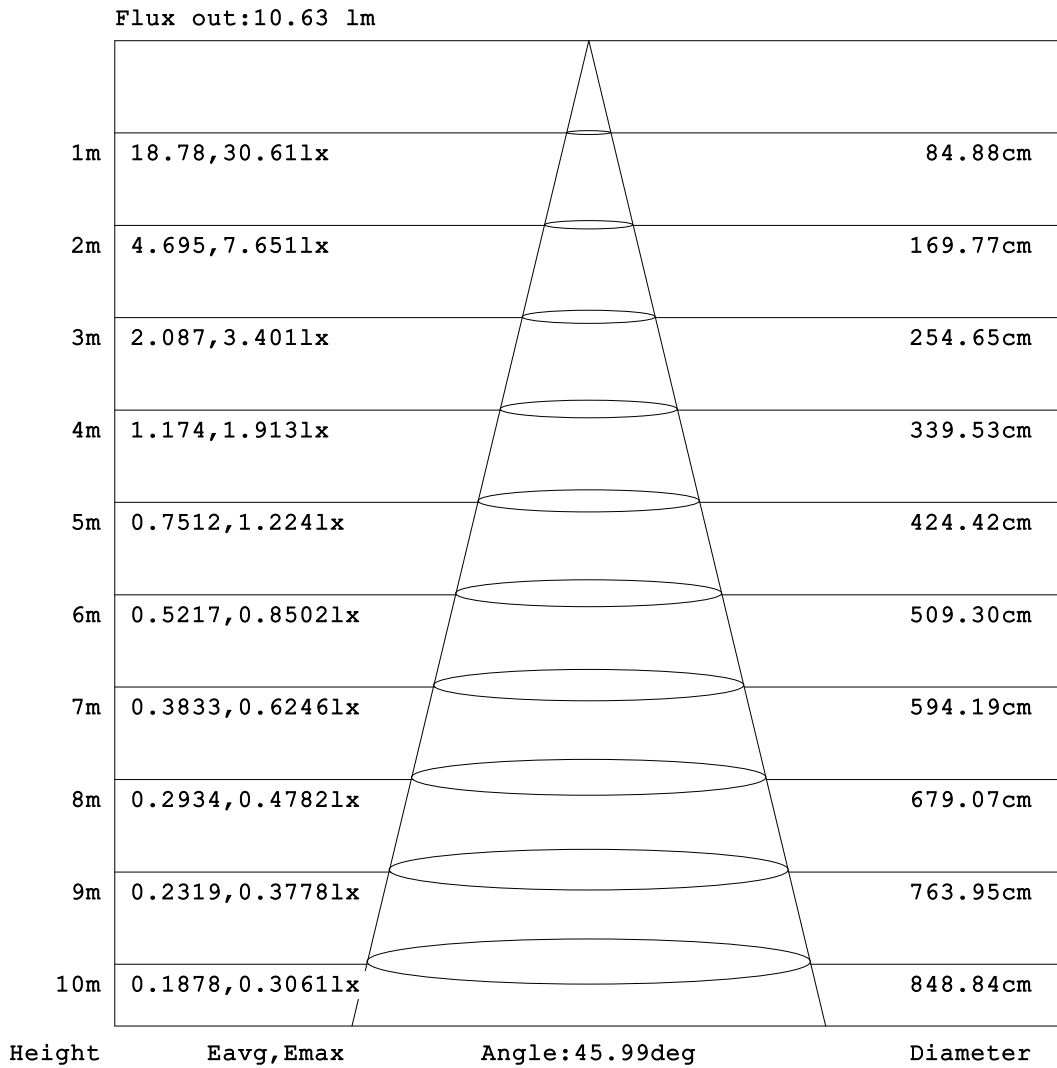


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3°C
 Operators:
 Test Date: 2024-06-17

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 Figure

Test:U:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



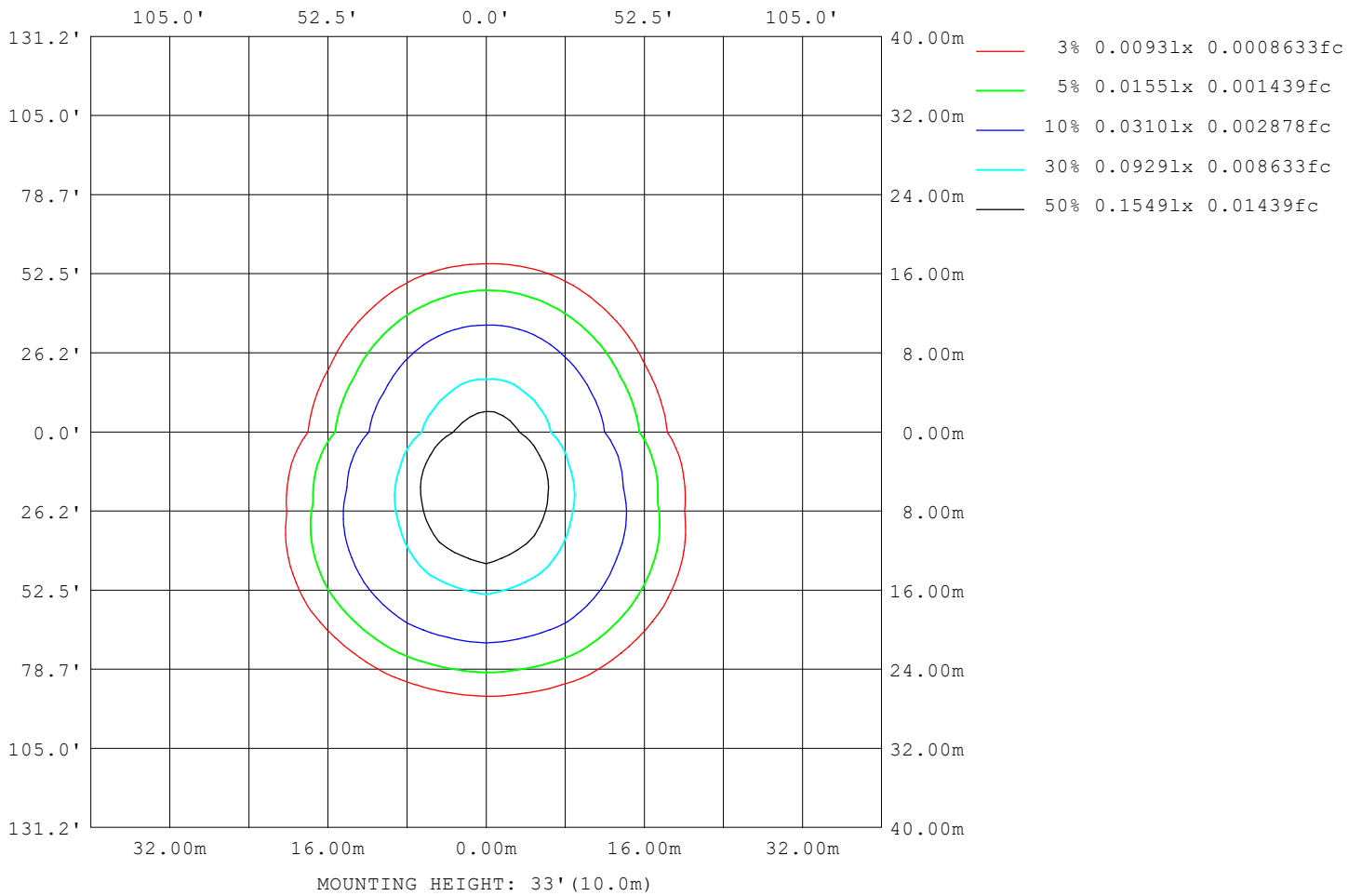
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3°C
 Operators:
 Test Date: 2024-06-17

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:24.101V I:0.1349A P:3.0958W PF:0.9522 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:96.3602x1 lm		
NAME: LSD09-5CCT-24V-WH	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

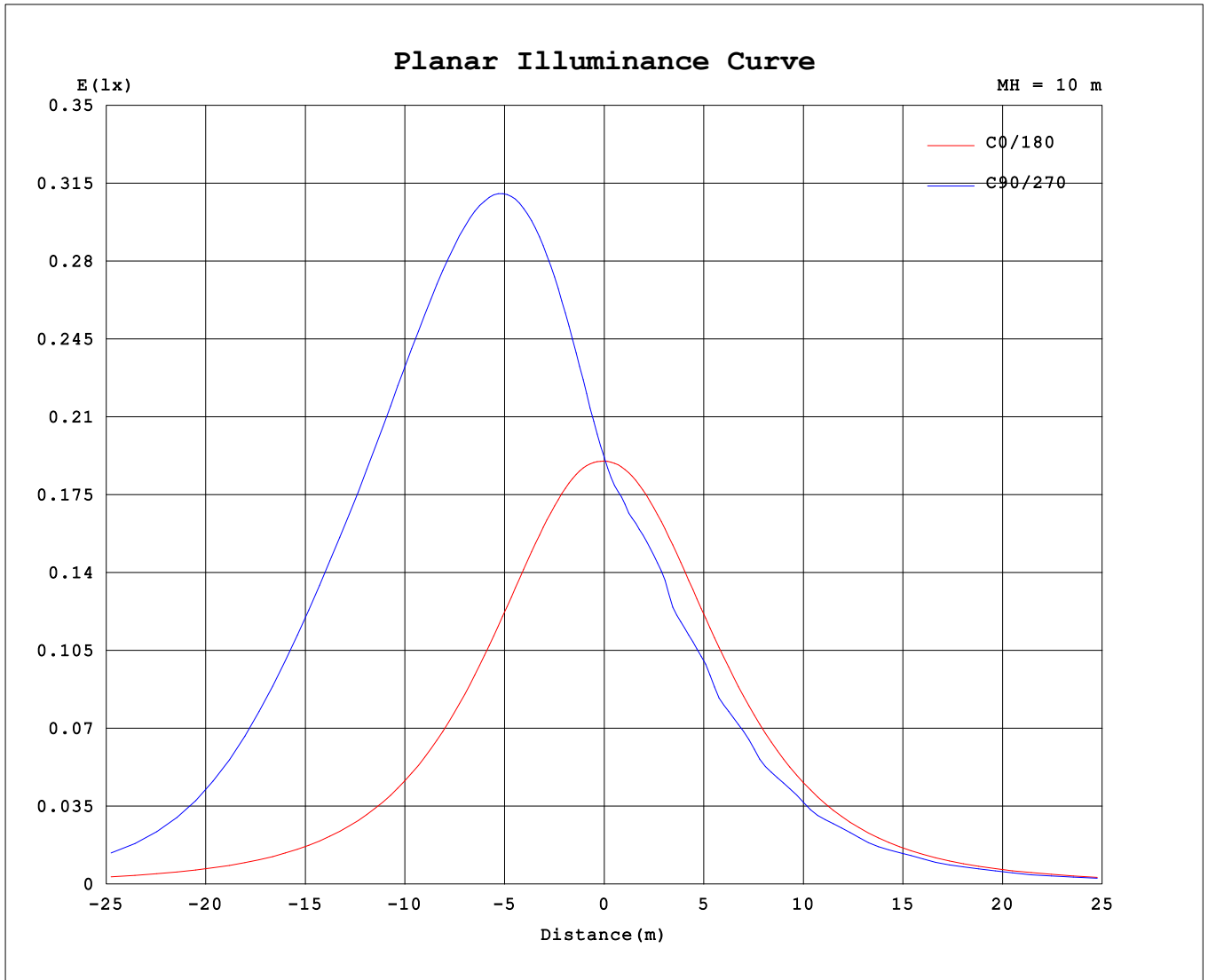
AvgL	cd/m2
L_0~180 (65) av	154
L_0~180 (75) av	138
L_0~180 (85) av	104
L_90~270 (65) av	486
L_90~270 (75) av	217
L_90~270 (85) av	82
L_45 (65) av	326
L_45 (75) av	195
L_45 (85) av	87

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3℃
 Operators:
 Test Date:2024-06-17

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: 24.3 °C
 Operators:
 Test Date: 2024-06-17

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:

