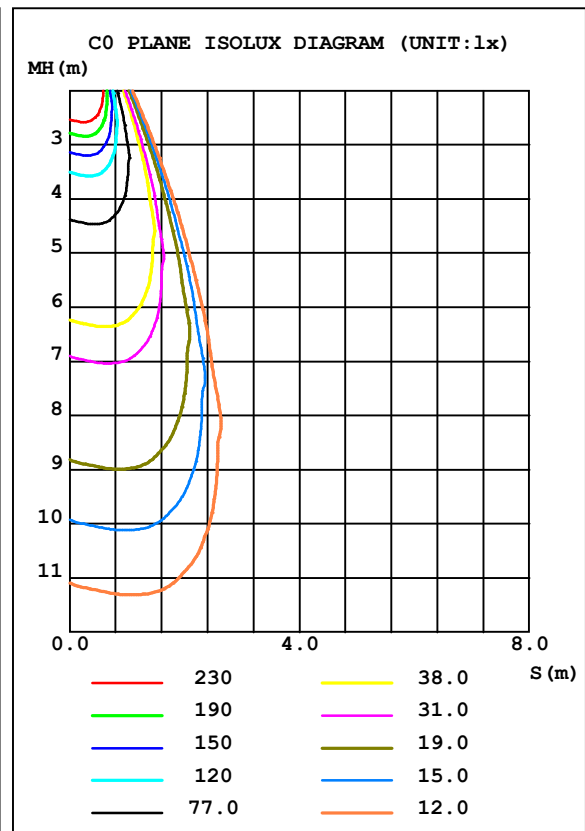
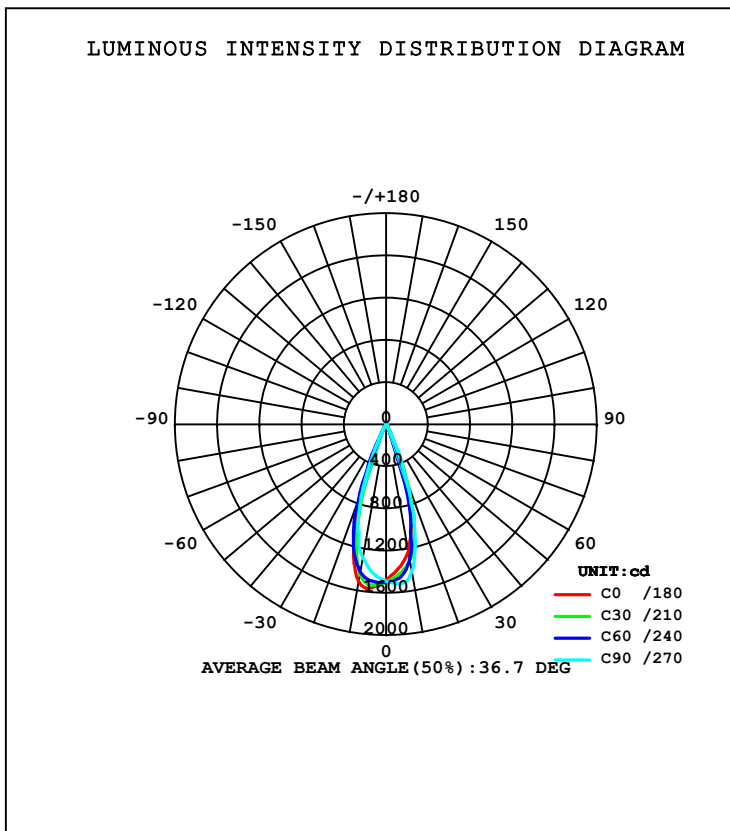


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm		
NAME: KD032075S	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.15 lm/W			
MODEL	V6HD	I <sub>max</sub> (cd)	1563	S/MH (C0/180)	0.57
NOMINAL POWER (W)	7	EFFICIENCY (%)	100.0	S/MH (C90/270)	0.57
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	550.83	η UP (C0-180)	0.0
NOMINAL FLUX (lm)	550.83	CIE CLASS	DIRECT	η DN (C0-180)	50.6
LAMPS INSIDE	1	η up (%)	0.0	η UP (C180-360)	0.0
TEST VOLTAGE (V)	220.3	η down (%)	100.0	η DN (C180-360)	49.4



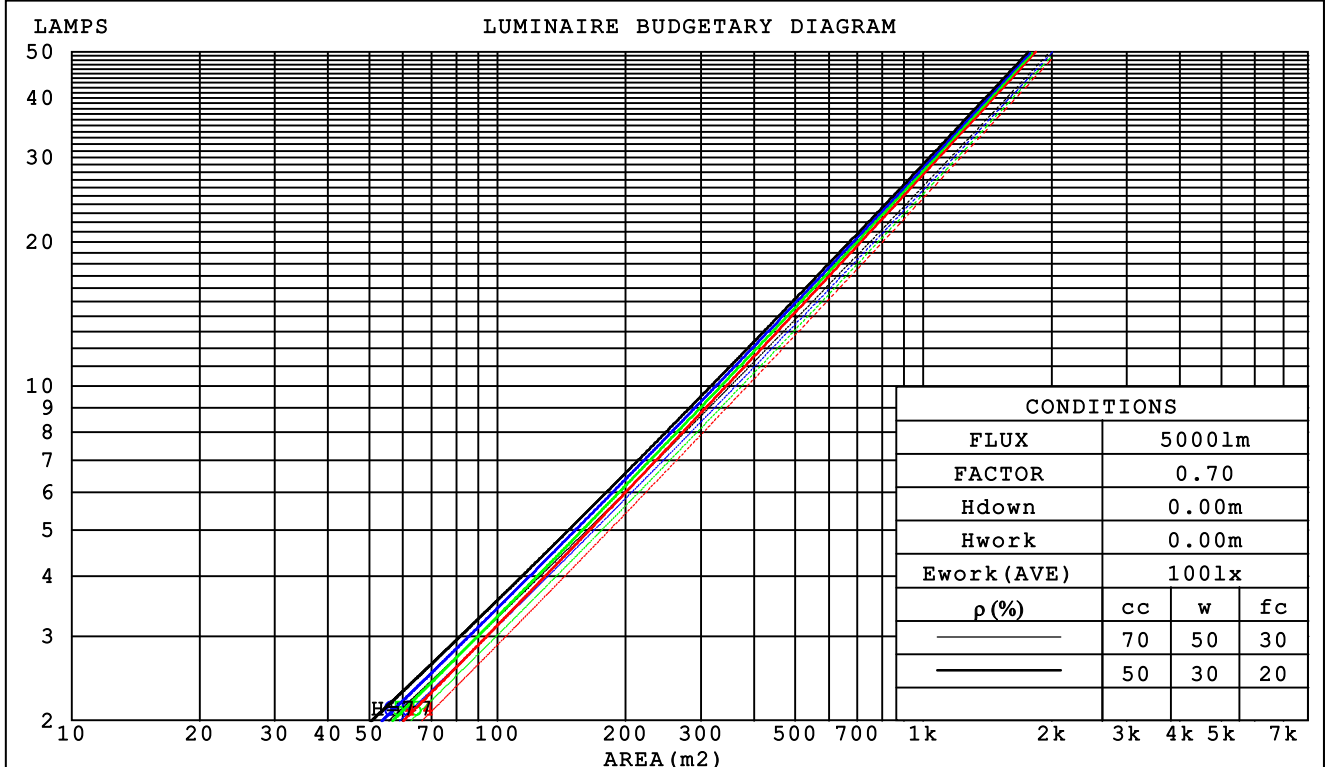
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 26DEG  
 Operators:  
 Test Date: 2020-04-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B SYSTEM V1.0.202  
 Humidity: 75%  
 Test Distance: 6.500m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm		
NAME: KD032075S	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION 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	1.12	1.10	1.09	1.10	1.09	1.07	1.06	1.05	1.04	1.03	1.02	1.01	.99	.98	.98	.96
2.0	1.07	1.04	1.01	1.05	1.02	.90	1.02	.90	.98	.99	.97	.96	.96	.95	.94	.92
3.0	1.02	.98	.95	1.01	.97	.94	.98	.95	.93	.96	.93	.91	.94	.92	.90	.89
4.0	.98	.93	.90	.96	.93	.90	.94	.91	.89	.93	.90	.88	.91	.89	.87	.85
5.0	.94	.89	.86	.93	.89	.86	.91	.88	.85	.90	.87	.84	.88	.86	.84	.82
6.0	.90	.86	.82	.89	.85	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.79
7.0	.87	.82	.79	.86	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.77
8.0	.84	.79	.76	.83	.79	.76	.82	.78	.76	.81	.78	.75	.80	.77	.75	.74
9.0	.81	.76	.74	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.73	.72
10.0	.78	.74	.71	.78	.74	.71	.77	.73	.71	.76	.73	.71	.76	.73	.70	.69



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:26DEG  
 Operators:  
 Test Date:2020-04-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
 Humidity:75%  
 Test Distance:6.500m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%
10	1510	1431	1287	1197	1223	1306	1417	1495	0- 10	137.0	137.0	24.86
20	645.3	674.5	641.8	593.4	562.2	524.2	573.1	628.9	10- 20	281.8	418.8	76.02
30	46.11	47.40	65.94	73.73	56.63	52.76	56.93	61.06	20- 30	111.6	530.3	96.28
40	8.088	8.343	6.202	9.730	9.658	10.11	9.769	9.408	30- 40	14.67	545.0	98.94
50	0.6657	0.3939	0.1498	0.3107	1.132	1.331	1.171	1.514	40- 50	2.571	547.6	99.41
60	0.1165	0.1775	0.1387	0.1498	1.198	1.337	1.265	1.179	50- 60	0.6173	548.2	99.52
70	0.1165	0.4022	0.3107	0.2940	1.370	1.379	1.357	1.270	60- 70	0.7212	548.9	99.65
80	0.4493	0.4299	0.5381	0.4133	1.226	1.268	1.215	1.248	70- 80	0.8732	549.8	99.81
90	0.5048	0.7378	0.7434	0.8876	1.331	1.279	1.304	1.379	80- 90	1.032	550.8	100.00
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:26DEG  
Operators:  
Test Date:2020-04-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
Humidity:75%  
Test Distance:6.500m [K=1.0000]  
Remarks:

**WEC AND CCEC**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm															
NAME: KD032075S						TYPE:						WEIGHT:			
DIMENSION:						SPECIFICATION:						SERIAL No.:			
MANUFACTURER:						SURFACE:						PROTECTION ANGLE:			

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.145	.083	.026	.139	.079	.025	.126	.072	.023	.115	.066	.021	.104	.060	.019	
2.0	.134	.074	.023	.129	.071	.022	.119	.066	.020	.109	.061	.019	.100	.057	.018	
3.0	.125	.067	.020	.121	.065	.019	.112	.061	.018	.104	.057	.018	.097	.054	.017	
4.0	.118	.061	.018	.114	.060	.018	.107	.057	.017	.100	.054	.016	.094	.051	.015	
5.0	.111	.057	.016	.108	.055	.016	.102	.053	.016	.096	.051	.015	.091	.048	.015	
6.0	.106	.053	.015	.103	.052	.015	.097	.050	.015	.092	.048	.014	.088	.046	.014	
7.0	.101	.050	.014	.098	.049	.014	.093	.047	.014	.089	.046	.013	.085	.044	.013	
8.0	.096	.047	.013	.094	.046	.013	.090	.045	.013	.086	.044	.013	.082	.042	.012	
9.0	.092	.045	.012	.090	.044	.012	.087	.043	.012	.083	.042	.012	.080	.041	.012	
10.0	.089	.042	.012	.087	.042	.012	.084	.041	.012	.080	.040	.011	.078	.039	.011	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.151	.133	.117	.130	.114	.101	.089	.079	.071	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.107	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.114	.086	.065	.098	.074	.056	.068	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.106	.076	.055	.091	.066	.048	.063	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.098	.068	.047	.085	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.092	.061	.040	.079	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.087	.056	.035	.075	.048	.030	.052	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.082	.051	.031	.071	.044	.027	.049	.031	.019	.029	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:26DEG  
 Operators:  
 Test Date:2020-04-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
 Humidity:75%  
 Test Distance:6.500m [K=1.0000]  
 Remarks:

**Uncorrected UGR Table**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm										
NAME: KD032075S					TYPE:			WEIGHT:		
DIMENSION:					SPECIFICATION:			SERIAL No.:		
MANUFACTURER:					SURFACE:			PROTECTION 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	5.9	6.6	6.1	6.7	6.9	8.0	8.7	8.2	8.8	9.0
3H	5.8	6.4	6.0	6.6	6.8	7.9	8.5	8.1	8.7	8.9
4H	5.9	6.5	6.1	6.7	6.9	7.9	8.5	8.1	8.7	8.9
6H	6.2	6.8	6.5	7.0	7.3	8.1	8.6	8.3	8.9	9.1
8H	6.8	7.4	7.1	7.6	7.9	8.3	8.9	8.6	9.1	9.3
12H	7.3	7.9	7.6	8.1	8.4	8.8	9.3	9.1	9.6	9.8
4H 2H	5.7	6.3	5.9	6.5	6.7	7.7	8.4	8.0	8.6	8.8
3H	5.6	6.2	5.9	6.4	6.7	7.7	8.2	8.0	8.5	8.7
4H	5.8	6.3	6.1	6.6	6.9	7.7	8.2	8.1	8.5	8.8
6H	6.5	6.9	6.8	7.2	7.6	8.1	8.5	8.5	8.8	9.2
8H	7.4	7.8	7.8	8.1	8.5	8.4	8.8	8.8	9.2	9.6
12H	8.2	8.5	8.6	8.9	9.3	9.2	9.6	9.6	10.0	10.3
8H 4H	5.8	6.2	6.2	6.6	6.9	7.7	8.1	8.0	8.4	8.8
6H	6.9	7.2	7.3	7.6	8.0	8.2	8.5	8.6	8.9	9.3
8H	8.2	8.5	8.6	8.9	9.3	8.7	9.0	9.2	9.4	9.9
12H	9.3	9.5	9.7	10.0	10.4	9.8	10.1	10.3	10.5	11.0
12H 4H	5.8	6.2	6.2	6.6	7.0	7.7	8.1	8.1	8.4	8.8
6H	7.1	7.4	7.5	7.8	8.2	8.3	8.6	8.8	9.0	9.5
8H	8.6	8.8	9.0	9.3	9.7	9.0	9.3	9.5	9.7	10.2
Variations with the observer position at spacings:										
S = 1.0H	+ 1.7 / - 1.4					+ 2.1 / - 2.5				
1.5H	+ 3.6 / - 1.6					+ 4.2 / - 2.8				
2.0H	+ 0.9 / - 0.5					+ 1.2 / - 2.0				

CIE Pub.117 Corrected 550.8 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.1)

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:26DEG  
Operators:  
Test Date:2020-04-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
Humidity:75%  
Test Distance:6.500m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm		
NAME: KD032075S	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

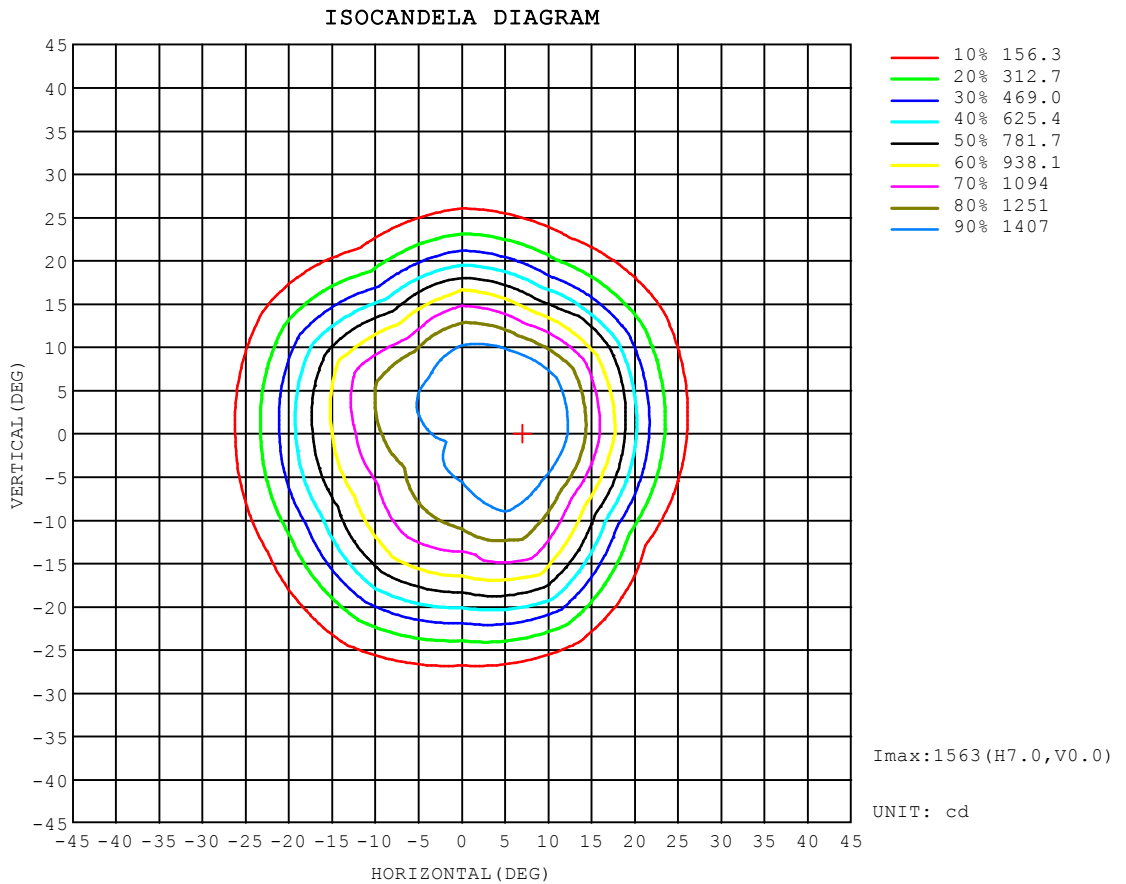
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
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:26DEG  
Operators:  
Test Date:2020-04-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
Humidity:75%  
Test Distance:6.500m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm		
NAME: KD032075S	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

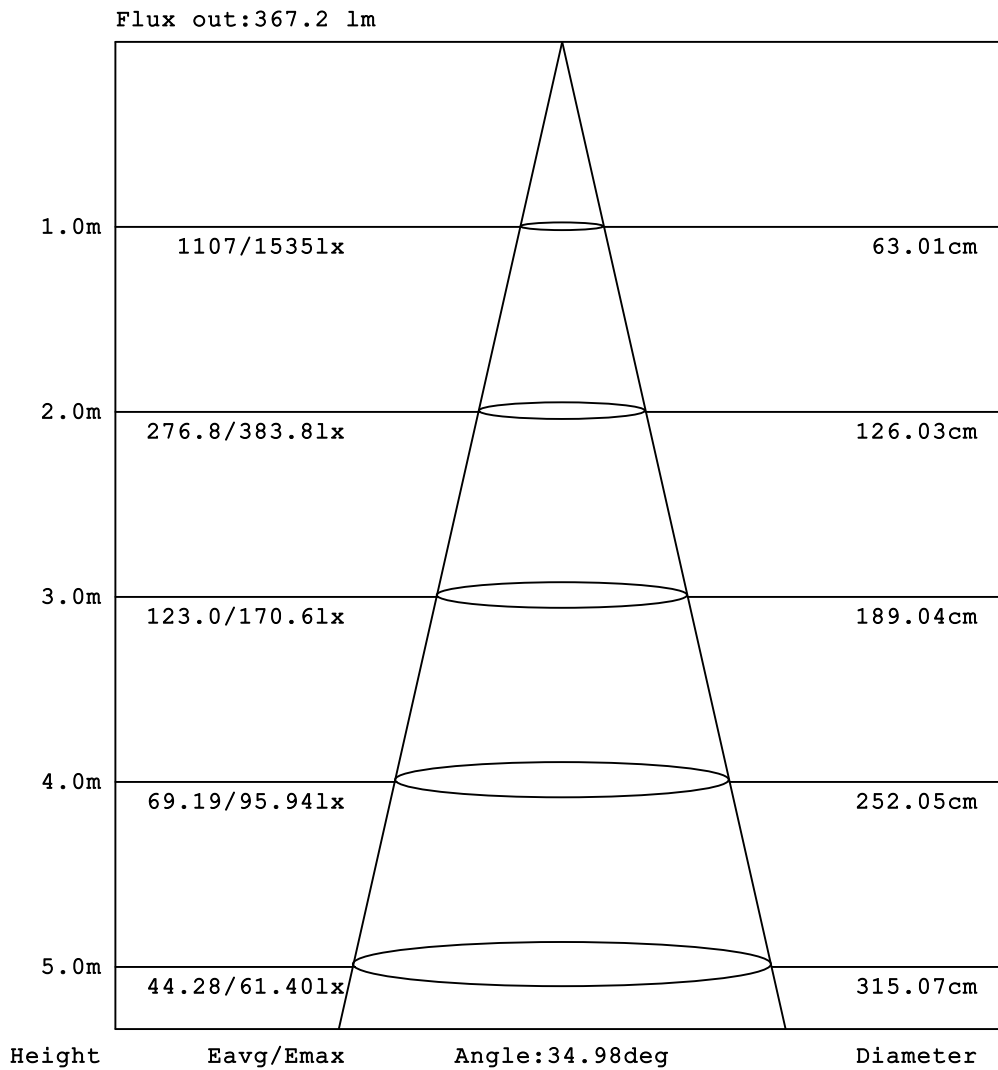


C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:26DEG  
Operators:  
Test Date:2020-04-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
Humidity:75%  
Test Distance:6.500m [K=1.0000]  
Remarks:

**AAI Figure**

Test:U:220.4V I:0.0670A P:7.330W PF:0.4930 Lamp Flux:550.8x1 lm		
NAME: KD032075S	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION 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:26DEG  
Operators:  
Test Date:2020-04-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B SYSTEM V1.0.202  
Humidity:75%  
Test Distance:6.500m [K=1.0000]  
Remarks: