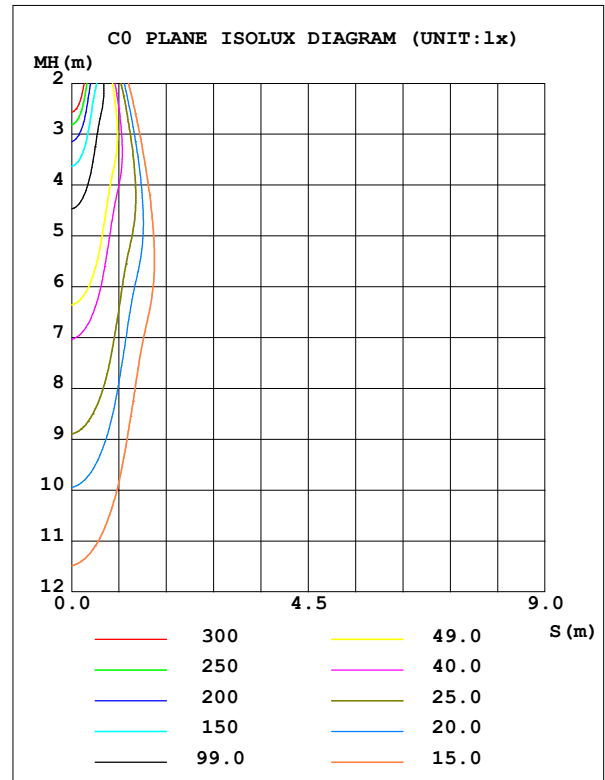
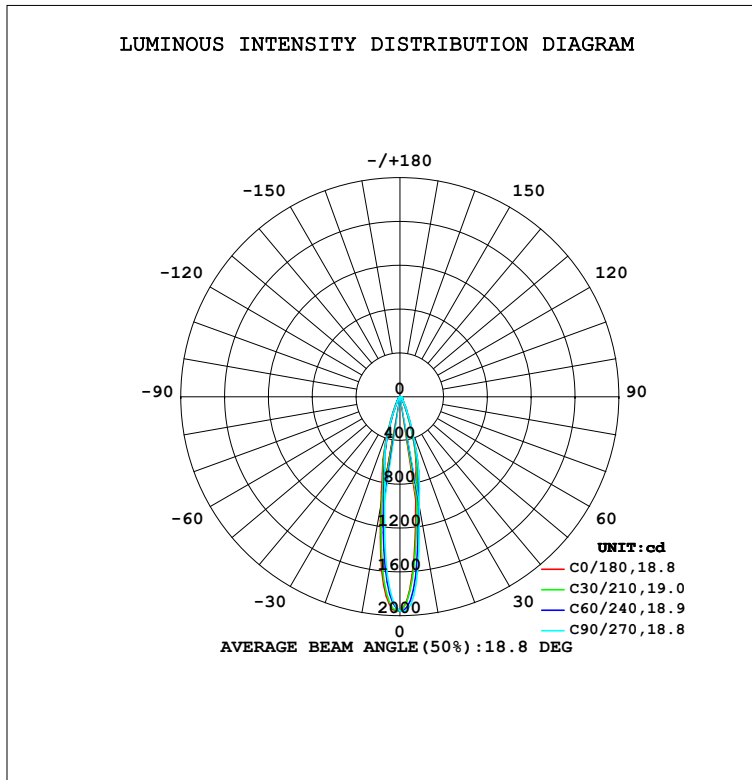


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 58.84 lm/W
MODEL		I _{max} (cd)	1976	S/MH (C0/180)		0.35
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)		0.29
RATED VOLTAGE (V)		TOTAL FLUX (lm)	411.89	η UP,DN (C0-180)		0.0,55.6
NOMINAL FLUX (lm)	411.89	CIE CLASS	DIRECT	η UP,DN (C180-360)		0.0,44.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM		0.00
TEST VOLTAGE (V)		η down (%)	100.0	CIBSE SHR MAX		1.00



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_v1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [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	842.7	943.9	1019	1068	1007	898.8	804.9	752.2	0- 10	128.5	128.5	31.2,31.2
20	286.8	308.4	323.0	324.8	305.0	273.2	267.2	252.1	10- 20	156.0	284.5	69.1,69.1
30	72.38	86.58	92.58	86.28	69.09	57.67	48.09	49.96	20- 30	66.23	350.7	85.2,85.2
40	27.92	35.29	38.55	38.14	26.50	19.14	13.57	15.47	30- 40	27.06	377.8	91.7,91.7
50	11.74	18.89	21.01	23.03	13.97	8.837	6.576	7.421	40- 50	14.72	392.5	95.3,95.3
60	7.175	10.72	11.81	14.49	10.48	5.097	1.524	1.898	50- 60	9.957	402.5	97.7,97.7
70	2.416	6.306	7.018	8.034	5.166	0.9556	0.4382	0.6640	60- 70	5.760	408.2	99.1,99.1
80	0.9653	2.010	2.518	3.429	1.435	0.2070	0.0044	0.1230	70- 80	2.671	410.9	99.8,99.8
90	0	0.6793	1.153	1.171	0.2406	0.0119	0	0.0033	80- 90	0.9812	411.9	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		

C Range: 0 - 360DEG

C Interval: 30.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:Doug

Test Date:05 June 2020

 γ Range: 0 - 90DEG

 γ Interval: 1.0DEG

Test System:EVERFINE GO-i300_v1 SYSTEM V2.0.401

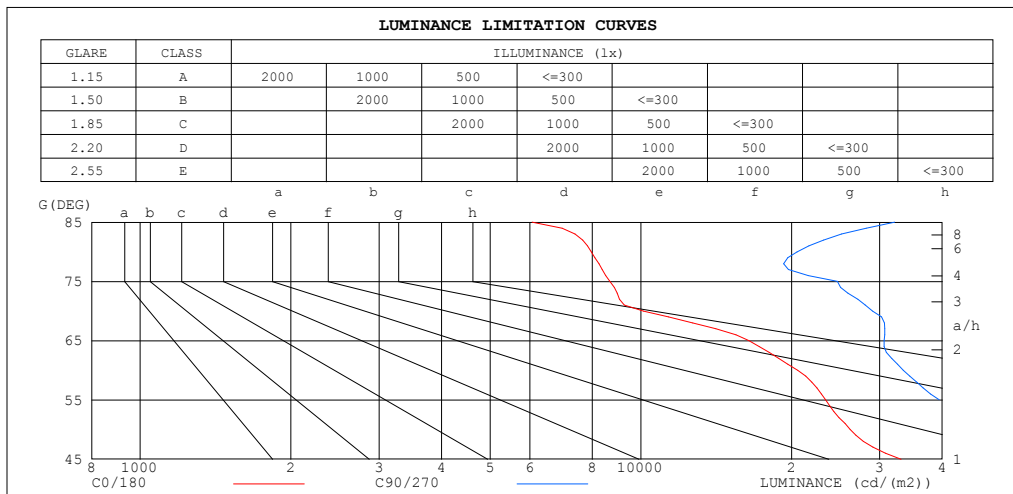
Humidity:65.0%

Test Distance:3.160m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6070	32156
80	7968	20529
75	8679	24688
70	10127	29052
65	16423	30634
60	20569	33441
55	23388	39453
50	26188	46284
45	33095	54573

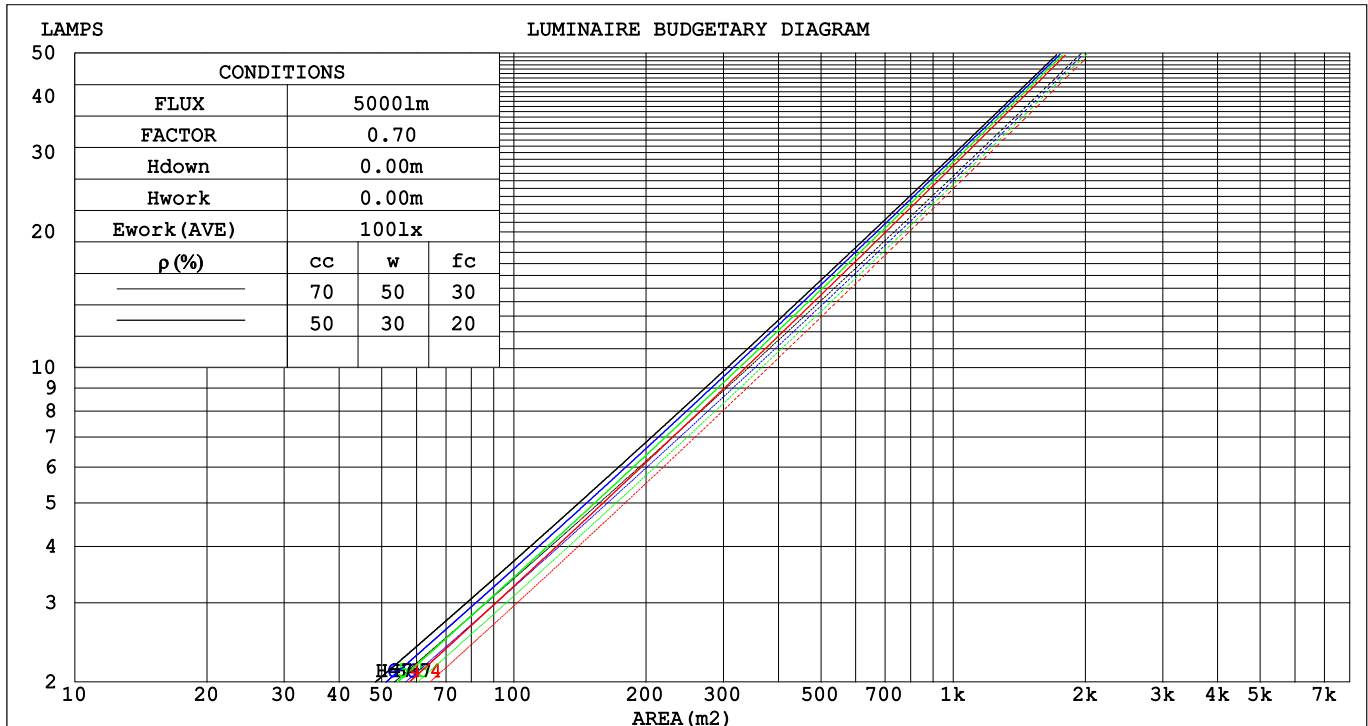
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	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															



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm																	
NAME: SL224-15-G-N-Q4									TYPE:						WEIGHT:		
SPEC.:									DIM.:						SERIAL No.:		
MFR.: Switch Lighting									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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.158	.090	.029	.152	.086	.027	.139	.080	.025	.128	.074	.024	.117	.068	.022	
2.0	.148	.081	.025	.142	.078	.024	.132	.073	.023	.122	.069	.021	.113	.064	.020	
3.0	.138	.073	.022	.133	.071	.021	.124	.067	.020	.116	.064	.020	.109	.060	.019	
4.0	.129	.067	.020	.125	.065	.019	.118	.062	.019	.111	.059	.018	.104	.057	.017	
5.0	.121	.062	.018	.118	.061	.018	.112	.058	.017	.106	.056	.017	.100	.053	.016	
6.0	.114	.057	.016	.112	.056	.016	.106	.054	.016	.101	.052	.015	.096	.051	.015	
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.096	.049	.014	.092	.048	.014	
8.0	.103	.050	.014	.101	.050	.014	.096	.048	.014	.092	.047	.013	.089	.045	.013	
9.0	.098	.047	.013	.096	.047	.013	.092	.046	.013	.089	.044	.013	.085	.043	.013	
10.0	.093	.045	.012	.092	.044	.012	.088	.043	.012	.085	.042	.012	.082	.041	.012	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016		
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013		
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011		
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009		
5.0	.117	.086	.063	.101	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008		
6.0	.109	.076	.053	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006		
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.025	.017	.011	.008	.006		
8.0	.095	.062	.039	.082	.054	.034	.056	.038	.024	.033	.022	.014	.011	.007	.005		
9.0	.089	.056	.034	.077	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004		
10.0	.084	.052	.030	.073	.045	.026	.050	.032	.019	.029	.019	.011	.010	.006	.004		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm											
NAME: SL224-15-G-N-Q4					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: Switch Lighting					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		22.4	23.2	22.7	23.4	23.5	24.3	25.1	24.5	25.2	25.4
	3H	22.8	23.5	23.1	23.7	23.9	25.3	26.0	25.6	26.2	26.4
	4H	22.9	23.6	23.2	23.8	24.0	25.7	26.4	25.9	26.6	26.8
	6H	23.0	23.6	23.2	23.8	24.1	25.8	26.5	26.1	26.7	26.9
	8H	23.0	23.6	23.3	23.8	24.1	25.9	26.5	26.2	26.8	27.0
	12H	23.0	23.5	23.3	23.8	24.1	26.0	26.6	26.4	26.9	27.2
4H	2H	23.0	23.7	23.3	23.9	24.1	24.6	25.3	24.9	25.5	25.7
	3H	23.6	24.1	23.9	24.4	24.7	25.9	26.5	26.2	26.7	27.0
	4H	23.8	24.3	24.1	24.6	24.9	26.3	26.9	26.7	27.2	27.5
	6H	23.9	24.4	24.3	24.7	25.0	26.5	27.0	26.9	27.4	27.7
	8H	23.9	24.4	24.3	24.7	25.1	26.7	27.1	27.1	27.5	27.8
	12H	23.9	24.3	24.3	24.7	25.1	26.9	27.3	27.3	27.6	28.0
8H	4H	24.1	24.5	24.5	24.9	25.2	26.4	26.8	26.8	27.2	27.5
	6H	24.3	24.7	24.7	25.1	25.5	26.6	27.0	27.1	27.4	27.8
	8H	24.4	24.7	24.8	25.1	25.6	26.9	27.2	27.3	27.6	28.0
	12H	24.4	24.7	24.9	25.2	25.6	27.2	27.5	27.6	27.9	28.4
12H	4H	24.1	24.5	24.5	24.8	25.2	26.3	26.8	26.7	27.1	27.5
	6H	24.3	24.7	24.8	25.1	25.5	26.6	27.0	27.1	27.4	27.8
	8H	24.5	24.8	24.9	25.2	25.7	26.9	27.2	27.3	27.6	28.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.7 / - 1.0					+ 0.4 / - 0.6					
1.5H	+ 0.9 / - 1.2					+ 0.6 / - 0.3					
2.0H	+ 0.7 / - 1.0					+ 0.7 / - 0.9					

CIE Pub.117, 411.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.1)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

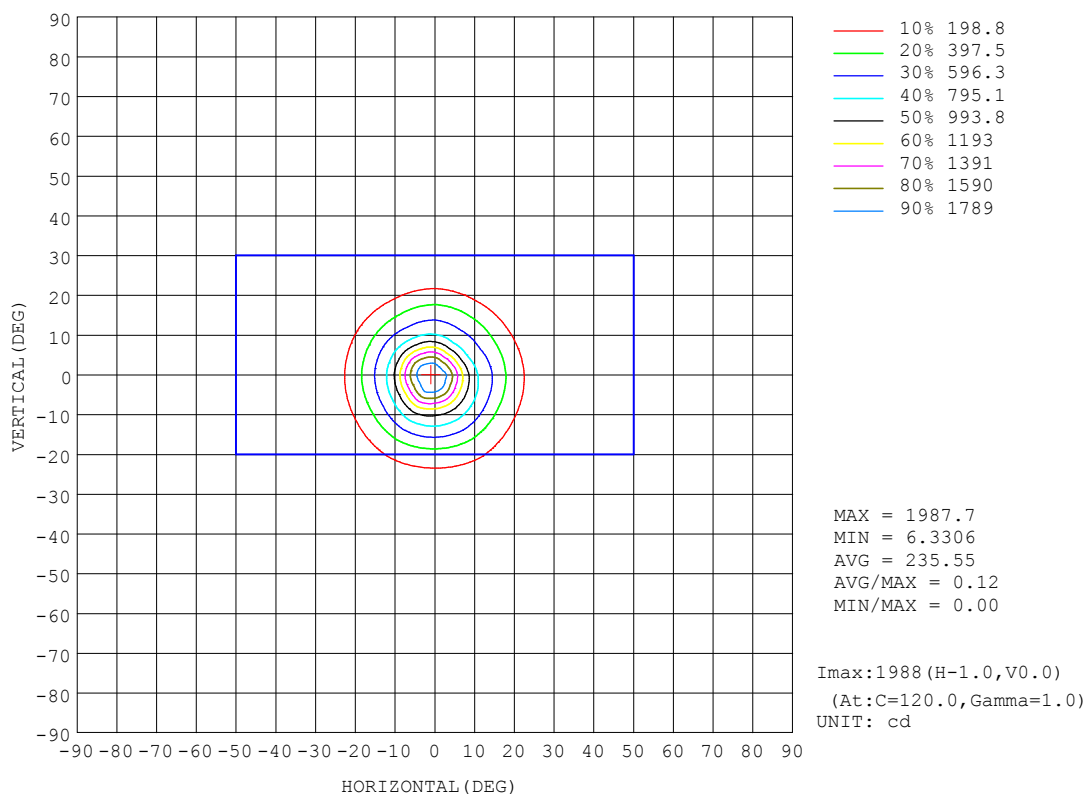
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	87	84	92	87	83	80
1.00	98	93	89	97	92	89	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	106	104	106	104	102	95
4.00	113	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

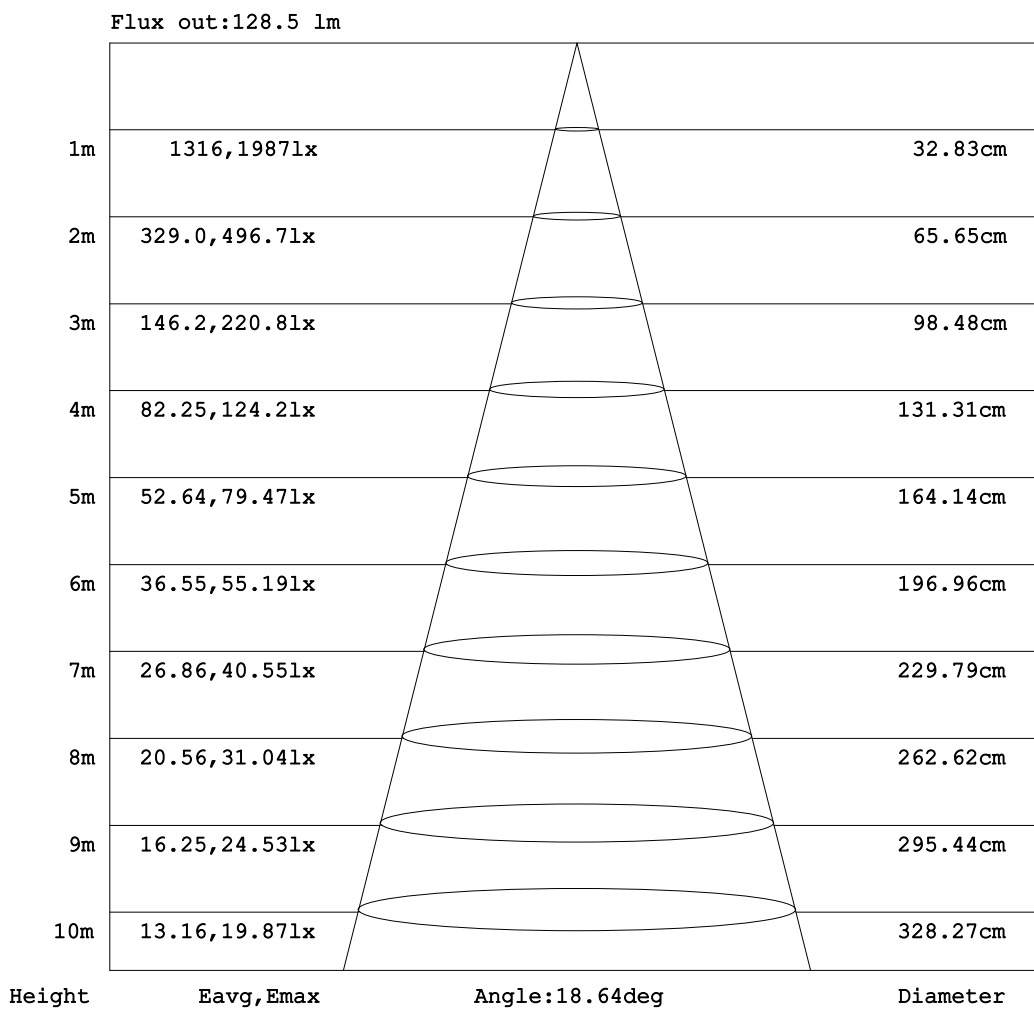


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_v1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

AAI Figure

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



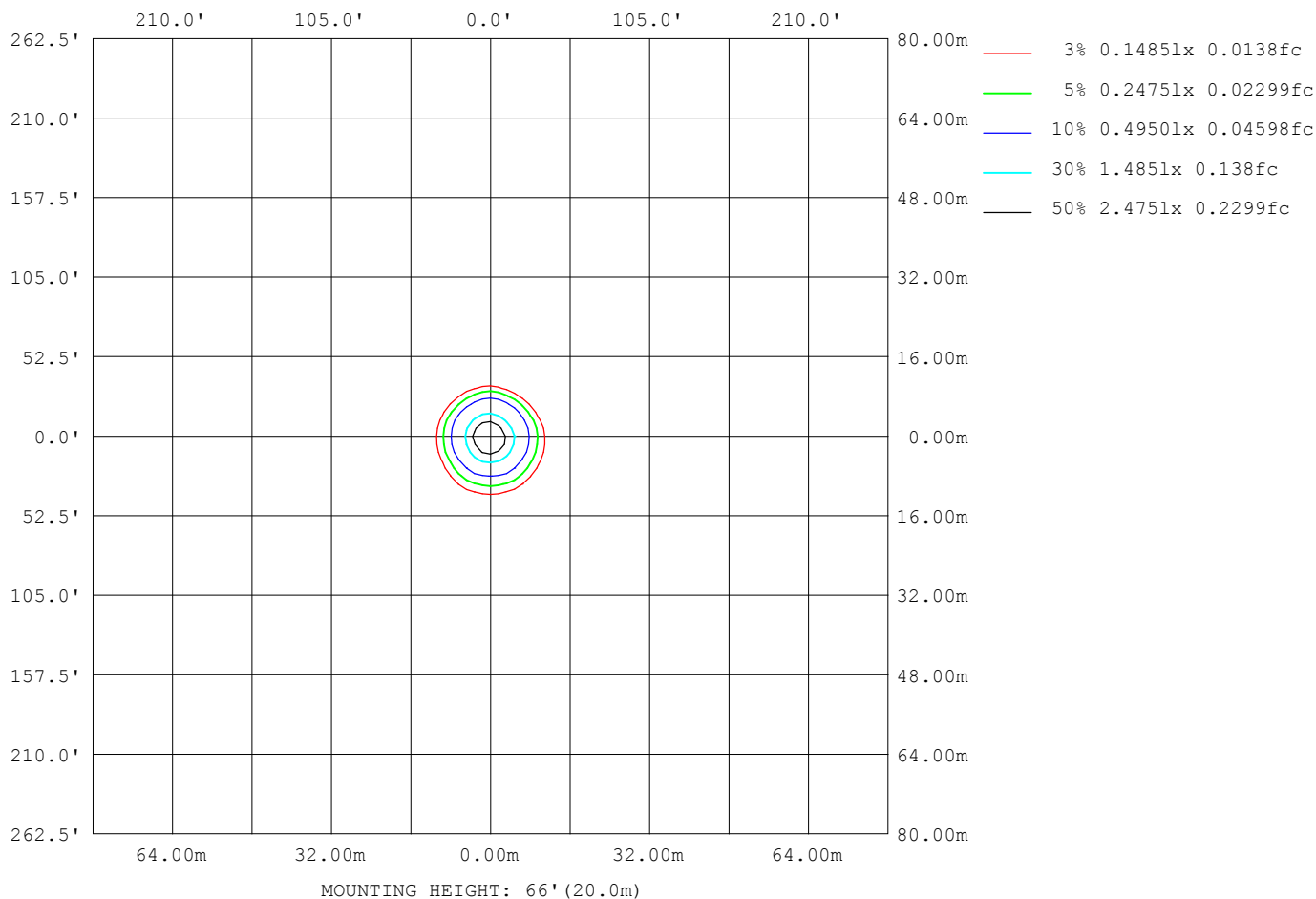
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:229.90V I:0.0450A P:7.0000W PF:0.6890 Freq:50.00Hz Lamp Flux:411.89x1 lm		
NAME: SL224-15-G-N-Q4	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

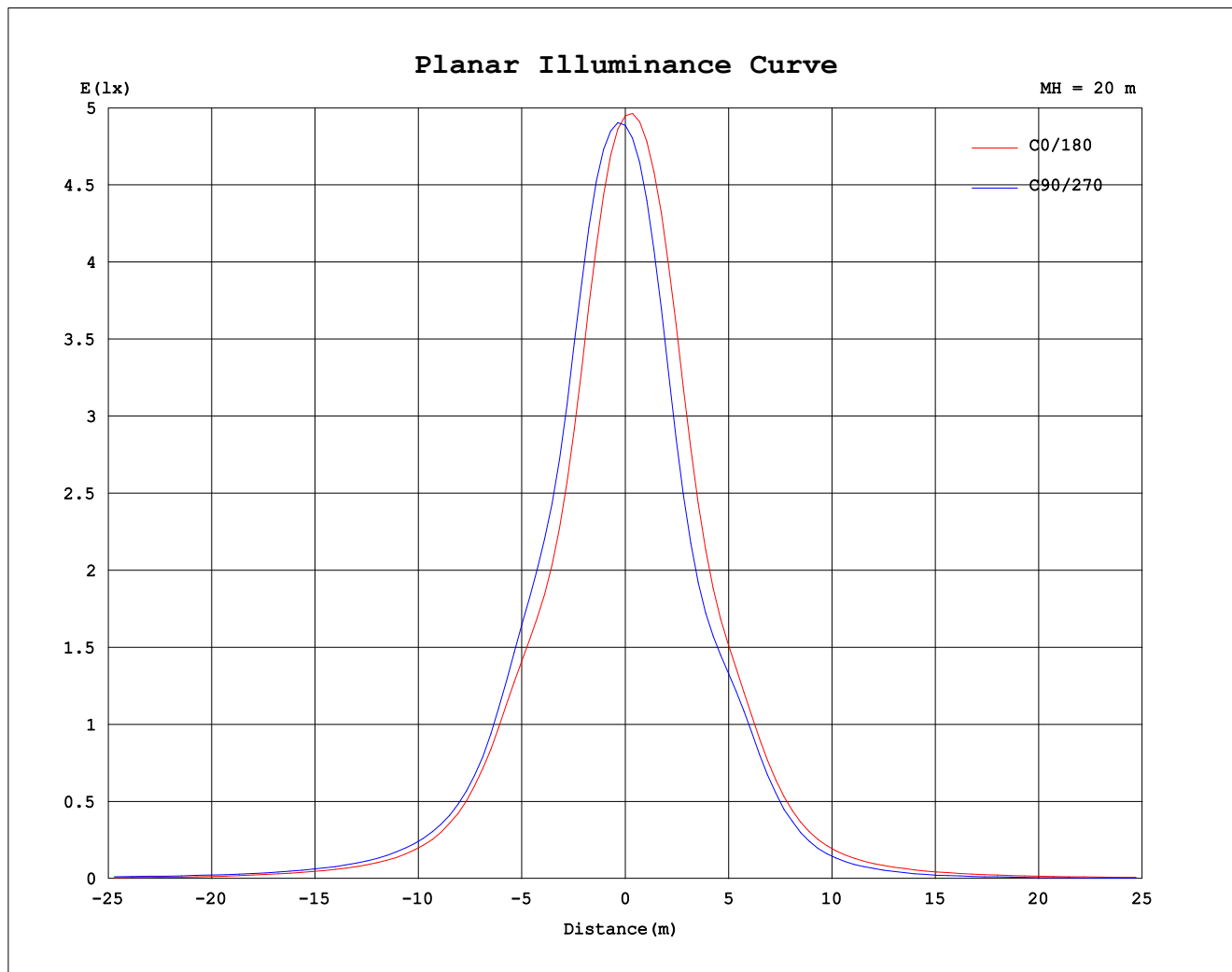
AvgL	cd/m2
L_0~180 (65) av	20637
L_0~180 (75) av	11549
L_0~180 (85) av	9562
L_90~270 (65) av	16726
L_90~270 (75) av	12619
L_90~270 (85) av	16084
L_45 (65) av	20138
L_45 (75) av	14911
L_45 (85) av	16397

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Doug
Test Date:05 June 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Doug
 Test Date: 05 June 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 3.160m [K=1.0000]
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 3.160m [K=1.0000]
Remarks:

```