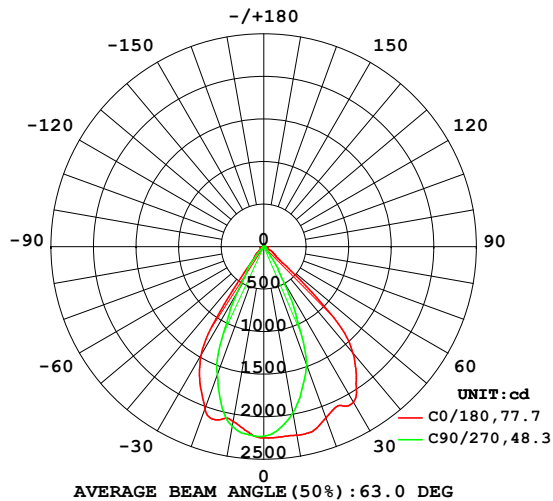


**LUMINAIRE PHOTOMETRIC TEST REPORT**

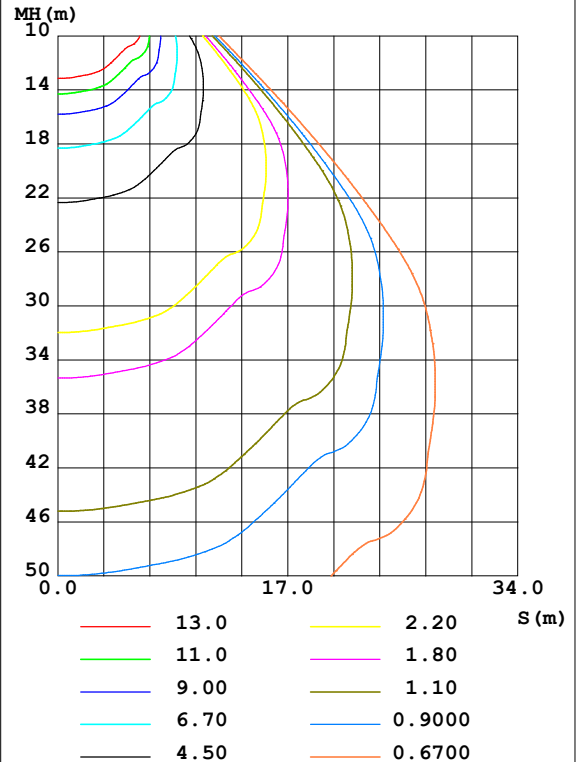
NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 78.69 lm/W
MODEL	TR3012AW	I <sub>max</sub> (cd)	2253	S/MH (C0/180)	0.95	
NOMINAL POWER(W)	28.7	LOR(%)	100.0	S/MH (C90/270)	0.76	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2263.9	□ UP, DN (C0-180)	0.7, 49.2	
NOMINAL FLUX(lm)	2263.91	CIE CLASS	DIRECT	□ UP, DN (C180-360)	0.6, 49.4	
LAMPS INSIDE	1	□ up (%)	1.4	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	220.1	□ down (%)	98.6	CIBSE SHR MAX	0.85	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 September 2021

□ Range: 0 - 180DEG  
 □ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.650m [K=1.0000]  
 Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	2250	2073	1981	1998	2085	2113	2142	2185	0- 10	206.3	206.3	9.11,9.11
20	2141	1760	1473	1731	2024	1892	1599	1944	10- 20	555.8	762.0	33.7,33.7
30	2110	1256	427.5	1169	1480	1282	631.8	1429	20- 30	696.4	1458	64.4,64.4
40	1630	416.6	52.21	225.6	179.9	306.8	155.9	663.0	30- 40	508.6	1967	86.9,86.9
50	250.0	57.31	16.93	11.75	44.91	14.61	21.91	202.1	40- 50	208.4	2176	96.1,96.1
60	86.64	9.333	8.916	6.164	30.48	6.940	11.71	11.27	50- 60	32.43	2208	97.5,97.5
70	29.41	5.445	3.106	2.835	44.56	3.660	4.847	6.228	60- 70	12.64	2221	98.1,98.1
80	42.29	1.877	0.6023	0.6383	2.240	0.7967	1.266	2.777	70- 80	8.622	2229	98.5,98.5
90	5.087	0.4192	0.1424	0.1389	0.3244	0.1281	0.1316	0.8217	80- 90	4.117	2233	98.6,98.6
100	0.3166	0.1885	0.1958	0.4373	0.9771	0.2746	0.1639	0.1709	90-100	0.3916	2234	98.7,98.7
110	0.8040	0.6223	0.4802	1.618	2.898	1.102	0.2638	0.4209	100-110	0.6528	2234	98.7,98.7
120	2.451	2.091	1.536	3.828	5.390	2.683	0.9130	1.601	110-120	1.680	2236	98.8,98.8
130	5.416	4.864	4.255	7.576	8.368	4.811	2.977	3.703	120-130	3.388	2239	98.9,98.9
140	9.324	9.789	9.144	12.00	13.60	7.895	5.987	6.999	130-140	5.545	2245	99.2,99.2
150	14.23	13.56	14.73	13.88	13.50	10.82	9.752	10.83	140-150	6.828	2252	99.5,99.5
160	14.23	14.66	16.29	14.39	14.91	11.67	13.33	12.05	150-160	6.188	2258	99.7,99.7
170	15.21	18.19	18.16	17.68	17.48	15.69	14.14	15.51	160-170	4.294	2262	99.9,99.9
180	17.99	17.54	16.72	17.19	18.04	17.58	16.74	17.20	170-180	1.625	2264	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 2102.6 lm

%lum = 92.9%

%lamp = 92.9%

Conical surface Flux(120deg): 2207.9 lm

%lum = 97.5%

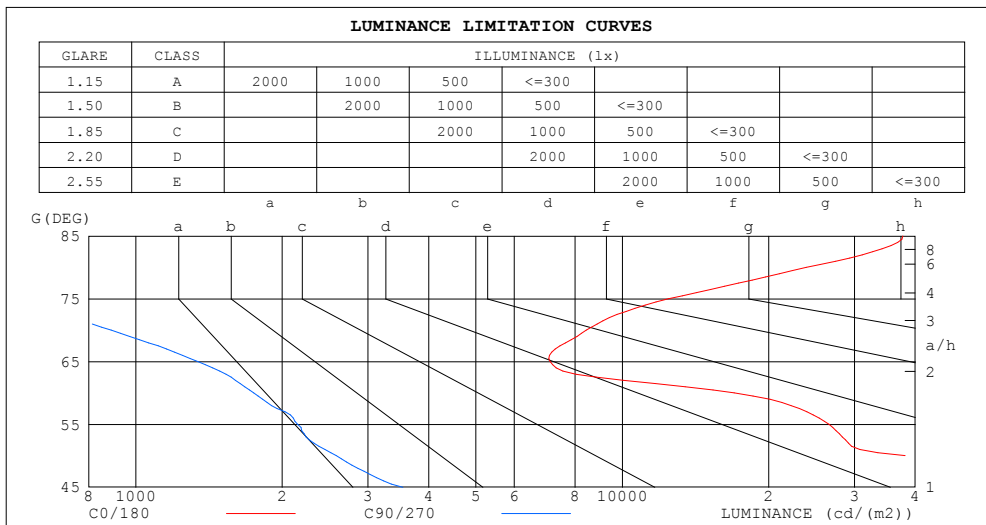
%lamp = 97.5%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:15 September 2021

□ Range: 0 - 180DEG  
□ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.650m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	37737	350
80	23878	340
75	12445	589
70	8431	890
65	7109	1340
60	16989	1748
55	26576	2149
50	38123	2582
45	149024	3539

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.650m [K=1.0000]  
 Remarks:

### WEC AND CCEC

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)					
0.0						
1.0	.189 .107 .034	.181 .103 .033	.168 .096 .031	.156 .090 .029	.144 .084 .027	
2.0	.181 .099 .030	.175 .096 .030	.163 .091 .028	.153 .086 .027	.143 .081 .025	
3.0	.172 .092 .027	.167 .089 .027	.157 .085 .026	.148 .081 .025	.140 .077 .024	
4.0	.164 .085 .025	.159 .083 .025	.151 .080 .024	.143 .077 .023	.135 .074 .022	
5.0	.156 .080 .023	.152 .078 .023	.145 .075 .022	.138 .073 .022	.131 .070 .021	
6.0	.149 .075 .021	.145 .073 .021	.139 .071 .021	.133 .069 .020	.127 .067 .020	
7.0	.142 .070 .020	.139 .069 .020	.133 .067 .019	.128 .065 .019	.122 .064 .019	
8.0	.136 .066 .019	.133 .066 .019	.128 .064 .018	.123 .062 .018	.118 .061 .018	
9.0	.130 .063 .018	.128 .062 .017	.123 .061 .017	.118 .059 .017	.114 .058 .017	
10.0	.125 .060 .017	.122 .059 .016	.118 .058 .016	.114 .057 .016	.110 .055 .016	

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)					
0.0	.201 .201 .201	.172 .172 .172	.117 .117 .117	.067 .067 .067	.022 .022 .022	
1.0	.182 .168 .154	.156 .144 .133	.107 .099 .092	.061 .057 .053	.020 .018 .017	
2.0	.168 .143 .122	.144 .123 .105	.099 .085 .073	.057 .050 .043	.018 .016 .014	
3.0	.156 .124 .099	.134 .107 .086	.092 .074 .060	.053 .043 .035	.017 .014 .012	
4.0	.146 .110 .082	.126 .095 .071	.086 .066 .050	.050 .039 .030	.016 .013 .010	
5.0	.138 .098 .069	.119 .085 .060	.082 .059 .042	.047 .035 .025	.015 .011 .008	
6.0	.131 .089 .059	.113 .077 .051	.078 .054 .036	.045 .032 .022	.015 .010 .007	
7.0	.125 .082 .052	.107 .071 .045	.074 .050 .032	.043 .029 .019	.014 .010 .006	
8.0	.119 .076 .046	.103 .066 .040	.071 .046 .028	.041 .027 .017	.013 .009 .006	
9.0	.114 .071 .041	.098 .061 .036	.068 .043 .025	.040 .025 .015	.013 .008 .005	
10.0	.110 .066 .037	.094 .057 .033	.066 .040 .023	.038 .024 .014	.012 .008 .005	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.650m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

NAME: TR3012AW					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: VJC 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					23.7	24.7	24.0	24.9	25.1	12.8	13.8	13.1	14.0	14.2
3H					23.6	24.5	23.9	24.7	24.9	12.7	13.6	12.9	13.8	14.0
4H					23.5	24.4	23.8	24.6	24.9	12.6	13.4	12.9	13.7	13.9
6H					23.6	24.4	23.9	24.7	24.9	12.5	13.3	12.8	13.6	13.8
8H					23.7	24.5	24.0	24.8	25.1	12.4	13.2	12.8	13.5	13.8
12H					23.9	24.6	24.2	24.9	25.2	12.4	13.1	12.7	13.4	13.7
4H 2H					23.5	24.3	23.8	24.6	24.8	12.6	13.5	12.9	13.7	14.0
3H					23.3	24.0	23.6	24.3	24.6	12.4	13.2	12.8	13.5	13.8
4H					23.2	23.9	23.6	24.2	24.6	12.4	13.0	12.7	13.4	13.7
6H					23.3	23.9	23.7	24.3	24.7	12.3	12.9	12.7	13.2	13.6
8H					23.6	24.1	24.0	24.5	24.9	12.2	12.8	12.6	13.1	13.5
12H					23.8	24.3	24.3	24.7	25.2	12.2	12.7	12.6	13.1	13.5
8H 4H					23.1	23.6	23.5	24.0	24.4	12.3	12.8	12.7	13.2	13.6
6H					23.2	23.7	23.7	24.1	24.5	12.2	12.6	12.6	13.0	13.5
8H					23.5	23.9	23.9	24.3	24.8	12.1	12.5	12.6	12.9	13.4
12H					23.8	24.2	24.3	24.6	25.1	12.1	12.4	12.5	12.9	13.4
12H 4H					23.0	23.5	23.5	23.9	24.4	12.3	12.8	12.7	13.2	13.6
6H					23.2	23.6	23.6	24.0	24.5	12.2	12.6	12.7	13.0	13.5
8H					23.4	23.7	23.9	24.2	24.7	12.1	12.5	12.6	12.9	13.4
Variations with the observer position at spacings:														
S = 1.0H					+ 3.0 / - 6.1					+ 3.6 / - 6.5				
1.5H					+ 3.9 / - 7.9					+ 4.1 / - 6.1				
2.0H					+ 7.0 / - 6.1					+ 2.8 / - 1.4				

CIE Pub.117, 2264 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.8$ )

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.650m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

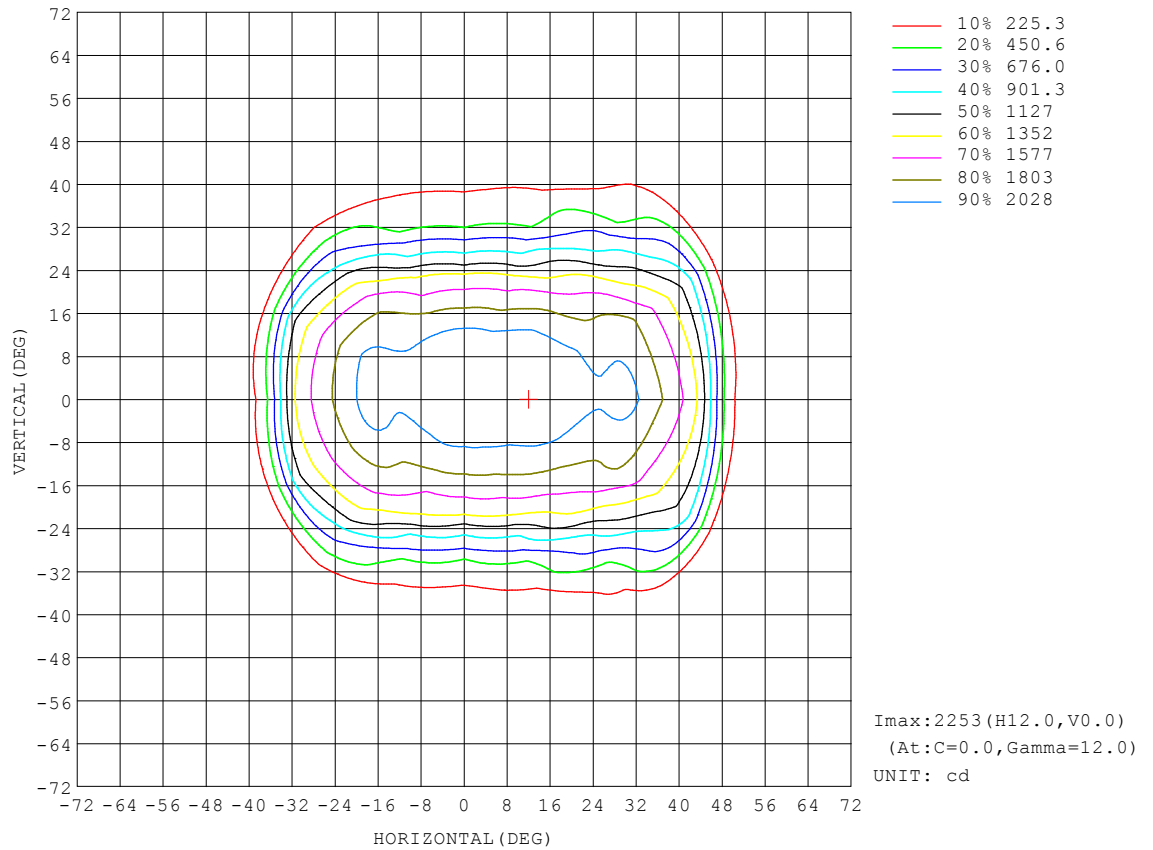
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT)    k(RI) x RCR = 5									
k = 0.60	83	76	72	83	76	72	82	76	72	68
0.80	91	85	81	91	84	81	89	84	80	76
1.00	97	90	86	96	90	86	94	90	85	81
1.25	101	95	91	100	95	91	98	93	90	85
1.50	104	99	95	103	98	94	100	96	93	88
2.00	107	103	99	105	101	98	103	99	97	91
2.50	109	105	101	107	103	101	104	101	98	92
3.00	111	107	104	109	105	103	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	95
5.00	114	111	109	112	110	108	107	106	104	96
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: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.650m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

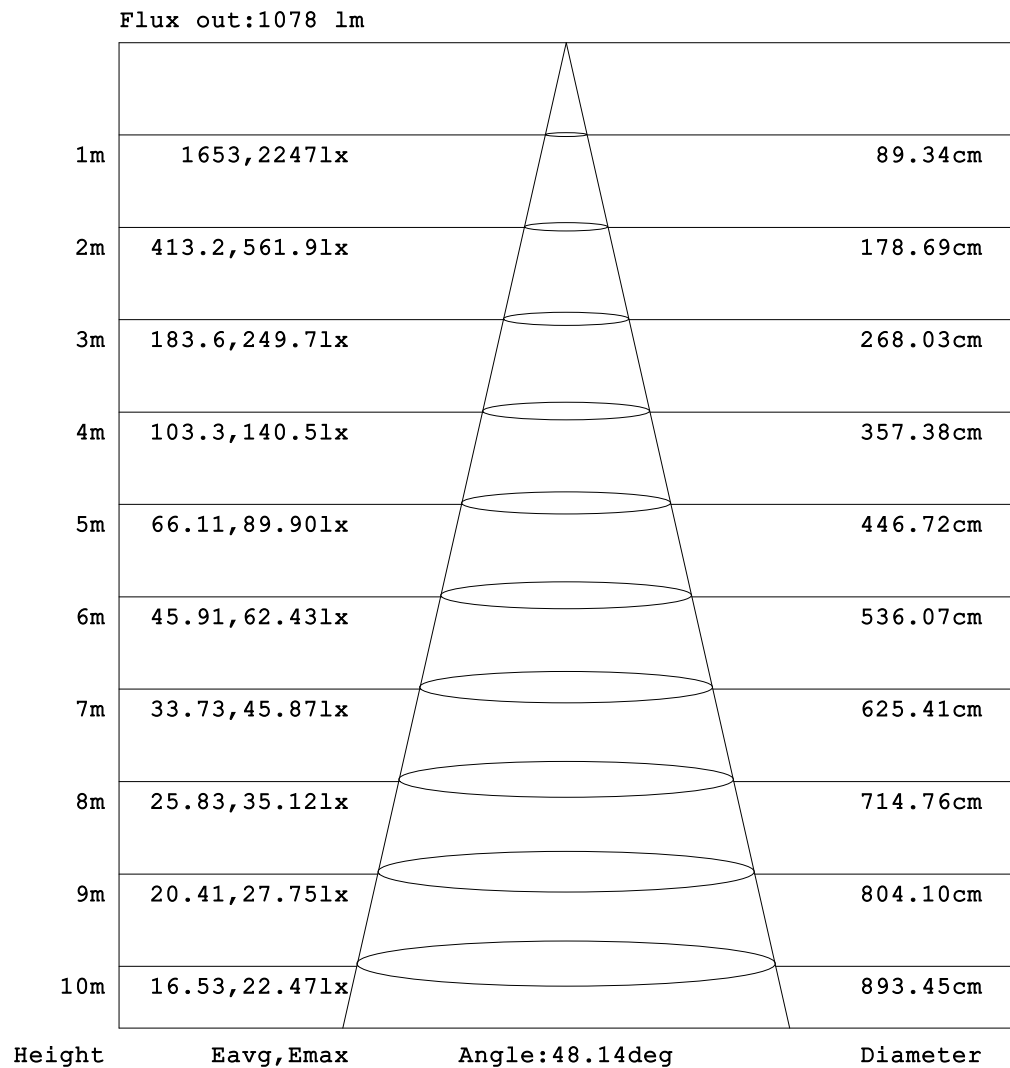


C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:7.650m [K=1.0000]  
 Remarks:

### AAI Figure

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

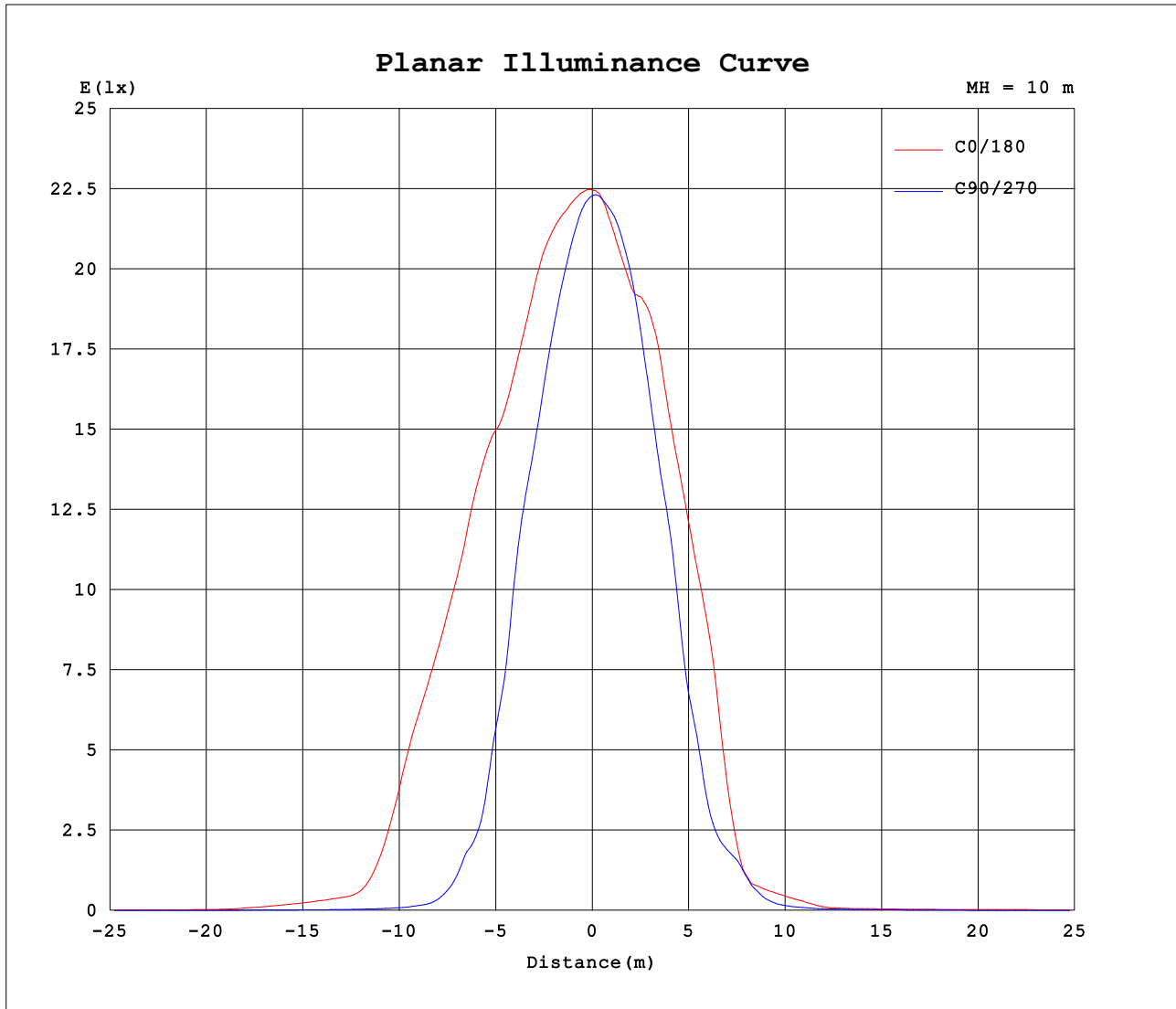


**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.650m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 September 2021

☐ Range: 0 - 180DEG  
☐ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.650m [K=1.0000]  
 Remarks:

# LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: TR3012AW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) □ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	2247	2240	2234	2230	2228	2226	2222	2218	2247	2240	2234	2230	2228	2226	2222	2218			
5	2245	2219	2184	2159	2147	2162	2154	2152	2185	2192	2210	2217	2214	2210	2207	2211			
10	2250	2175	2073	2014	1981	1992	1998	2034	2085	2095	2113	2131	2142	2141	2185	2208			
15	2242	2126	1946	1803	1739	1758	1835	2015	2106	2085	1989	1938	1928	1961	2117	2199			
20	2141	1994	1760	1560	1473	1510	1731	1945	2024	2061	1892	1625	1599	1662	1944	2096			
25	2065	1854	1546	1125	915	1124	1519	1681	1776	1803	1661	1283	1121	1316	1673	1978			
30	2110	1824	1256	666	427	634	1169	1371	1480	1490	1282	776	632	831	1429	1960			
35	1895	1618	815	323	201	294	671	882	720	1035	757	358	345	409	1009	1782			
40	1630	1320	417	112	52.2	80.6	226	173	180	259	307	212	156	284	663	1475			
45	1075	1025	227	36.0	25.5	26.1	26.8	86.1	128	90.7	86.6	50.6	44.8	84.6	328	1101			
50	250	292	57.3	19.5	16.9	14.2	11.7	34.4	44.9	37.7	14.6	19.0	21.9	29.9	202	402			
55	155	45.6	15.9	13.0	12.6	9.66	8.29	17.0	30.0	16.7	9.34	11.8	15.1	16.5	33.4	73.9			
60	86.6	20.7	9.33	9.78	8.92	6.83	6.16	15.0	30.5	14.8	6.94	8.48	11.7	11.3	11.3	32.0			
65	30.6	12.3	7.02	6.50	5.78	4.38	4.51	16.2	38.7	13.8	5.36	5.80	7.95	8.07	7.99	15.1			
70	29.4	9.71	5.44	3.99	3.11	2.44	2.83	25.2	44.6	17.6	3.66	3.53	4.85	5.40	6.23	12.5			
75	32.9	10.7	3.56	2.20	1.56	1.20	1.23	13.2	22.2	13.6	1.86	1.86	2.51	3.10	4.53	11.2			
80	42.3	15.9	1.88	1.13	0.60	0.60	0.64	1.28	2.24	1.94	0.80	0.89	1.27	1.66	2.78	16.1			
85	33.5	10.9	0.97	0.61	0.31	0.12	0.14	0.20	0.22	0.17	0.34	0.47	0.52	0.80	1.33	15.8			
90	5.09	1.48	0.42	0.13	0.14	0.13	0.14	0.29	0.32	0.19	0.13	0.12	0.13	0.40	0.82	2.93			
95	0.96	0.20	0.15	0.16	0.16	0.17	0.22	0.47	0.56	0.31	0.16	0.12	0.14	0.13	0.14	0.22			
100	0.32	0.27	0.19	0.20	0.20	0.25	0.44	0.84	0.98	0.61	0.27	0.16	0.16	0.14	0.17	0.22			
105	0.53	0.44	0.31	0.29	0.27	0.41	0.90	1.59	1.78	1.23	0.56	0.22	0.19	0.17	0.23	0.34			
110	0.80	0.76	0.62	0.48	0.48	0.71	1.62	2.64	2.90	2.12	1.10	0.40	0.26	0.27	0.42	0.60			
115	1.43	1.39	1.19	0.87	0.85	1.29	2.60	3.94	4.17	3.17	1.85	0.82	0.46	0.54	0.86	1.13			
120	2.45	2.37	2.09	1.64	1.54	2.20	3.83	5.51	5.39	4.16	2.68	1.50	0.91	1.13	1.60	1.97			
125	3.77	3.68	3.31	2.79	2.67	3.46	5.48	7.30	6.66	5.24	3.64	2.43	1.79	2.05	2.57	3.08			
130	5.42	5.30	4.86	4.37	4.25	5.10	7.58	9.85	8.37	6.85	4.81	3.54	2.98	3.22	3.70	4.30			
135	7.35	7.13	6.95	6.49	6.33	7.24	9.83	12.5	11.9	9.05	6.22	4.79	4.40	4.62	5.06	5.59			
140	9.32	9.43	9.79	9.27	9.14	9.74	12.0	13.7	13.6	10.3	7.90	6.30	5.99	6.25	7.00	7.16			
145	12.5	11.9	12.1	11.9	11.8	12.2	13.1	14.2	13.8	10.9	9.45	7.96	7.71	8.09	9.06	9.23			
150	14.2	13.4	13.6	14.4	14.7	14.4	13.9	14.4	13.5	11.0	10.8	9.95	9.75	10.2	10.8	10.8			
155	14.4	14.7	14.2	15.3	15.8	15.1	14.0	15.3	13.7	11.9	11.2	11.9	11.9	12.2	11.5	12.1			
160	14.2	15.8	14.7	15.7	16.3	15.2	14.4	16.5	14.9	13.7	11.7	12.6	13.3	12.9	12.0	13.2			
165	14.4	16.2	16.7	16.3	16.7	15.8	16.3	17.7	16.4	15.8	13.6	12.8	13.2	13.2	13.8	14.1			
170	15.2	16.8	18.2	18.4	18.2	17.9	17.7	18.4	17.5	17.4	15.7	14.7	14.1	15.1	15.5	15.3			
175	16.8	17.2	17.9	17.8	17.7	17.6	17.9	18.0	18.0	17.7	17.0	16.1	15.8	16.0	16.5	16.2			
180	18.0	17.8	17.5	17.1	16.7	16.7	17.2	17.4	18.0	17.8	17.6	17.0	16.7	16.7	17.2	17.4			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:DAMIN

Test Date:15 September 2021

□ Range: 0 - 180DEG

□ Interval: 0.5DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362

Humidity:65.0%

Test Distance:7.650m [K=1.0000]

Remarks: