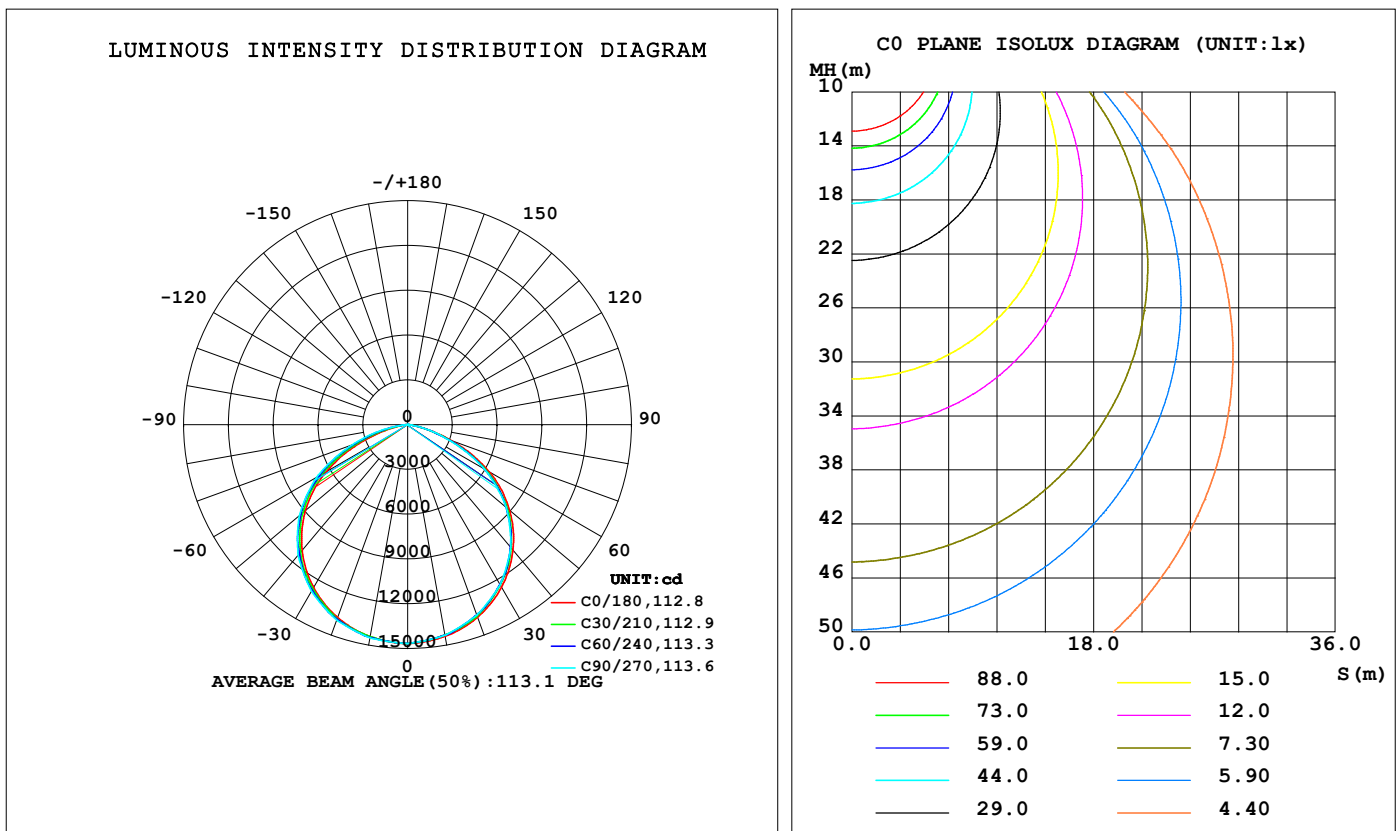


# LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 143.34 lm/W
MODEL	N/A	I <sub>max</sub> (cd)	14664	S/MH(C0/180)	1.28	
NOMINAL POWER(W)	280	LOR(%)	100.0	S/MH(C90/270)	1.30	
RATED VOLTAGE(V)	480	TOTAL FLUX(lm)	40408	η UP,DN(C0-180)	0.0,48.2	
NOMINAL FLUX(lm)	40408.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.8	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	480	η down (%)	100.0	CIBSE SHR MAX	1.35	



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1440	1431	1434	1431	1442	1444	1451	1443	0- 10	1384	1384	3.42,3.42
20	1372	1356	1358	1356	1374	1381	1393	1381	10- 20	3981	5365	13.3,13.3
30	1258	1238	1239	1240	1260	1276	1289	1276	20- 30	6084	11449	28.3,28.3
40	1097	1078	1075	1079	1100	1127	1142	1128	30- 40	7411	18860	46.7,46.7
50	891.1	867.3	862.4	867.8	893.3	929.9	947.1	931.9	40- 50	7737	26597	65.8,65.8
60	630.2	601.2	593.1	594.9	627.9	676.4	703.1	683.0	50- 60	6893	33490	82.9,82.9
70	309.7	289.6	276.0	282.6	304.3	366.1	392.2	375.2	60- 70	4758	38247	94.7,94.7
80	52.16	58.54	38.43	53.08	47.99	97.57	106.5	104.4	70- 80	1973	40221	99.5,99.5
90	0.3117	0	0	0	0.4564	0	0	0	80- 90	187.7	40408	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 22758 lm

%lum = 56.3%

%lamp = 56.3%

Conical surface Flux(120deg): 33490 lm

%lum = 82.9%

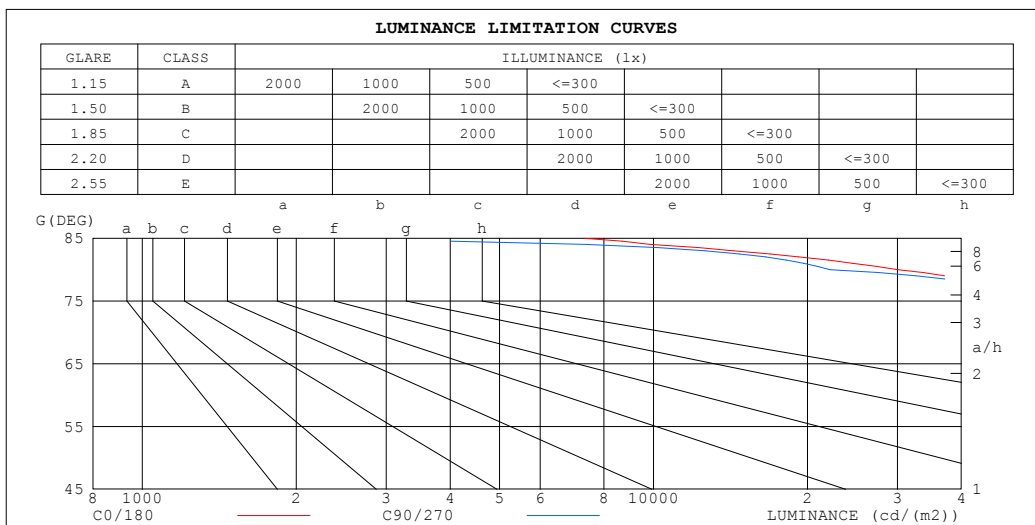
%lamp = 82.9%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7321	0
80	30040	22130
75	62305	60744
70	90545	80699
65	112046	102828
60	126043	118627
55	134102	126887
50	138634	134173
45	141579	136992

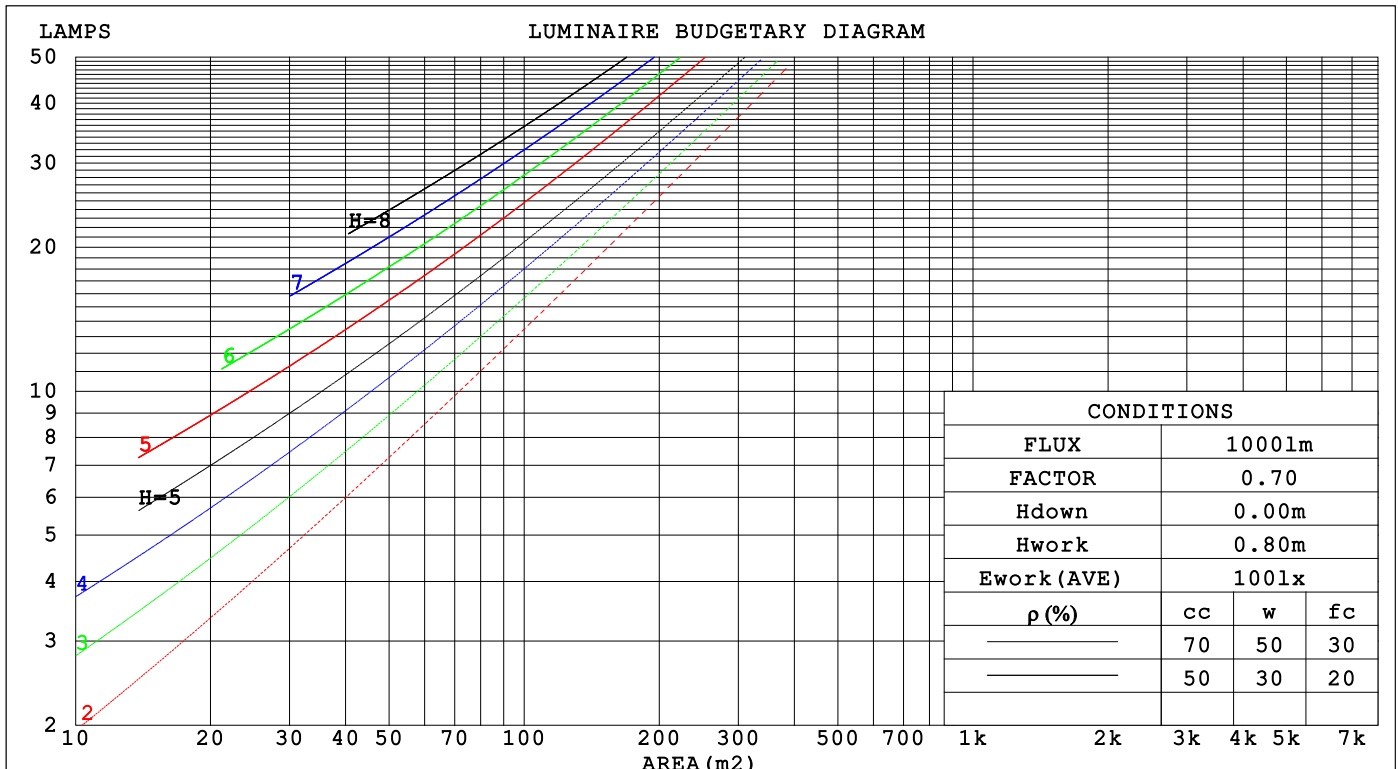
H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

### CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.88	.86
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.84	.79	.76	.81	.77	.74	.72
3.0	.81	.73	.67	.80	.72	.66	.77	.70	.65	.74	.69	.64	.71	.67	.63	.61
4.0	.72	.63	.57	.71	.63	.56	.68	.61	.56	.66	.60	.55	.64	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.52	.44	.38	.52	.43	.38	.50	.43	.37	.49	.42	.37	.47	.41	.37	.35
8.0	.48	.39	.34	.47	.39	.33	.46	.38	.33	.45	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.28
10.0	.40	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

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	.284	.161	.051	.277	.158	.050	.264	.151	.048	.252	.145	.047	.241	.139	.045															
2.0	.275	.151	.046	.269	.148	.046	.257	.143	.044	.247	.138	.043	.237	.134	.042															
3.0	.259	.138	.041	.253	.136	.041	.243	.132	.040	.233	.128	.039	.225	.124	.038															
4.0	.241	.125	.037	.236	.124	.037	.227	.120	.036	.219	.117	.035	.211	.115	.035															
5.0	.224	.114	.033	.220	.113	.033	.212	.110	.033	.205	.108	.032	.198	.106	.032															
6.0	.209	.105	.030	.205	.104	.030	.198	.102	.030	.192	.100	.029	.185	.098	.029															
7.0	.195	.097	.027	.192	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027															
8.0	.183	.089	.025	.180	.089	.025	.174	.087	.025	.169	.086	.025	.164	.084	.024															
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.155	.078	.023															
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.074	.021															

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	.179	.156	.136	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.060	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm										
NAME: Crane Master Series					TYPE: Floodlight			WEIGHT: N/A		
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE					DIM.: N/A			SERIAL No.: N/A		
MFR.: Red Sky Lighting					SUR.: N/A			Shielding Angle: N/A		
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	22.3	23.8	22.5	24.0	24.2	22.1	23.6	22.4	23.8	24.0
3H	22.9	24.3	23.2	24.5	24.8	22.7	24.1	23.0	24.3	24.5
4H	23.0	24.3	23.3	24.5	24.8	22.8	24.1	23.1	24.3	24.6
6H	22.9	24.2	23.3	24.4	24.7	22.7	24.0	23.1	24.2	24.5
8H	22.9	24.1	23.2	24.4	24.6	22.7	23.9	23.0	24.2	24.4
12H	22.8	24.0	23.2	24.3	24.6	22.6	23.8	23.0	24.1	24.4
4H 2H	---	---	---	---	---	---	---	---	---	---
3H	---	---	---	---	---	---	---	---	---	---
4H	---	---	---	---	---	---	---	---	---	---
6H	---	---	---	---	---	---	---	---	---	---
8H	---	---	---	---	---	---	---	---	---	---
12H	---	---	---	---	---	---	---	---	---	---
8H 4H	---	---	---	---	---	---	---	---	---	---
6H	---	---	---	---	---	---	---	---	---	---
8H	---	---	---	---	---	---	---	---	---	---
12H	---	---	---	---	---	---	---	---	---	---
12H 4H	---	---	---	---	---	---	---	---	---	---
6H	---	---	---	---	---	---	---	---	---	---
8H	---	---	---	---	---	---	---	---	---	---
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.0 / - 0.0					+ 0.0 / - 0.0				
1.5H	+ 0.0 / - 0.0					+ 0.0 / - 0.0				
2.0H	+ 0.0 / - 0.0					+ 0.0 / - 0.0				

CIE Pub.117, 40408 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 12.9)  
 Area: 0.1 m2

H(β) Range:-90 - 90DEG  
 H(β) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:J.W  
 Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
 Humidity:65.0%  
 Test Distance:5.700m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

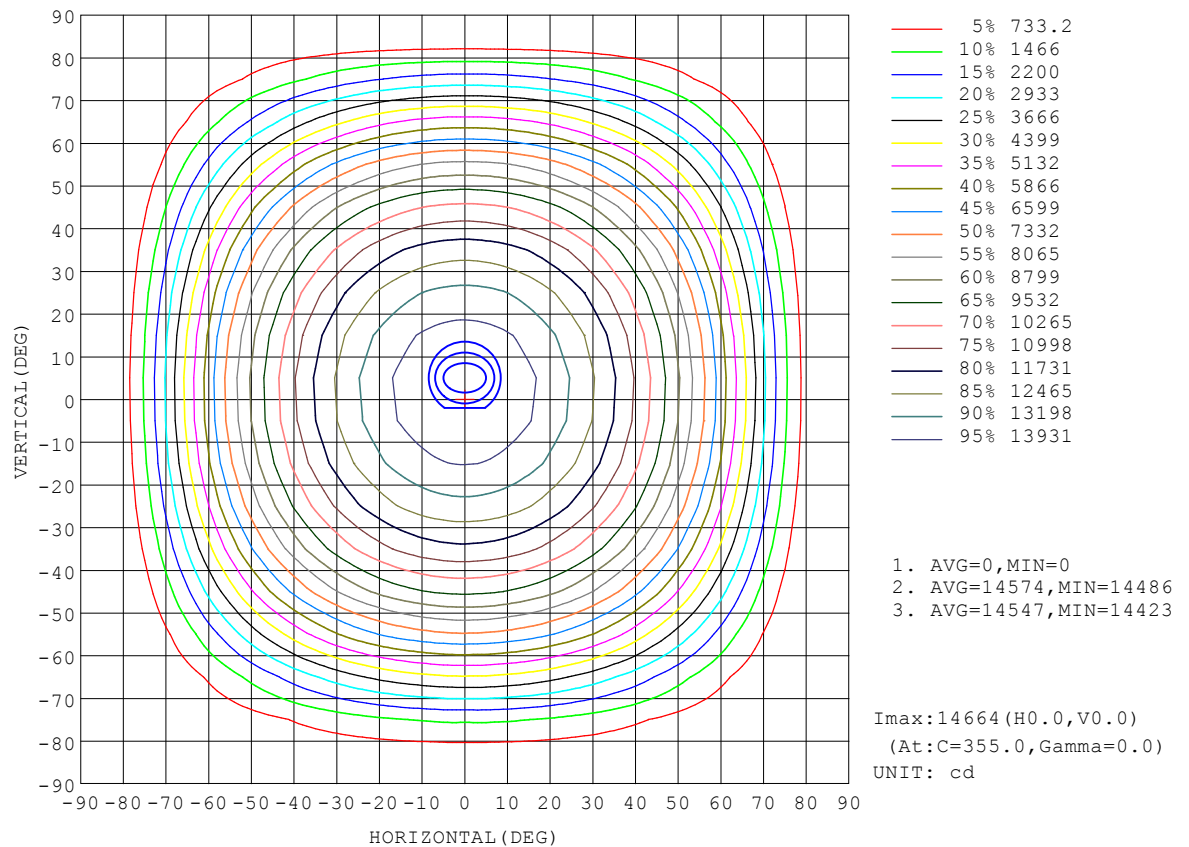
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	56	46	40	33
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	85	75	68	83	74	67	81	72	67	59
1.50	90	80	74	88	79	73	85	78	72	65
2.00	97	88	82	95	87	82	91	85	80	73
2.50	100	93	87	98	92	86	95	89	85	77
3.00	104	97	92	101	96	91	97	93	89	81
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	101	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:J.W  
 Test Date:18 April 2024

$V(B)$  Range:-80 - 80DEG  
 $V(B)$  Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
 Humidity:65.0%  
 Test Distance:5.700m [K=1.0000]  
 Remarks:

### ISOCANDELA DIAGRAM

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



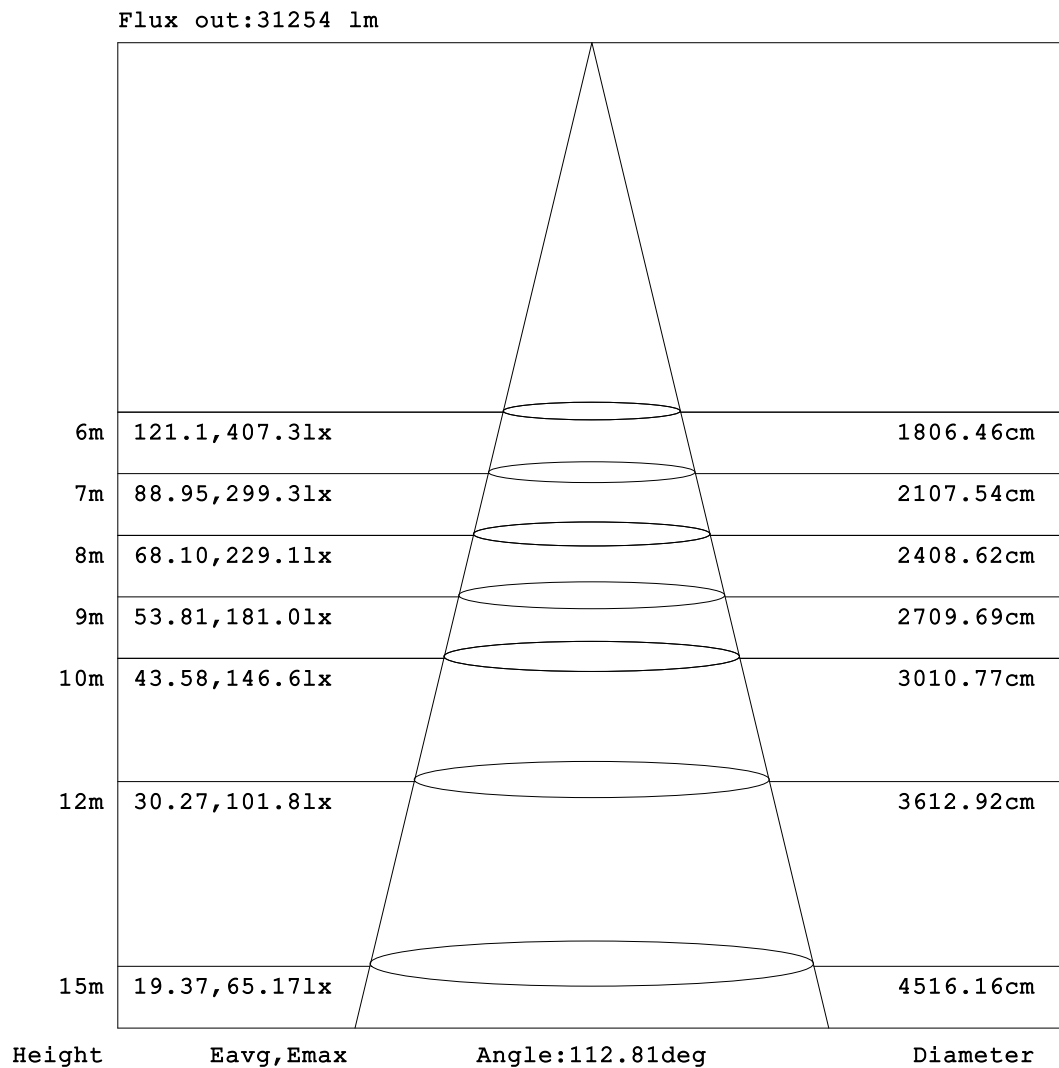
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3lx1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



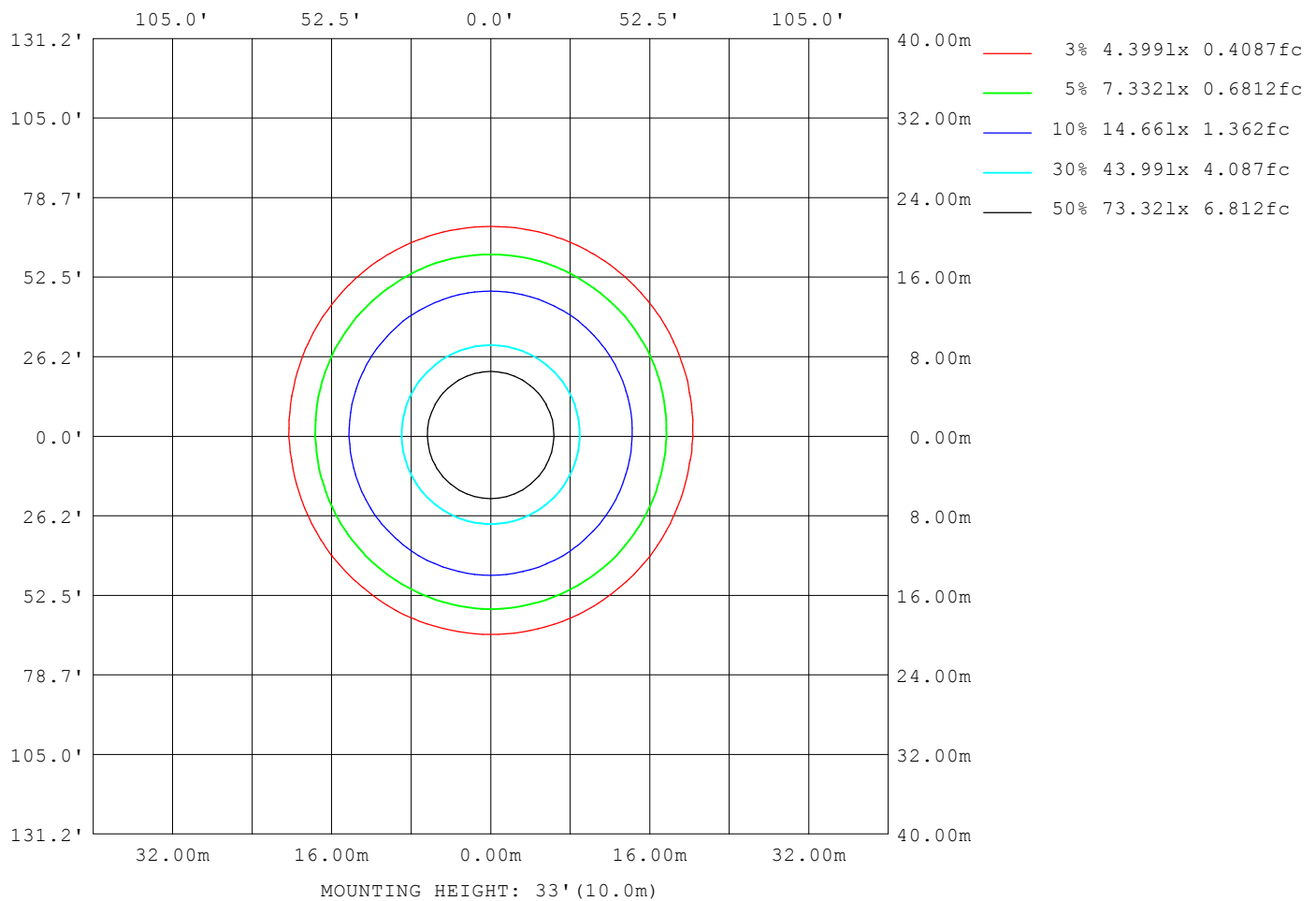
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG  
 H(β) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:J.W  
 Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
 Humidity:65.0%  
 Test Distance:5.700m [K=1.0000]  
 Remarks:

### ISOLUX DIAGRAM

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:478.36V I:0.6205A P:281.90W PF:0.9498 Freq:49.99Hz Lamp Flux:40408.3x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-3K-120-HS-CG-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

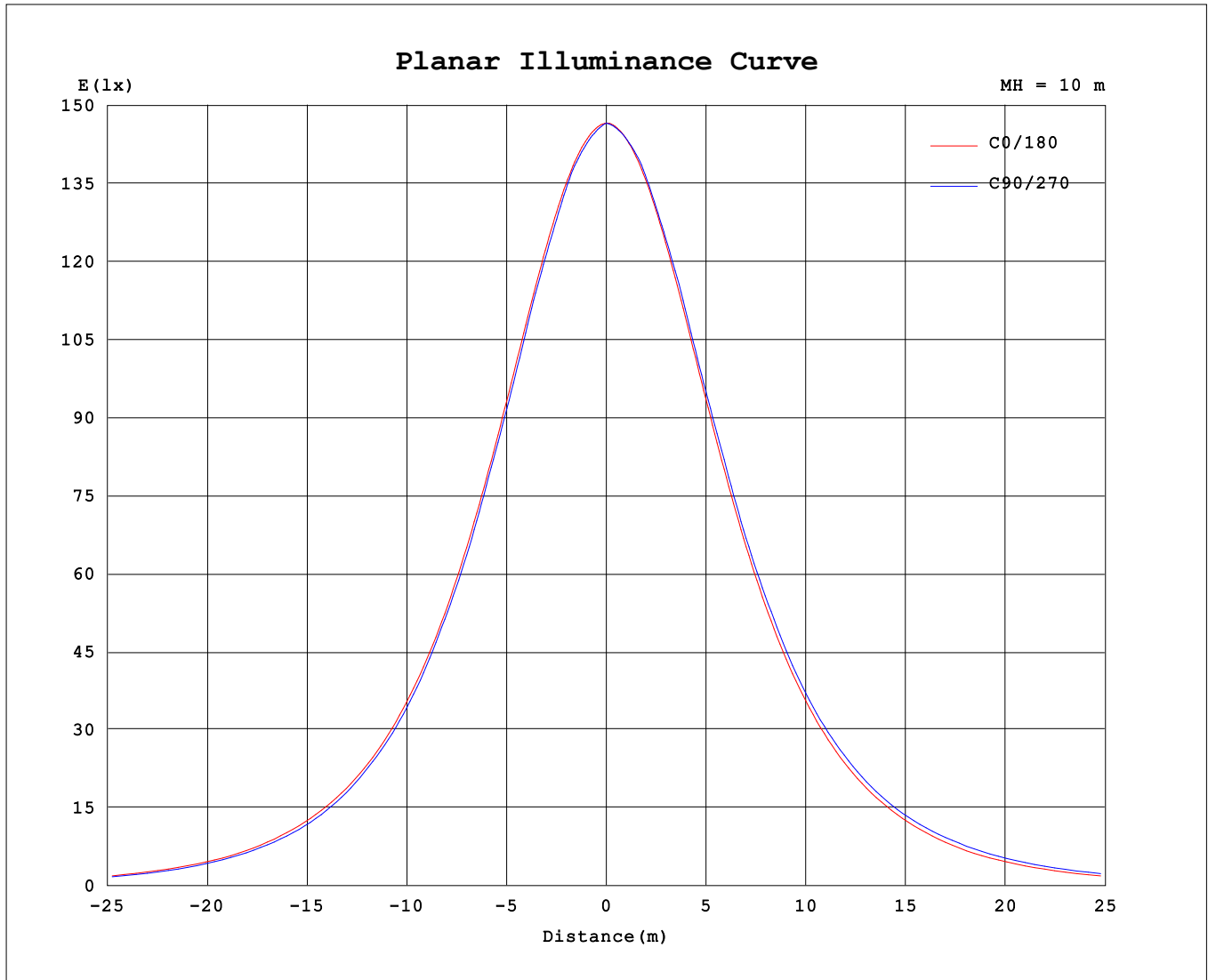
AvgL	cd/m2
L_0~180 (65) av	111681
L_0~180 (75) av	61649
L_0~180 (85) av	5721
L_90~270 (65) av	116206
L_90~270 (75) av	78548
L_90~270 (85) av	0
L_45 (65) av	114191
L_45 (75) av	69358
L_45 (85) av	11886

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:J.W  
 Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
 Humidity:65.0%  
 Test Distance:5.700m [K=1.0000]  
 Remarks:

### Planar Illuminance Curve



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:18 April 2024

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.480  
Humidity:65.0%  
Test Distance:5.700m [K=1.0000]  
Remarks:

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.480
Humidity:65.0%
Test Distance:5.700m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.480
Humidity:65.0%
Test Distance:5.700m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.480
Humidity:65.0%
Test Distance:5.700m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.480
Humidity:65.0%
Test Distance:5.700m [K=1.0000]
Remarks:
```