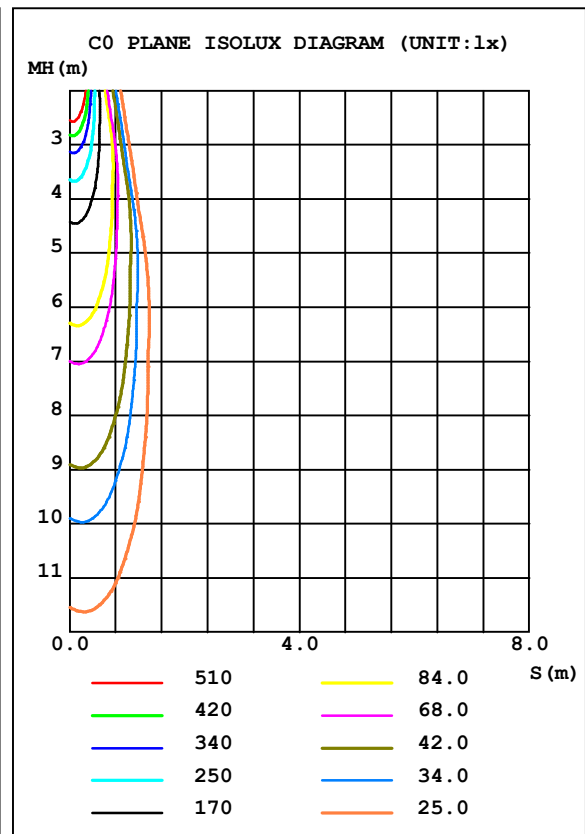
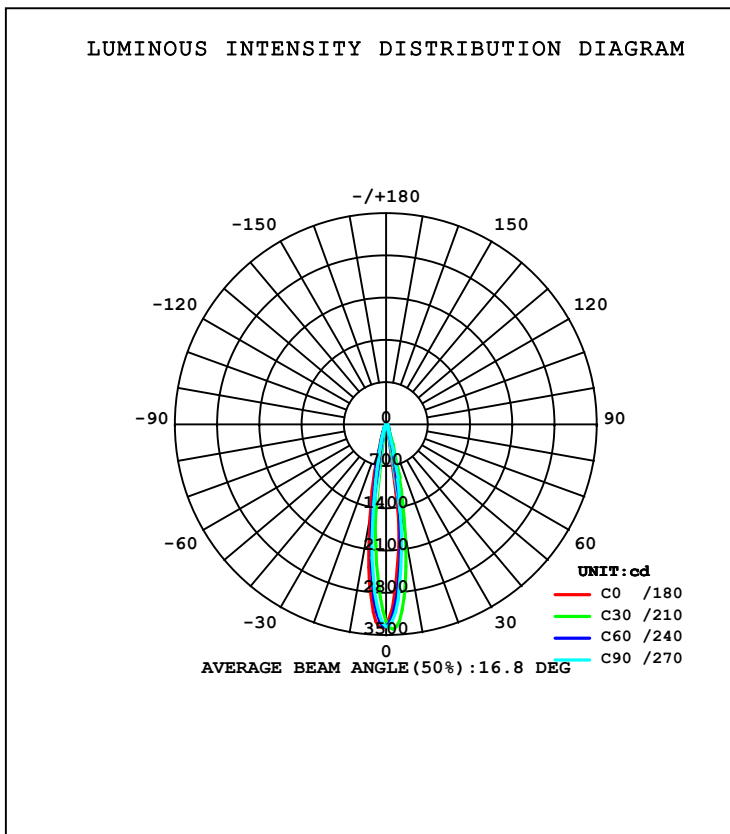


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm		
NAME: KD031068R	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.03 lm/W			
MODEL	V6HD	I _{max} (cd)	3399	S/MH (C0/180)	0.33
NOMINAL POWER (W)	7	EFFICIENCY (%)	100.0	S/MH (C90/270)	0.27
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	440.62	η UP (C0-180)	0.0
NOMINAL FLUX (lm)	440.62	CIE CLASS	DIRECT	η DN (C0-180)	49.6
LAMPS INSIDE	1	η up (%)	0.0	η UP (C180-360)	0.0
TEST VOLTAGE (V)	220.5	η down (%)	100.0	η DN (C180-360)	50.4



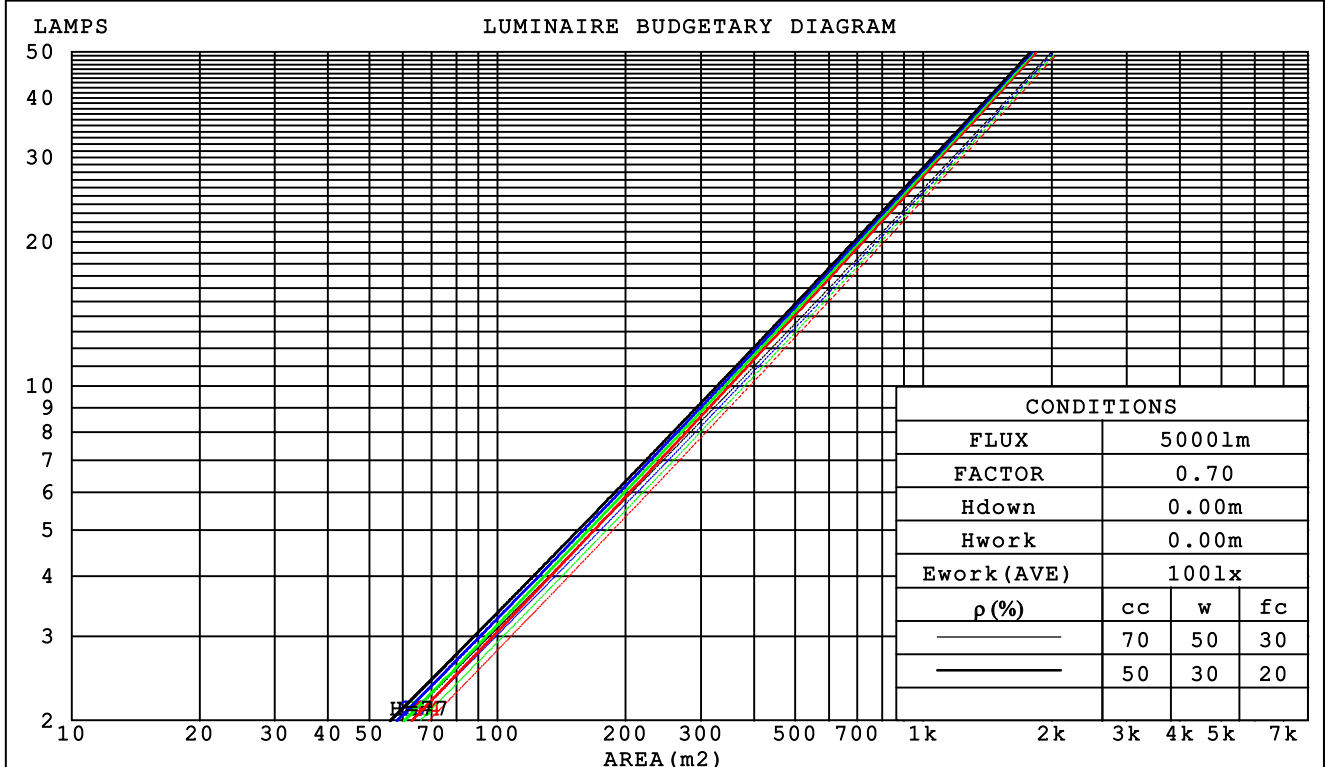
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators:
Test Date: 2020-04-22

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:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm		
NAME: KD031068R	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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.03	1.06	1.04	1.01	1.03	1.01	.99	1.00	.99	.97	.98	.96	.95	.94
3.0	1.04	1.00	.97	1.02	.99	.97	.00	.97	.95	.98	.95	.94	.96	.94	.92	.91
4.0	.00	.96	.93	.99	.95	.93	.97	.94	.92	.95	.93	.91	.93	.91	.90	.88
5.0	.97	.93	.90	.96	.92	.89	.94	.91	.89	.93	.90	.88	.91	.89	.87	.86
6.0	.94	.90	.87	.93	.89	.86	.92	.88	.86	.90	.88	.85	.89	.87	.85	.84
7.0	.91	.87	.84	.90	.87	.84	.89	.86	.84	.88	.85	.83	.87	.85	.83	.82
8.0	.88	.85	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.85	.83	.81	.80
9.0	.86	.82	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.84	.81	.79	.78
10.0	.84	.80	.78	.84	.80	.78	.83	.80	.78	.83	.80	.78	.82	.79	.77	.77



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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%
10	1554	1180	1056	1439	1037	1456	1328	1173	0- 10	204.4	204.4	46.38
20	225.8	180.8	161.8	202.0	162.3	240.7	210.6	177.5	10- 20	150.8	355.2	80.61
30	72.98	60.14	58.05	66.02	59.89	76.41	70.56	64.43	20- 30	51.55	406.7	92.30
40	20.75	16.50	16.34	18.41	17.93	22.91	20.50	19.13	30- 40	23.34	430.1	97.60
50	1.847	1.853	1.636	1.761	2.552	3.403	2.546	2.471	40- 50	7.002	437.1	99.19
60	0.5326	0.3273	0.4272	0.3772	1.581	1.703	1.570	1.473	50- 60	1.289	438.3	99.48
70	0.2885	0.2358	0.2774	0.1720	1.204	1.015	1.126	1.019	60- 70	0.7277	439.1	99.65
80	0.4715	0.3273	0.5547	0.3933	1.060	0.9514	0.9819	1.001	70- 80	0.7025	439.8	99.81
90	0.5326	0.7822	0.5159	0.6213	1.276	1.093	1.337	1.243	80- 90	0.8514	440.6	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

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:

WEC AND CCEC

Test:U:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm																
NAME: KD031068R						TYPE:						WEIGHT:				
DIMENSION:						SPECIFICATION:						SERIAL No.:				
MANUFACTURER:						SURFACE:						PROTECTION 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	.134	.076	.024	.128	.073	.023	.115	.066	.021	.104	.060	.019	.094	.054	.017		
2.0	.124	.068	.021	.118	.065	.020	.108	.060	.019	.099	.055	.017	.090	.051	.016		
3.0	.114	.061	.018	.110	.059	.018	.101	.055	.017	.094	.051	.016	.086	.048	.015		
4.0	.107	.055	.016	.103	.054	.016	.096	.051	.015	.089	.048	.014	.083	.045	.014		
5.0	.100	.051	.015	.097	.050	.014	.091	.047	.014	.085	.045	.013	.080	.043	.013		
6.0	.094	.047	.014	.091	.046	.013	.086	.044	.013	.081	.042	.012	.077	.040	.012		
7.0	.089	.044	.012	.087	.043	.012	.082	.042	.012	.078	.040	.012	.074	.038	.011		
8.0	.085	.041	.012	.082	.041	.011	.079	.039	.011	.075	.038	.011	.071	.037	.011		
9.0	.081	.039	.011	.079	.038	.011	.075	.037	.011	.072	.036	.010	.069	.035	.010		
10.0	.077	.037	.010	.075	.036	.010	.072	.035	.010	.069	.034	.010	.067	.034	.010		

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																	
1.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014		
3.0	.135	.113	.096	.115	.098	.083	.079	.068	.059	.046	.040	.035	.015	.013	.011		
4.0	.122	.098	.080	.104	.085	.069	.072	.059	.049	.042	.034	.029	.013	.011	.009		
5.0	.111	.085	.067	.095	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008		
6.0	.102	.075	.056	.087	.065	.049	.060	.046	.035	.035	.027	.021	.011	.009	.007		
7.0	.094	.067	.048	.081	.058	.042	.056	.041	.030	.032	.024	.018	.010	.008	.006		
8.0	.087	.060	.042	.075	.052	.036	.052	.037	.026	.030	.022	.015	.010	.007	.005		
9.0	.081	.054	.036	.070	.047	.032	.049	.033	.022	.028	.020	.013	.009	.006	.004		
10.0	.076	.050	.032	.066	.043	.028	.046	.030	.020	.027	.018	.012	.009	.006	.004		

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:

Uncorrected UGR Table

Test:U:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm										
NAME: KD031068R					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	12.4	13.0	12.6	13.2	13.3	12.0	12.6	12.2	12.8	12.9
3H	12.3	12.9	12.5	13.1	13.2	11.9	12.5	12.1	12.6	12.8
4H	12.2	12.8	12.5	13.0	13.2	11.8	12.4	12.1	12.6	12.8
6H	12.2	12.8	12.5	13.0	13.2	11.8	12.4	12.1	12.6	12.8
8H	12.3	12.8	12.6	13.0	13.3	11.9	12.4	12.2	12.7	12.9
12H	12.4	12.9	12.7	13.1	13.4	12.1	12.6	12.4	12.8	13.1
4H 2H	12.2	12.8	12.5	13.0	13.2	11.8	12.3	12.0	12.6	12.8
3H	12.1	12.6	12.4	12.8	13.1	11.6	12.1	12.0	12.4	12.7
4H	12.0	12.5	12.3	12.7	13.0	11.6	12.1	11.9	12.4	12.7
6H	12.0	12.4	12.4	12.8	13.1	11.7	12.1	12.1	12.4	12.8
8H	12.2	12.5	12.6	12.9	13.2	11.8	12.2	12.2	12.6	12.9
12H	12.4	12.7	12.8	13.1	13.5	12.1	12.5	12.5	12.8	13.2
8H 4H	11.9	12.3	12.3	12.6	13.0	11.5	11.9	11.9	12.2	12.6
6H	12.0	12.3	12.4	12.7	13.1	11.6	12.0	12.1	12.4	12.8
8H	12.2	12.5	12.7	12.9	13.3	11.9	12.2	12.4	12.6	13.0
12H	12.6	12.8	13.1	13.3	13.8	12.4	12.7	12.9	13.1	13.6
12H 4H	11.9	12.2	12.3	12.6	13.0	11.5	11.8	11.9	12.2	12.6
6H	12.0	12.3	12.4	12.7	13.1	11.7	11.9	12.1	12.3	12.8
8H	12.3	12.5	12.7	12.9	13.4	12.0	12.2	12.4	12.7	13.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.5 / - 5.2					+ 2.3 / - 4.6				
1.5H	+ 5.8 / - 6.5					+ 4.5 / - 5.0				
2.0H	+ 6.3 / - 2.3					+ 4.4 / - 2.0				

CIE Pub.117 Corrected 440.6 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.8)

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:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm		
NAME: KD031068R	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

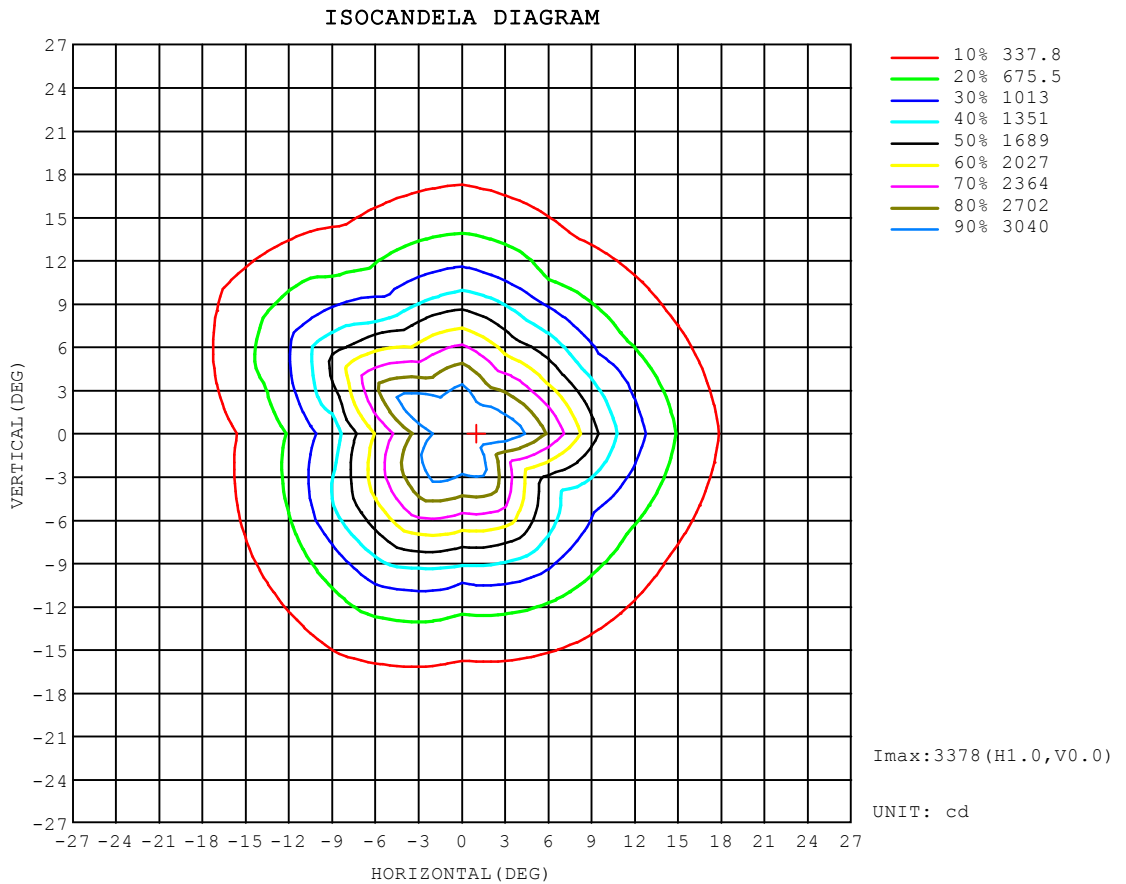
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	81	90	84	81	89	84	81	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	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

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:

ISOCANDELA DIAGRAM

Test:U:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm		
NAME: KD031068R	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER:	SURFACE:	PROTECTION ANGLE:

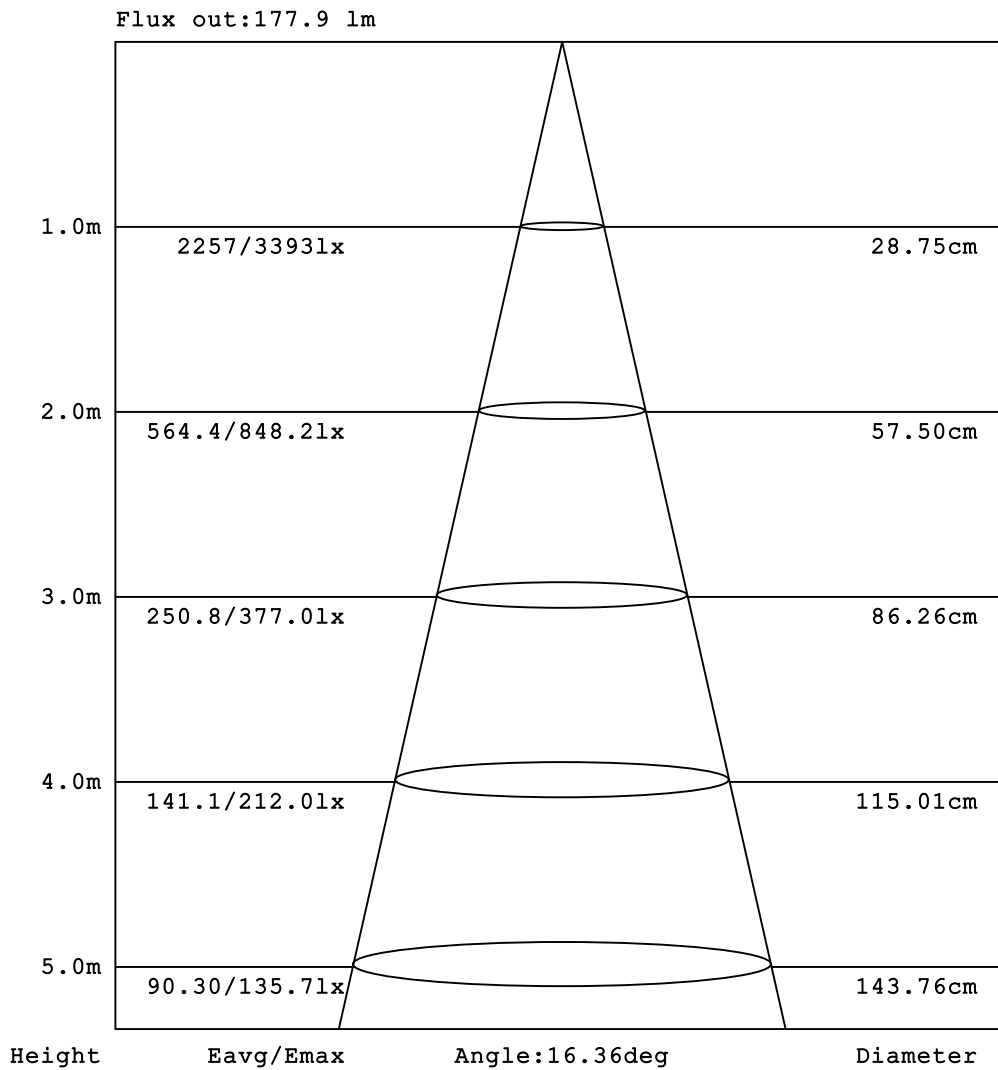


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-04-22

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:

AAI Figure

Test:U:220.5V I:0.0670A P:7.340W PF:0.4930 Lamp Flux:440.6x1 lm		
NAME: KD031068R	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

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: