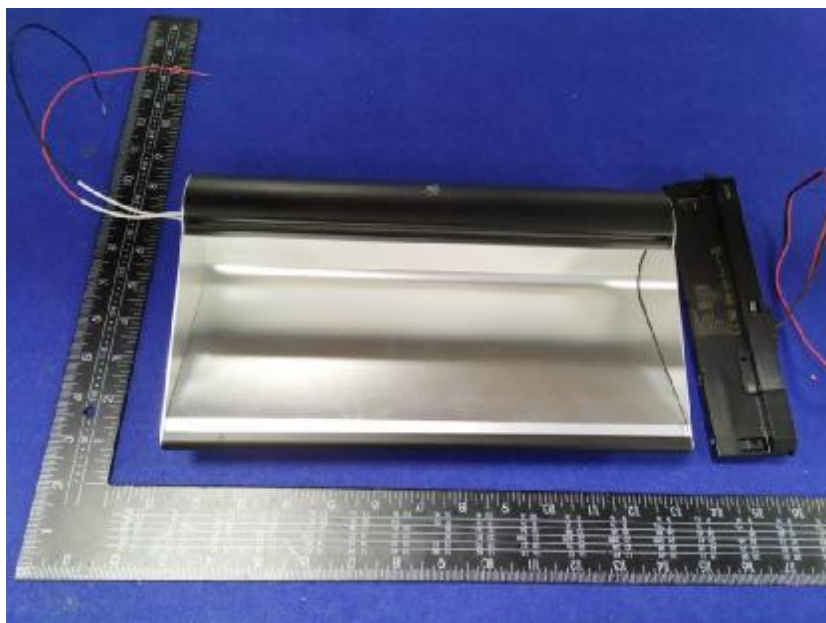


Luminaire Photograph



Light Output Ratio:	69.8%	
Luminaire Power:	27.6 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.00	fine grid method.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: zoe
Test Date: 2019-04-26

g Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity: 65.0%
Test Distance: 3.160m [K=1.0000]
Remarks: LAMP: OSRAM 3030 DRUIS S5 Ra: 90
DRIVER: PRO-04750 700mA
REFLECTOR: MR-1048B 60R
30minutes warm-up

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

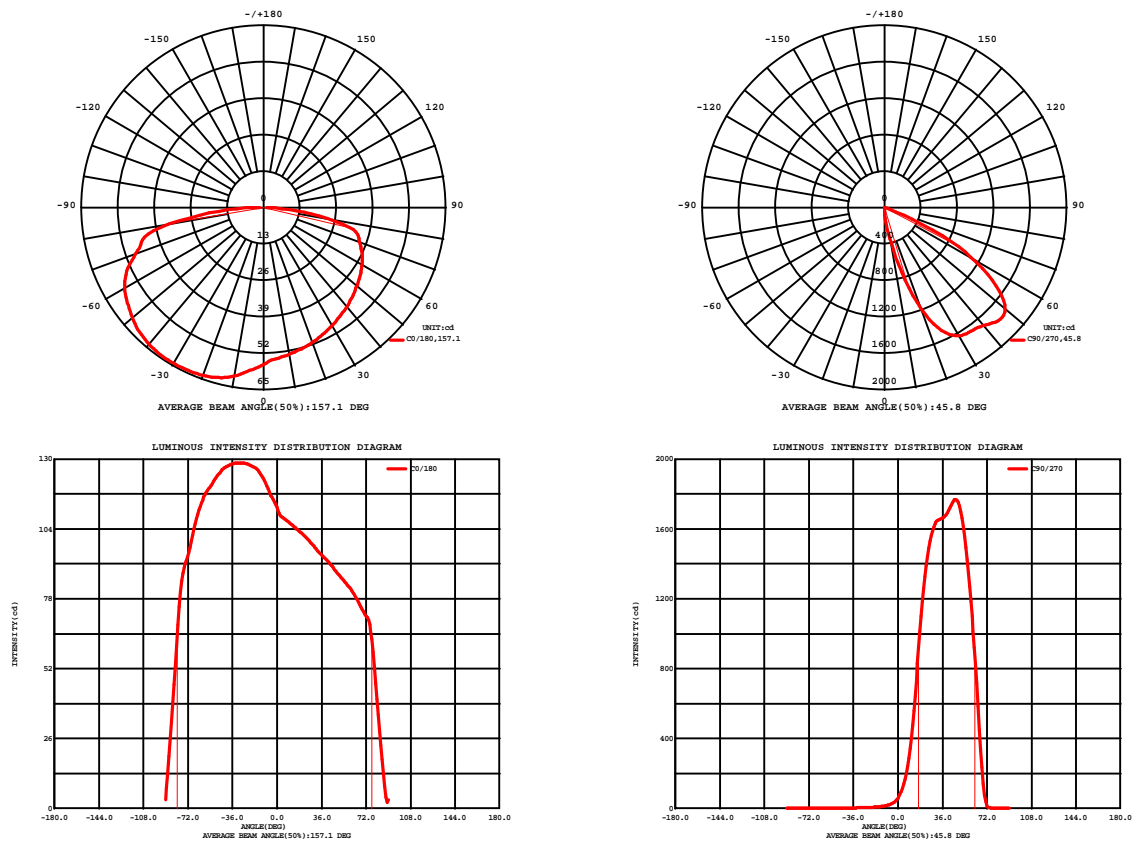


Fig. C0/C180

Fig. C90/C270

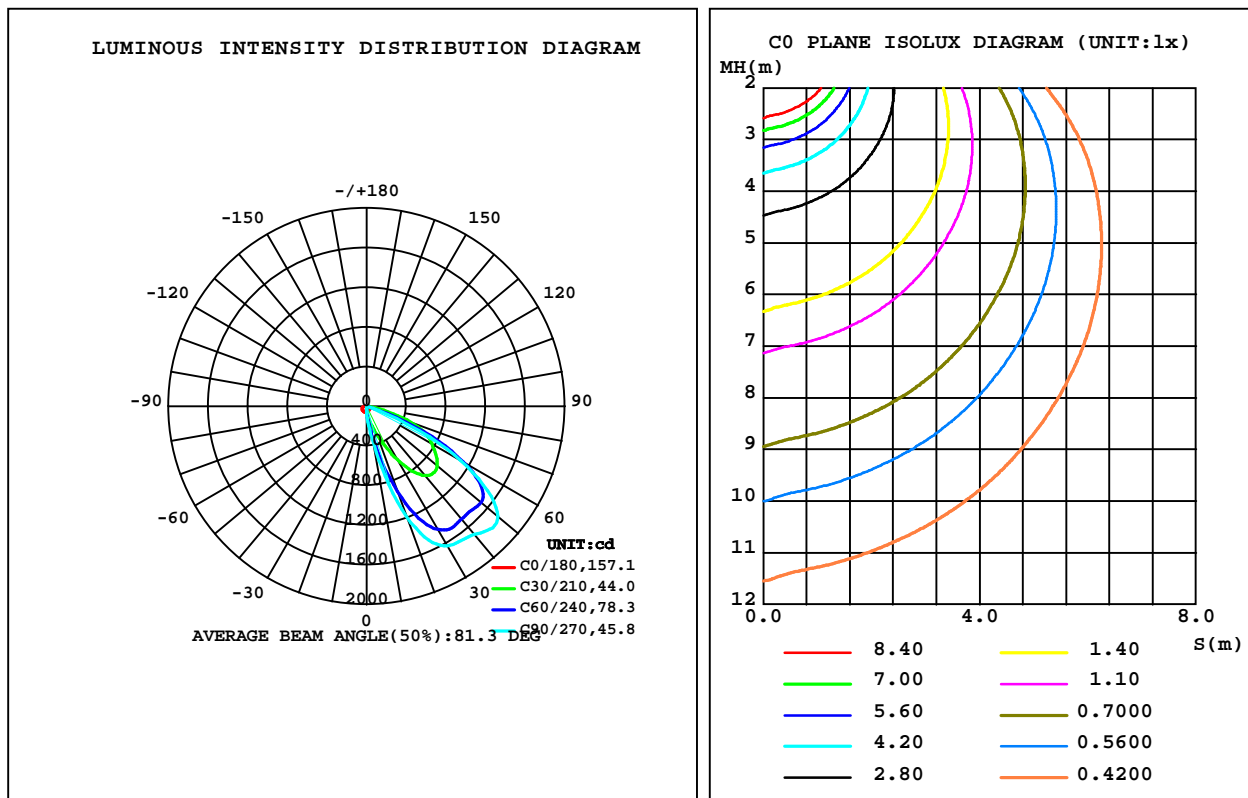
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: zoe
Test Date: 2019-04-26

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity: 65.0%
Test Distance: 3.160m [K=1.0000]
Remarks: LAMP: OSRAM 3030 DRUIS S5 Ra: 90
DRIVER: PRO-04750 700mA
REFLECTOR: MR-1048B 60R
30minutes warm-up

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 70.08 lm/W			
MODEL	OSRAM	Imax(cd)	1769	S/MH(C0/180)	1.71
NOMINAL POWER(W)	28	LOR(%)	69.8	S/MH(C90/270)	0.15
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1933.9	h UP,DN(C0-180)	0.0,68.5
NOMINAL FLUX(lm)	2769.86	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,1.3
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	220	h down(%)	69.8	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zoe
 Test Date:2019-04-26

g Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:3.160m [K=1.0000]
 Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
 DRIVER:PRO-04750 700mA
 REFLECTOR:MR-1048B 60R
 30minutes warm-up

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

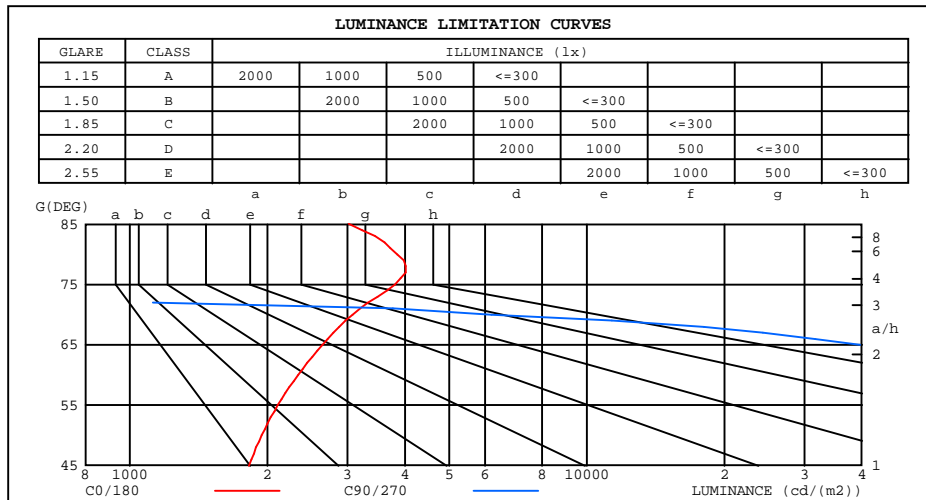
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	53.17	194.3	343.4	226.1	61.05	22.73	14.84	21.75	0- 10	8.186	8.186	0.42,0.30
20	51.20	606.9	1185	723.9	63.66	12.72	7.094	12.10	10- 20	64.59	72.77	3.76,2.63
30	48.75	1029	1627	1204	64.26	8.921	4.320	8.599	20- 30	205.8	278.6	14.4,10.1
40	46.23	1202	1692	1380	63.69	6.975	2.806	6.669	30- 40	351.9	630.4	32.6,22.8
50	43.51	1221	1730	1387	61.22	5.337	1.662	4.938	40- 50	459.0	1089	56.3,39.3
60	40.68	944.9	1100	1086	57.36	3.736	0.9399	3.246	50- 60	473.7	1563	80.8,56.4
70	36.57	351.0	73.57	443.8	48.56	2.087	0.5338	1.797	60- 70	298.6	1862	96.3,67.2
80	23.25	17.61	1.824	31.26	34.11	0.8979	0.2237	0.8075	70- 80	67.09	1929	99.7,69.6
90	1.585	0.2970	0.0227	0.4572	1.548	0.4078	0.1794	0.5604	80- 90	5.057	1934	100,69.8
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: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zoe
 Test Date:2019-04-26

g Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:3.160m [K=1.0000]
 Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
 DRIVER:PRO-04750 700mA
 REFLECTOR:MR-1048B 60R
 30minutes warm-up

LUMINANCE LIMITATION CURVES

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3021	334
80	3848	302
75	3799	362
70	3073	6181
65	2641	39706
60	2338	63205
55	2109	74817
50	1945	77322
45	1824	71505

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zoe
 Test Date:2019-04-26

G Range: 0 - 90DEG
 G Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:3.160m [K=1.0000]
 Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
 DRIVER:PRO-04750 700mA
 REFLECTOR:MR-1048B 60R
 30minutes warm-up

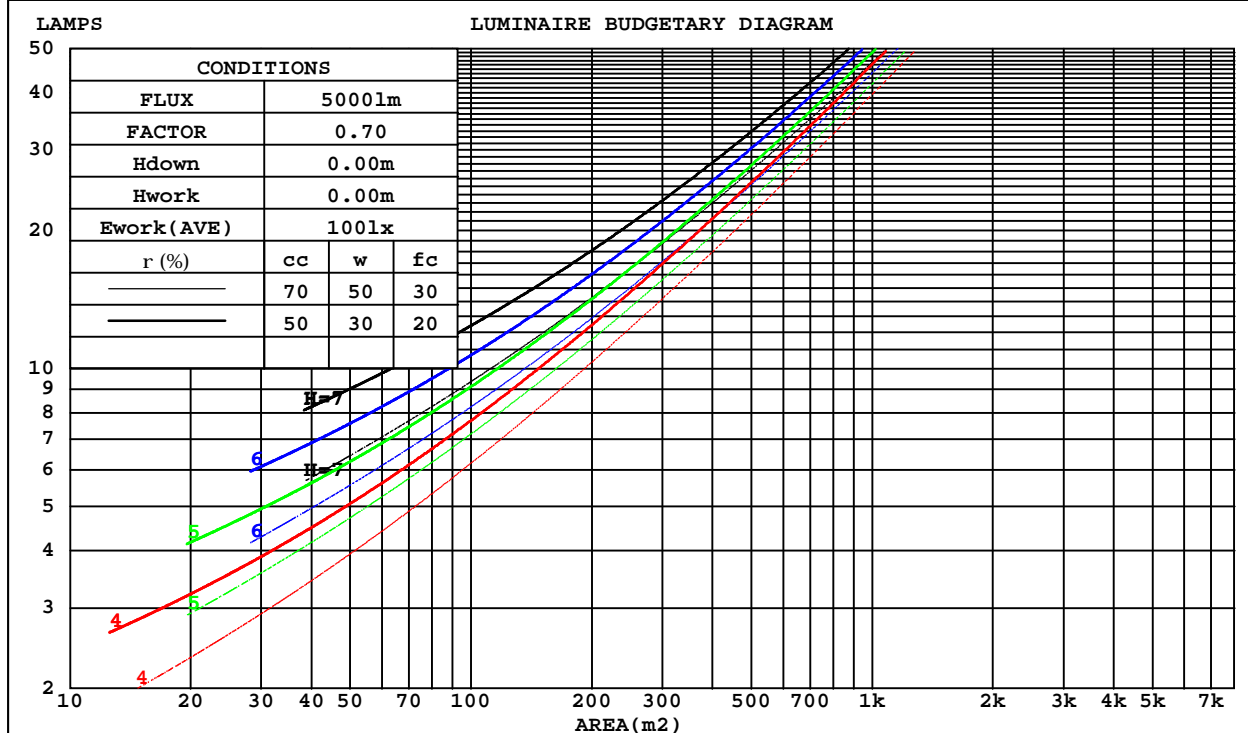


RISE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

g Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up



RISE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.212	.120	.038	.207	.118	.037	.197	.113	.036	.189	.109	.035	.181	.105	.034	
2.0	.208	.114	.035	.204	.112	.035	.196	.109	.034	.188	.106	.033	.181	.103	.032	
3.0	.198	.105	.032	.194	.104	.031	.186	.101	.031	.180	.098	.030	.173	.096	.030	
4.0	.185	.096	.028	.182	.095	.028	.175	.093	.028	.169	.091	.027	.163	.089	.027	
5.0	.172	.088	.025	.169	.087	.025	.163	.085	.025	.158	.083	.025	.153	.082	.025	
6.0	.160	.080	.023	.158	.080	.023	.152	.078	.023	.148	.077	.023	.143	.075	.022	
7.0	.150	.074	.021	.147	.073	.021	.142	.072	.021	.138	.071	.021	.134	.070	.020	
8.0	.140	.068	.019	.138	.068	.019	.133	.067	.019	.129	.066	.019	.126	.064	.019	
9.0	.131	.063	.018	.129	.063	.018	.125	.062	.018	.121	.061	.017	.118	.060	.017	
10.0	.123	.059	.016	.121	.058	.016	.118	.058	.016	.114	.057	.016	.111	.056	.016	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.133	.133	.133	.114	.114	.114	.078	.078	.078	.045	.045	.045	.014	.014	.014	
1.0	.126	.109	.094	.107	.094	.081	.073	.064	.056	.042	.037	.033	.014	.012	.011	
2.0	.121	.092	.068	.104	.079	.059	.071	.055	.041	.041	.032	.024	.013	.010	.008	
3.0	.117	.080	.051	.100	.069	.044	.069	.048	.031	.040	.028	.018	.013	.009	.006	
4.0	.112	.071	.039	.096	.061	.034	.066	.043	.024	.038	.025	.014	.012	.008	.005	
5.0	.108	.064	.031	.093	.055	.027	.064	.039	.019	.037	.023	.011	.012	.007	.004	
6.0	.103	.058	.026	.089	.050	.022	.061	.035	.016	.035	.021	.009	.011	.007	.003	
7.0	.099	.053	.022	.085	.046	.019	.059	.032	.013	.034	.019	.008	.011	.006	.003	
8.0	.094	.049	.019	.081	.043	.016	.056	.030	.012	.033	.018	.007	.011	.006	.002	
9.0	.090	.046	.016	.077	.040	.014	.054	.028	.010	.031	.017	.006	.010	.005	.002	
10.0	.086	.043	.015	.074	.037	.013	.051	.026	.009	.030	.016	.005	.010	.005	.002	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

g Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up

RISE GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR(Unified Glare Rating) Table

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm										
NAME: 1619.101B					TYPE:			WEIGHT:		
SPEC.:3000K					DIM.:			SERIAL No.:1904260897		
MFR.: RISE					SUR.:0.0348m2			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	26.6	28.2	26.8	28.4	28.6	31.9	33.5	32.1	33.7	34.0
3H	27.3	28.8	27.6	29.1	29.3	32.1	33.6	32.4	33.8	34.1
4H	27.4	28.8	27.7	29.1	29.3	31.9	33.4	32.3	33.6	33.9
6H	27.3	28.7	27.7	28.9	29.2	31.8	33.2	32.2	33.5	33.7
8H	27.3	28.6	27.6	28.9	29.2	31.8	33.1	32.1	33.4	33.7
12H	27.2	28.5	27.6	28.8	29.1	31.7	33.0	32.1	33.3	33.6
4H 2H	28.5	30.0	28.9	30.2	30.5	32.1	33.6	32.4	33.8	34.1
3H	29.6	30.8	29.9	31.1	31.4	32.4	33.6	32.7	33.9	34.2
4H	29.8	30.9	30.1	31.2	31.5	32.3	33.4	32.6	33.7	34.0
6H	29.7	30.7	30.1	31.1	31.4	32.2	33.2	32.6	33.5	33.9
8H	29.7	30.6	30.1	31.0	31.4	32.1	33.0	32.5	33.4	33.8
12H	29.7	30.5	30.1	30.9	31.3	32.1	32.9	32.5	33.3	33.7
8H 4H	29.8	30.7	30.2	31.1	31.5	32.2	33.1	32.6	33.5	33.9
6H	29.8	30.5	30.2	30.9	31.4	32.1	32.9	32.6	33.3	33.7
8H	29.8	30.4	30.2	30.8	31.3	32.1	32.8	32.6	33.2	33.6
12H	29.7	30.3	30.2	30.7	31.2	32.1	32.6	32.6	33.1	33.6
12H 4H	29.7	30.6	30.2	31.0	31.4	32.2	33.0	32.6	33.4	33.8
6H	29.7	30.4	30.2	30.8	31.3	32.1	32.8	32.6	33.2	33.6
8H	29.7	30.3	30.2	30.7	31.2	32.1	32.6	32.6	33.1	33.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.1 / - 0.2				
1.5H	+ 0.8 / - 0.9					+ 1.3 / - 1.8				
2.0H	+ 1.9 / - 4.5					+ 1.0 / - 2.3				

CIE Pub.117, 2770 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 3.5$)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up

RISE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

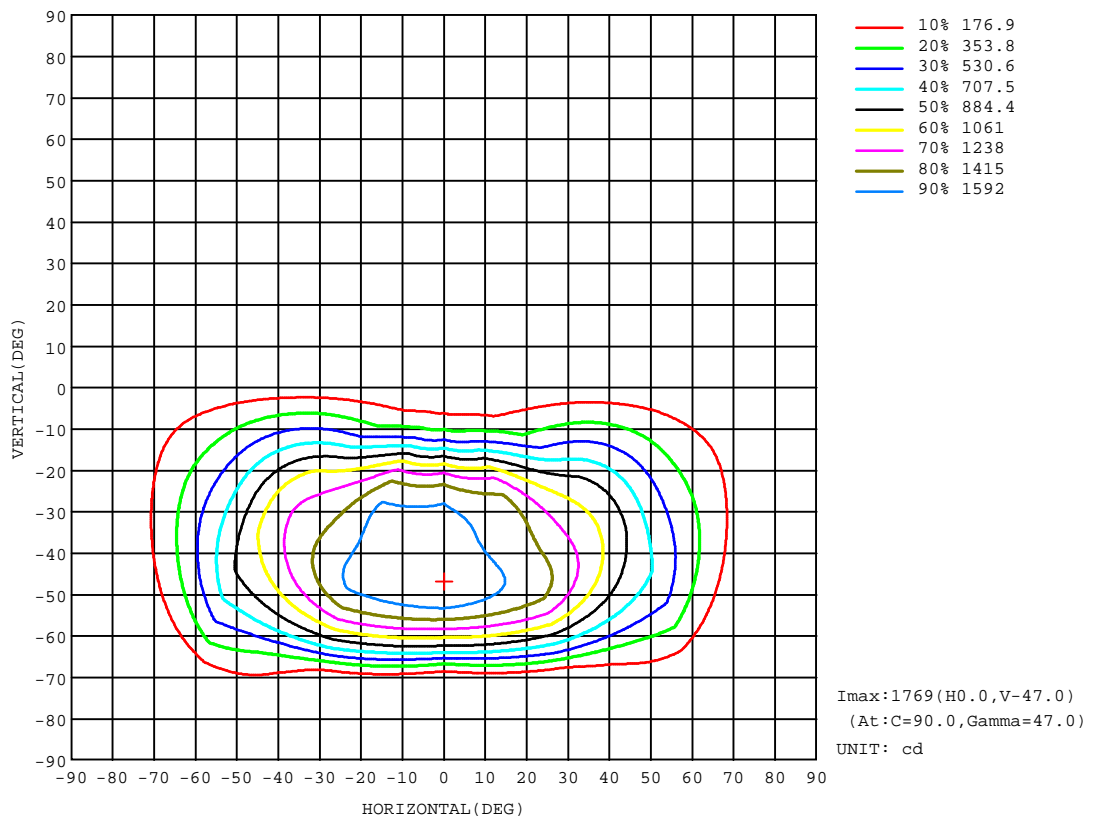
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	34	25	20	34	25	20	33	25	19	14
0.80	42	33	28	42	33	27	40	32	27	22
1.00	50	41	36	49	41	35	47	42	35	30
1.25	56	48	42	55	47	42	53	46	41	36
1.50	60	52	47	58	52	47	56	50	46	40
2.00	65	59	54	64	58	54	62	57	53	47
2.50	68	63	58	67	62	58	64	60	56	50
3.00	71	66	62	70	65	61	67	63	60	54
4.00	74	70	67	72	69	66	69	66	64	58
5.00	76	72	69	74	71	68	71	68	66	60
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zoe
 Test Date:2019-04-26

g Range: 0 - 90DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:3.160m [K=1.0000]
 Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
 DRIVER:PRO-04750 700mA
 REFLECTOR:MR-1048B 60R
 30minutes warm-up

ISOCANDELA DIAGRAM

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

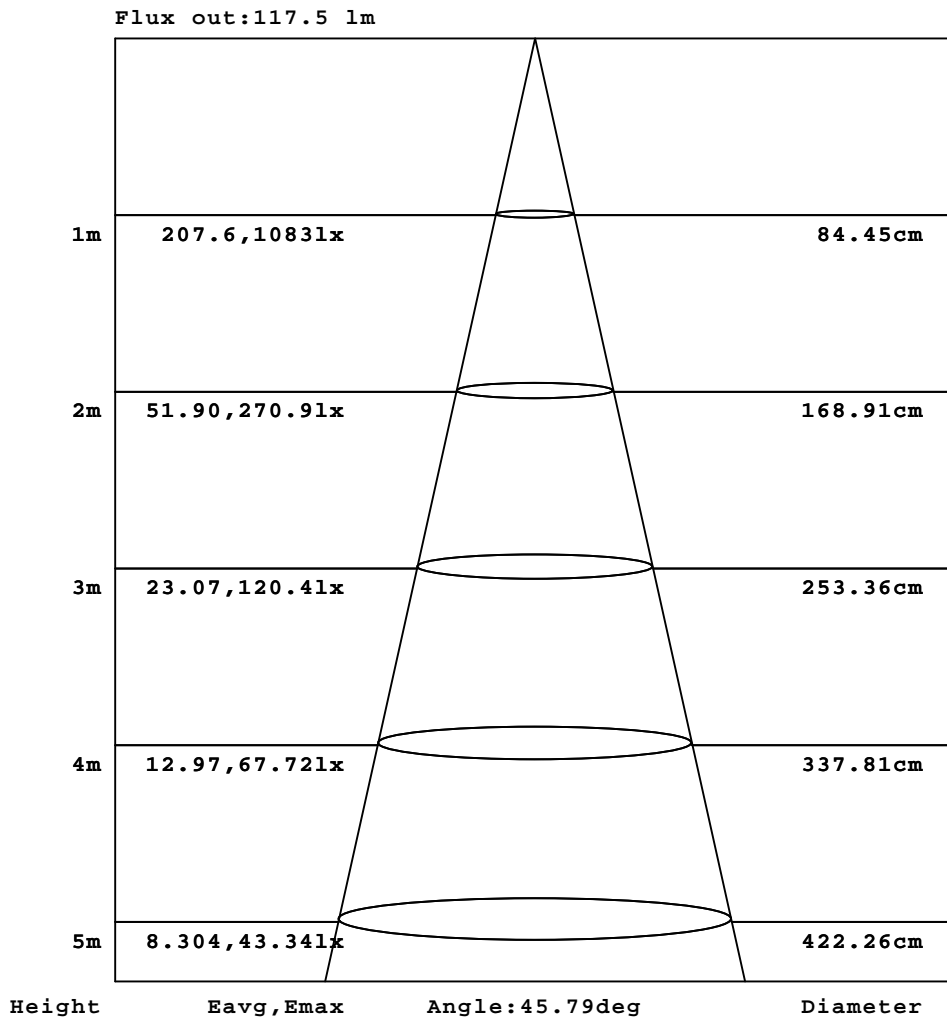


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

deg Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up

AAI Figure

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	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: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: zoe
Test Date: 2019-04-26

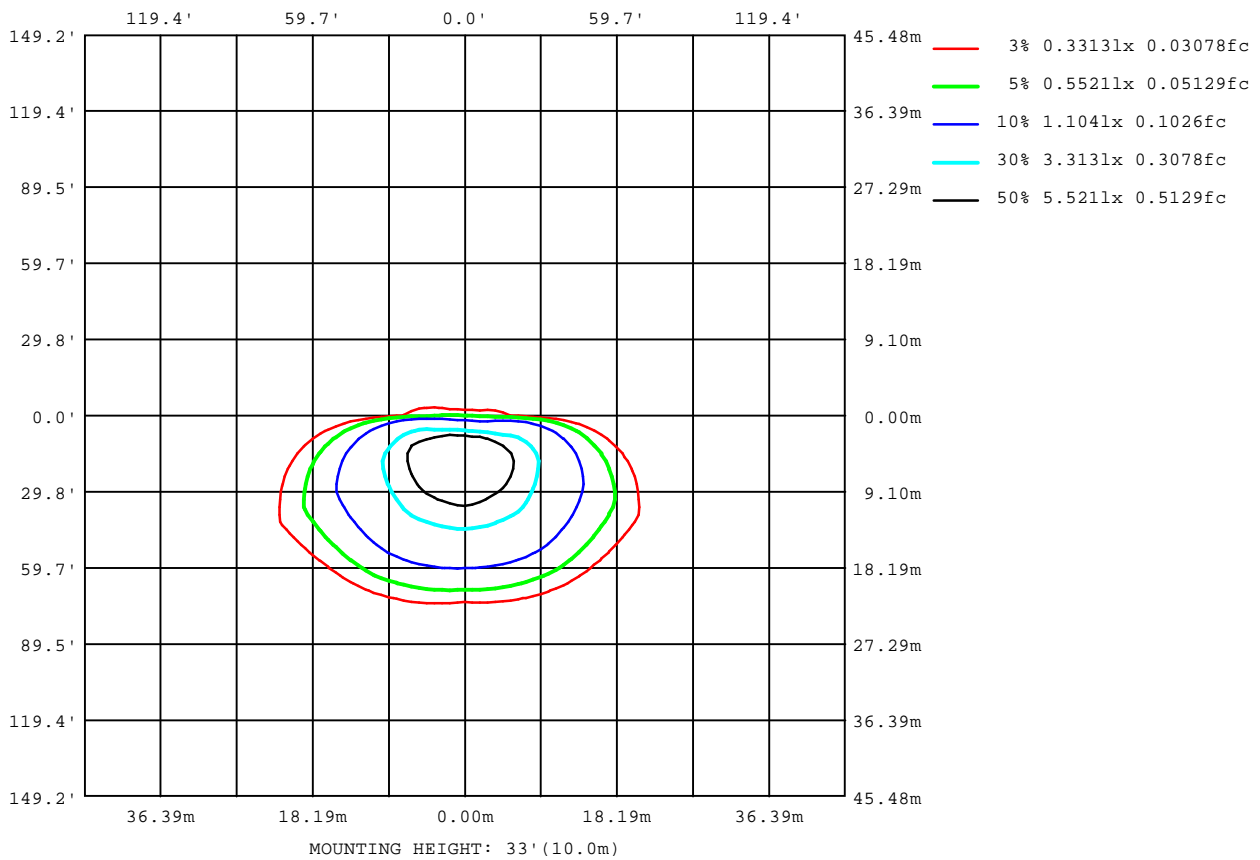
g Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity: 65.0%
Test Distance: 3.160m [K=1.0000]
Remarks: LAMP: OSRAM 3030 DRUIS S5 Ra: 90
DRIVER: PRO-04750 700mA
REFLECTOR: MR-1048B 60R
30minutes warm-up



RISE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up

LED Avg.L Report

Test:U:220.12V I:0.1307A P:27.597W PF:0.9563 Freq:49.99Hz Lamp Flux:2769.86x1 lm		
NAME: 1619.101B	TYPE:	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1904260897
MFR.: RISE	SUR.:0.0348m2	Shielding Angle:

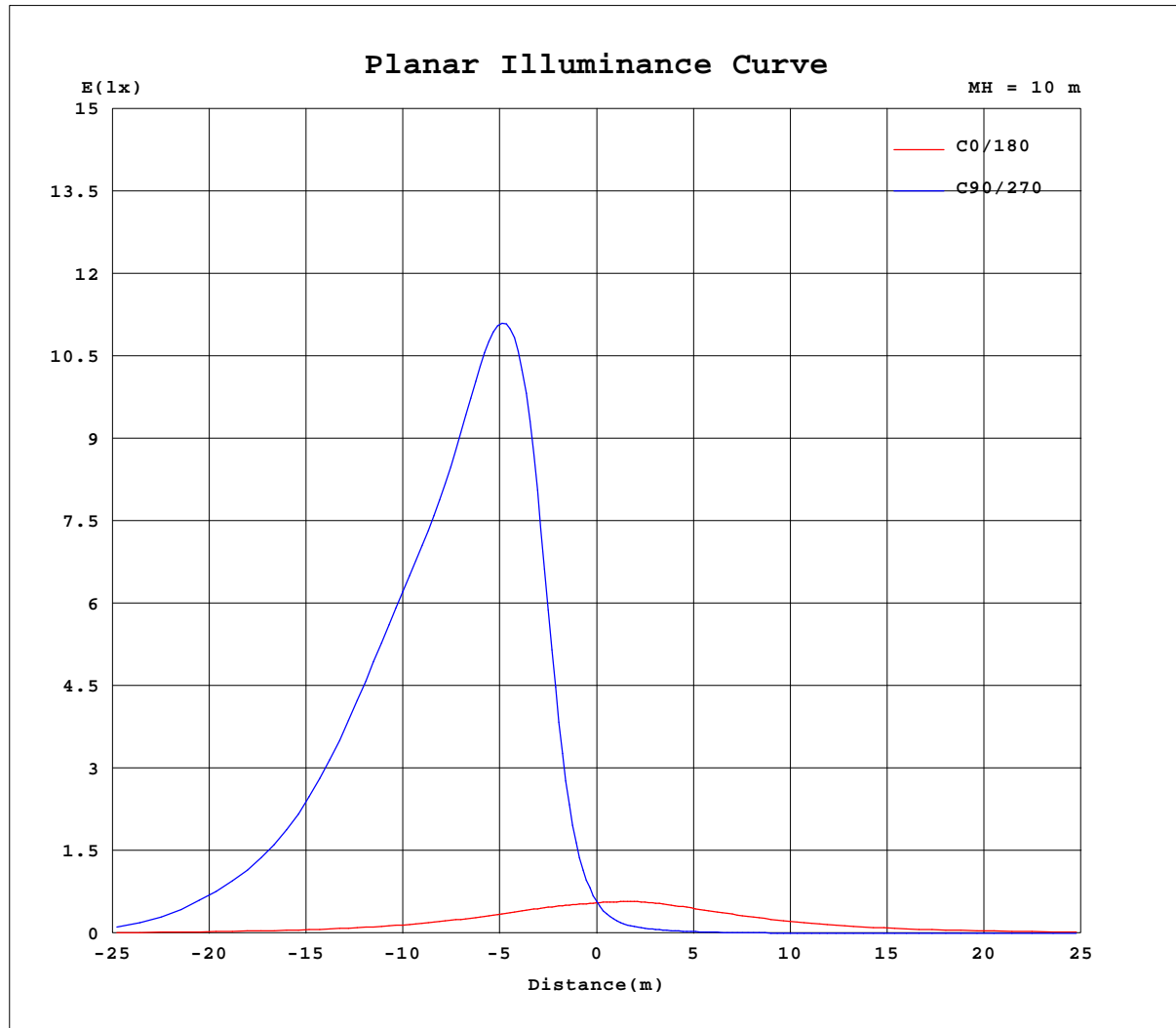
AvgL	cd/m2
L_0~180(65)av	3153
L_0~180(75)av	4387
L_0~180(85)av	4167
L_90~270(65)av	19877
L_90~270(75)av	202
L_90~270(85)av	177
L_45(65)av	27631
L_45(75)av	9274
L_45(85)av	719

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zoe
Test Date:2019-04-26

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks: LAMP:OSRAM 3030 DRUIS S5 Ra:90
DRIVER:PRO-04750 700mA
REFLECTOR:MR-1048B 60R
30minutes warm-up

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: zoe
 Test Date: 2019-04-26

deg Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.0.402
 Humidity: 65.0%
 Test Distance: 3.160m [K=1.0000]
 Remarks: LAMP: OSRAM 3030 DRUIS S5 Ra: 90
 DRIVER: PRO-04750 700mA
 REFLECTOR: MR-1048B 60R
 30minutes warm-up

