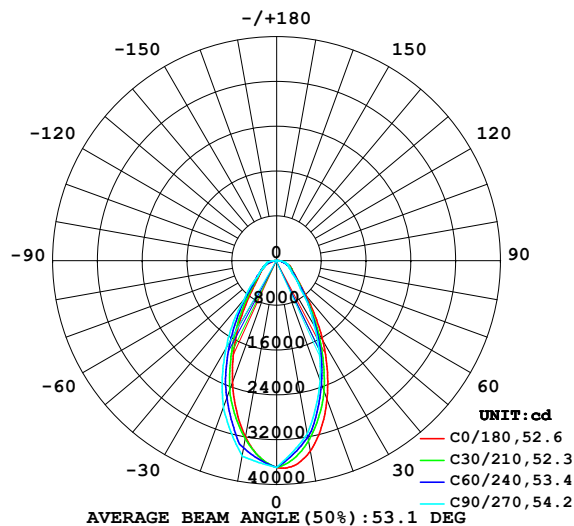


# LUMINAIRE PHOTOMETRIC TEST REPORT

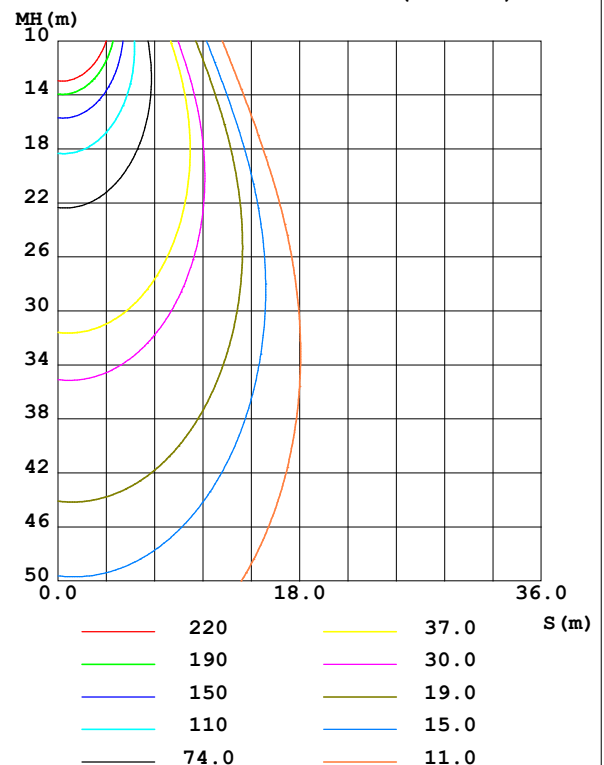
Test:U:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 140.69 lm/W
MODEL	N/A	Imax (cd)	37090	S/MH(C0/180)	0.75	
NOMINAL POWER(W)	280	LOR(%)	100.0	S/MH(C90/270)	0.89	
RATED VOLTAGE(V)	480	TOTAL FLUX(lm)	39632	η UP,DN(C0-180)	0.0,46.7	
NOMINAL FLUX(lm)	39631.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,53.3	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	480	η down (%)	100.0	CIBSE SHR MAX	0.90	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H(β) Range:-90 - 90DEG  
 H(β) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:J.W  
 Test Date:19 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	3456	3228	3149	3063	3202	3307	3546	3505	0- 10	3299	3299	8.32,8.32
20	2634	2392	2277	2184	2309	2505	2788	2767	10- 20	8115	11414	28.8,28.8
30	1651	1464	1349	1305	1378	1578	1810	1803	20- 30	9137	20551	51.9,51.9
40	824.1	744.3	672.7	657.7	679.8	798.8	904.4	925.9	30- 40	7022	27573	69.6,69.6
50	449.9	423.0	376.6	396.0	407.6	447.4	445.3	476.1	40- 50	4467	32040	80.8,80.8
60	307.7	289.1	261.9	274.8	295.7	309.1	292.4	320.7	50- 60	3194	35234	88.9,88.9
70	218.7	184.8	200.4	168.4	183.5	197.1	219.2	213.5	60- 70	2438	37672	95.1,95.1
80	103.8	90.39	128.3	69.60	72.36	95.74	163.4	119.5	70- 80	1575	39247	99,99
90	0.4243	0	0	0	0.4855	0	0	0	80- 90	384.9	39632	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): 30034 lm

%lum = 75.8%

%lamp = 75.8%

Conical surface Flux(120deg): 35234 lm

%lum = 88.9%

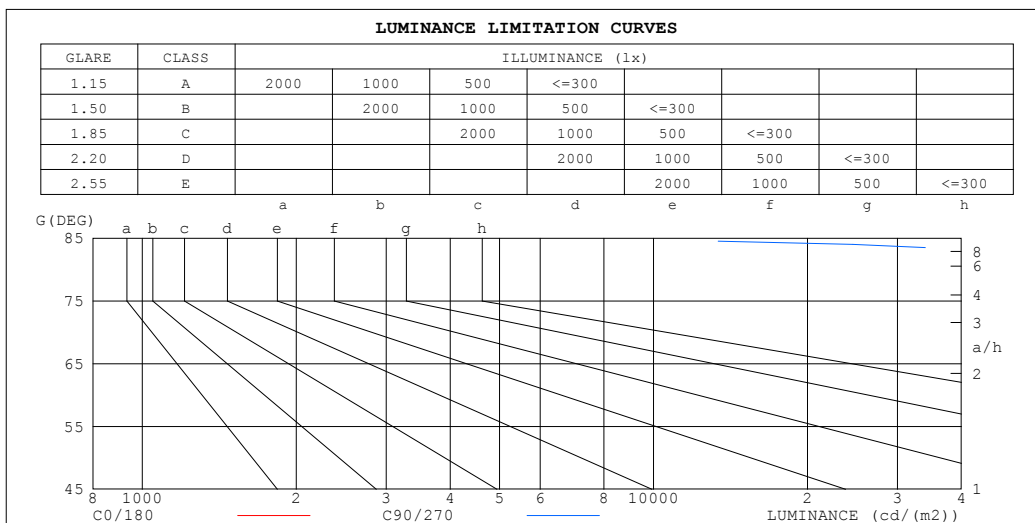
%lamp = 88.9%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-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	63167	0
80	59775	73867
75	58381	63486
70	63936	58581
65	62161	54691
60	61545	52382
55	63732	55664
50	69992	58594
45	82915	74196

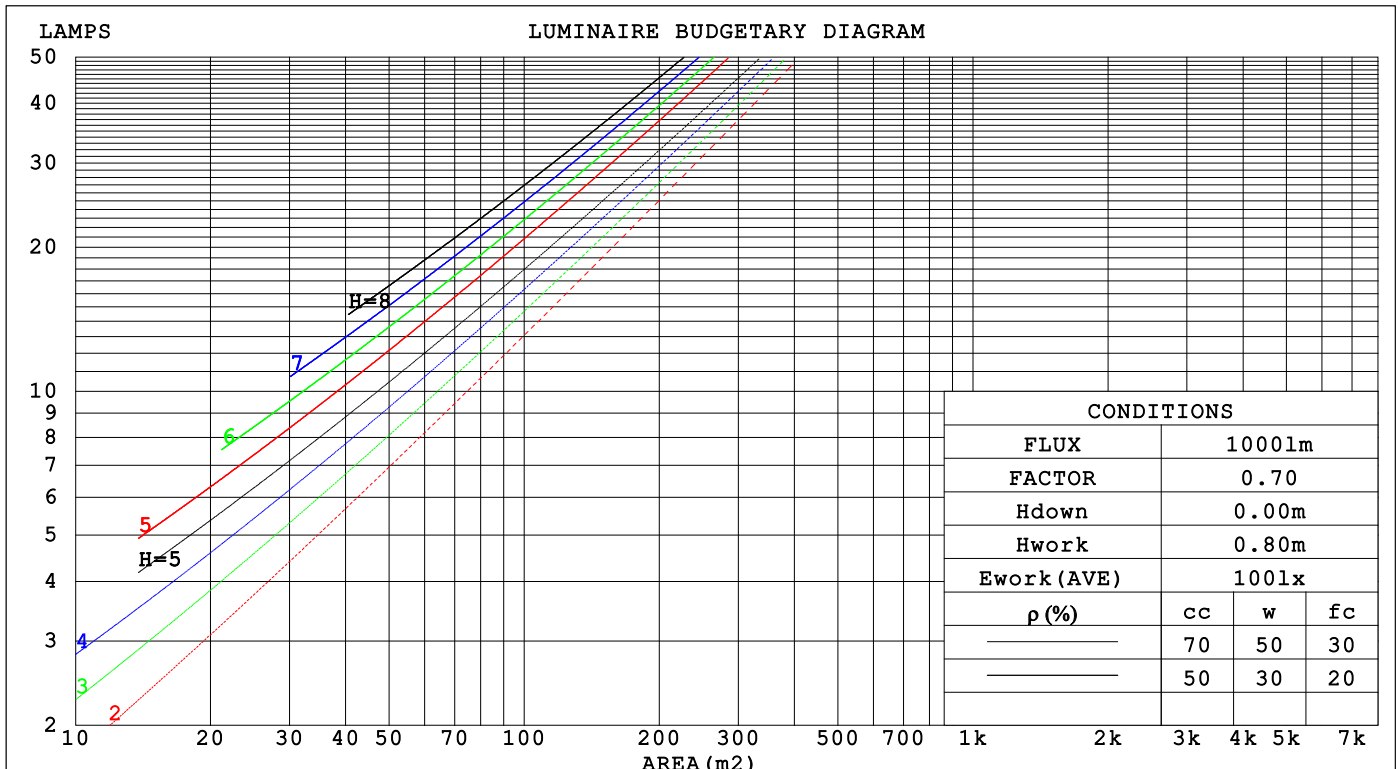
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 April 2024

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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.99	.96	.97	.95	.93	.94	.92	.91	.89
2.0	.97	.92	.87	.95	.90	.86	.92	.88	.84	.89	.85	.82	.86	.83	.81	.79
3.0	.88	.82	.77	.87	.81	.76	.84	.79	.75	.81	.77	.73	.79	.75	.72	.70
4.0	.81	.74	.68	.80	.73	.68	.77	.71	.67	.75	.70	.66	.73	.69	.65	.64
5.0	.74	.67	.62	.73	.66	.61	.71	.65	.61	.70	.64	.60	.68	.63	.60	.58
6.0	.69	.61	.56	.68	.61	.56	.66	.60	.56	.65	.59	.55	.63	.58	.55	.53
7.0	.64	.57	.52	.63	.56	.51	.62	.56	.51	.60	.55	.51	.59	.54	.50	.49
8.0	.60	.53	.48	.59	.52	.47	.58	.52	.47	.57	.51	.47	.56	.51	.47	.45
9.0	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42
10.0	.52	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.41	.49	.44	.41	.39



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:J.W  
Test Date:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-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	.242	.138	.044	.235	.134	.043	.222	.127	.041	.210	.121	.039	.199	.115	.037															
2.0	.228	.125	.038	.222	.123	.038	.211	.118	.037	.201	.113	.035	.192	.108	.034															
3.0	.213	.113	.034	.208	.111	.034	.198	.107	.033	.189	.104	.032	.181	.100	.031															
4.0	.199	.103	.030	.194	.102	.030	.186	.099	.029	.178	.096	.029	.171	.093	.028															
5.0	.186	.095	.027	.182	.093	.027	.174	.091	.027	.167	.088	.026	.161	.086	.026															
6.0	.174	.087	.025	.171	.086	.025	.164	.084	.024	.158	.082	.024	.152	.080	.024															
7.0	.164	.081	.023	.161	.080	.023	.155	.078	.023	.149	.077	.022	.144	.075	.022															
8.0	.154	.075	.021	.152	.075	.021	.146	.073	.021	.142	.072	.021	.137	.070	.020															
9.0	.146	.071	.020	.144	.070	.020	.139	.069	.019	.134	.067	.019	.130	.066	.019															
10.0	.138	.066	.018	.136	.066	.018	.132	.065	.018	.128	.064	.018	.124	.063	.018															

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	.176	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.106	.140	.114	.091	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.144	.100	.066	.124	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.136	.089	.054	.117	.077	.047	.081	.054	.033	.047	.032	.020	.015	.010	.006	
6.0	.129	.080	.045	.111	.069	.039	.076	.048	.028	.044	.029	.016	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.029	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.110	.062	.028	.095	.053	.025	.066	.038	.018	.038	.022	.011	.012	.007	.003	
10.0	.105	.057	.025	.091	.050	.022	.063	.035	.016	.037	.021	.009	.012	.007	.003	

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm										
NAME: Crane Master Series					TYPE: Floodlight			WEIGHT: N/A		
SPEC.: CMF-300-347-480-5K-60-HS-CP-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	18.4	19.6	18.6	19.7	19.9	17.8	19.0	18.0	19.2	19.4
3H	19.3	20.4	19.6	20.6	20.8	18.6	19.8	18.9	20.0	20.2
4H	19.7	20.7	19.9	20.9	21.2	19.0	20.1	19.3	20.3	20.6
6H	19.9	20.9	20.2	21.1	21.4	19.4	20.4	19.7	20.6	20.9
8H	19.9	20.9	20.3	21.2	21.4	19.4	20.4	19.7	20.6	20.9
12H	19.9	20.9	20.3	21.1	21.4	19.4	20.3	19.7	20.6	20.9
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, 39632 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 12.8)  
Area: 0.1 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

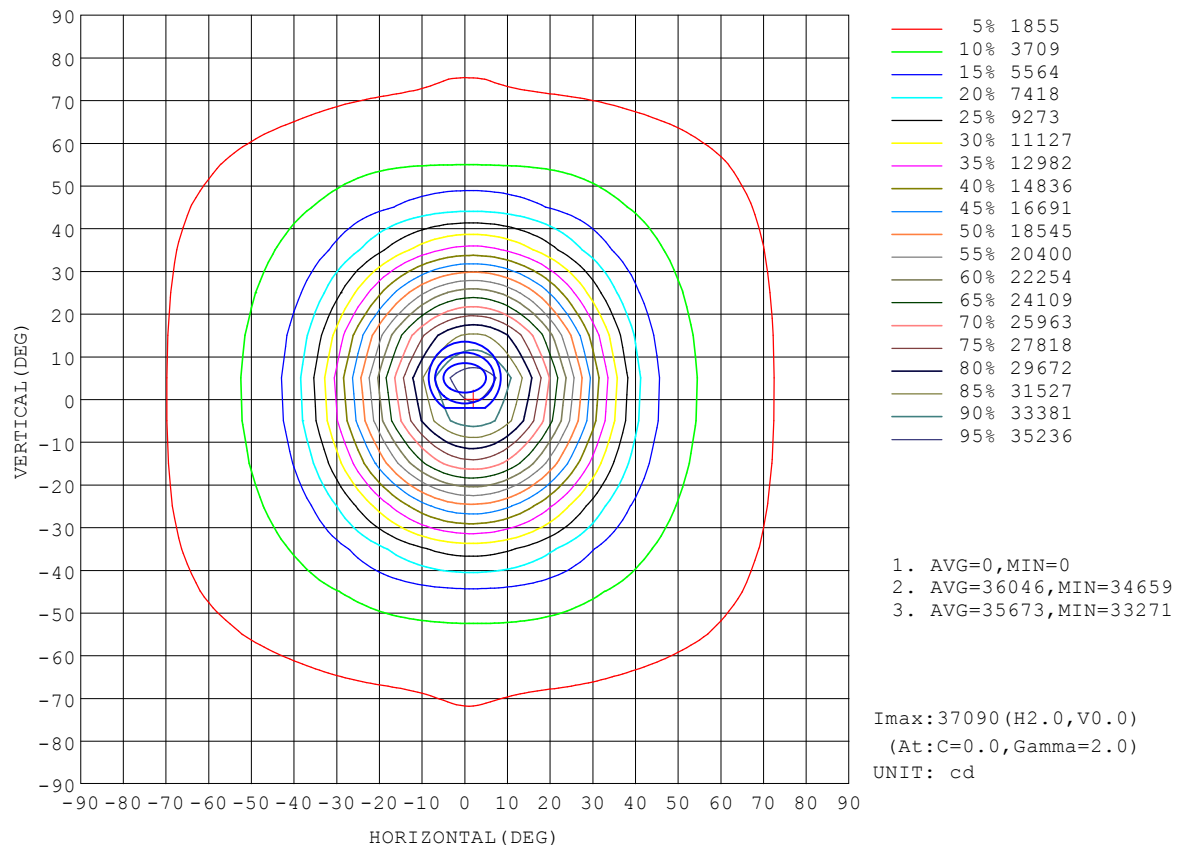
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	73	64	59	72	64	59	71	63	58	53
0.80	82	73	67	81	73	67	79	72	67	62
1.00	88	80	74	87	79	74	85	80	73	68
1.25	93	86	80	92	85	80	90	84	79	73
1.50	97	90	85	96	89	84	93	87	83	77
2.00	102	96	91	100	94	90	97	92	88	82
2.50	105	99	94	103	98	93	99	95	92	85
3.00	107	102	98	105	100	97	101	98	95	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	110	106	104	105	103	101	92
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:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



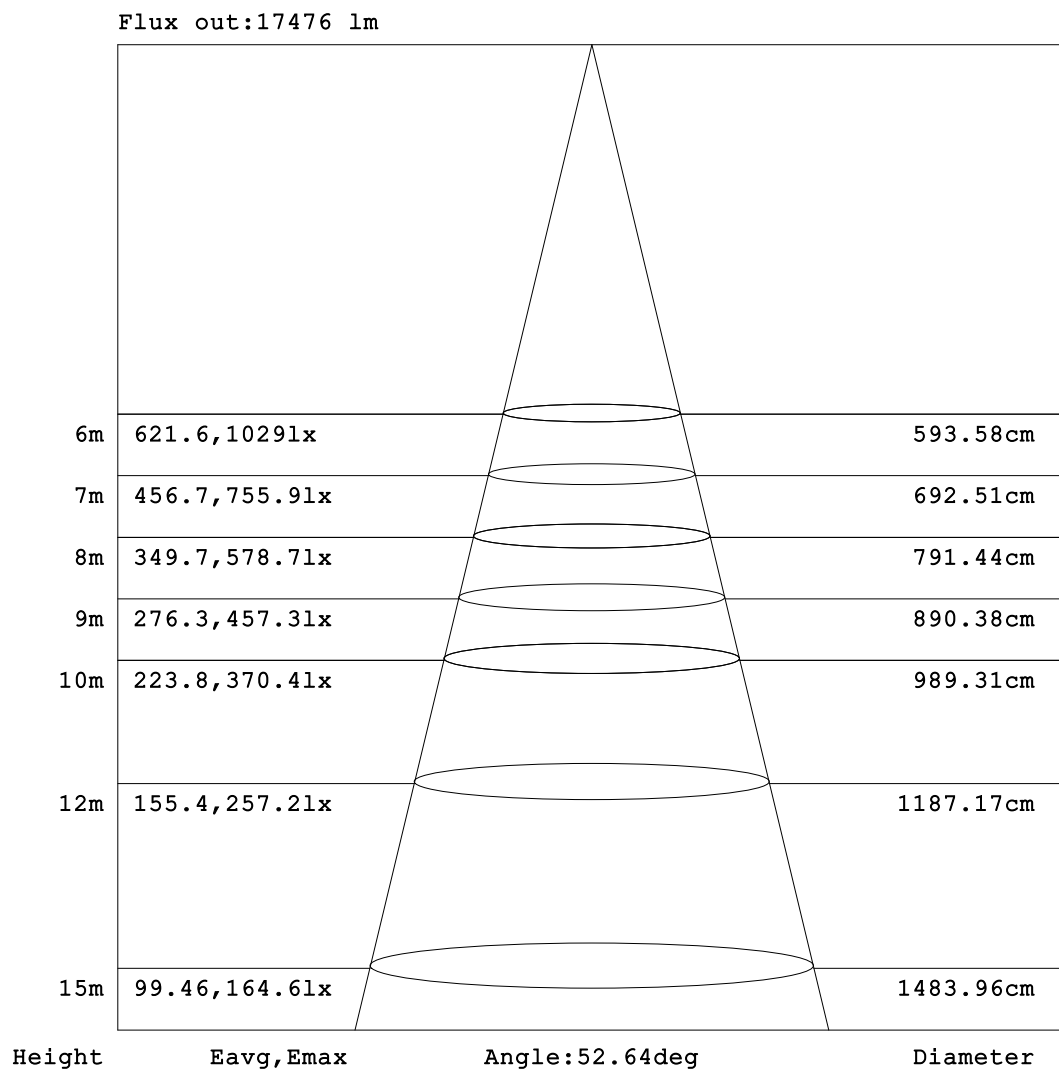
H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 April 2024

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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A



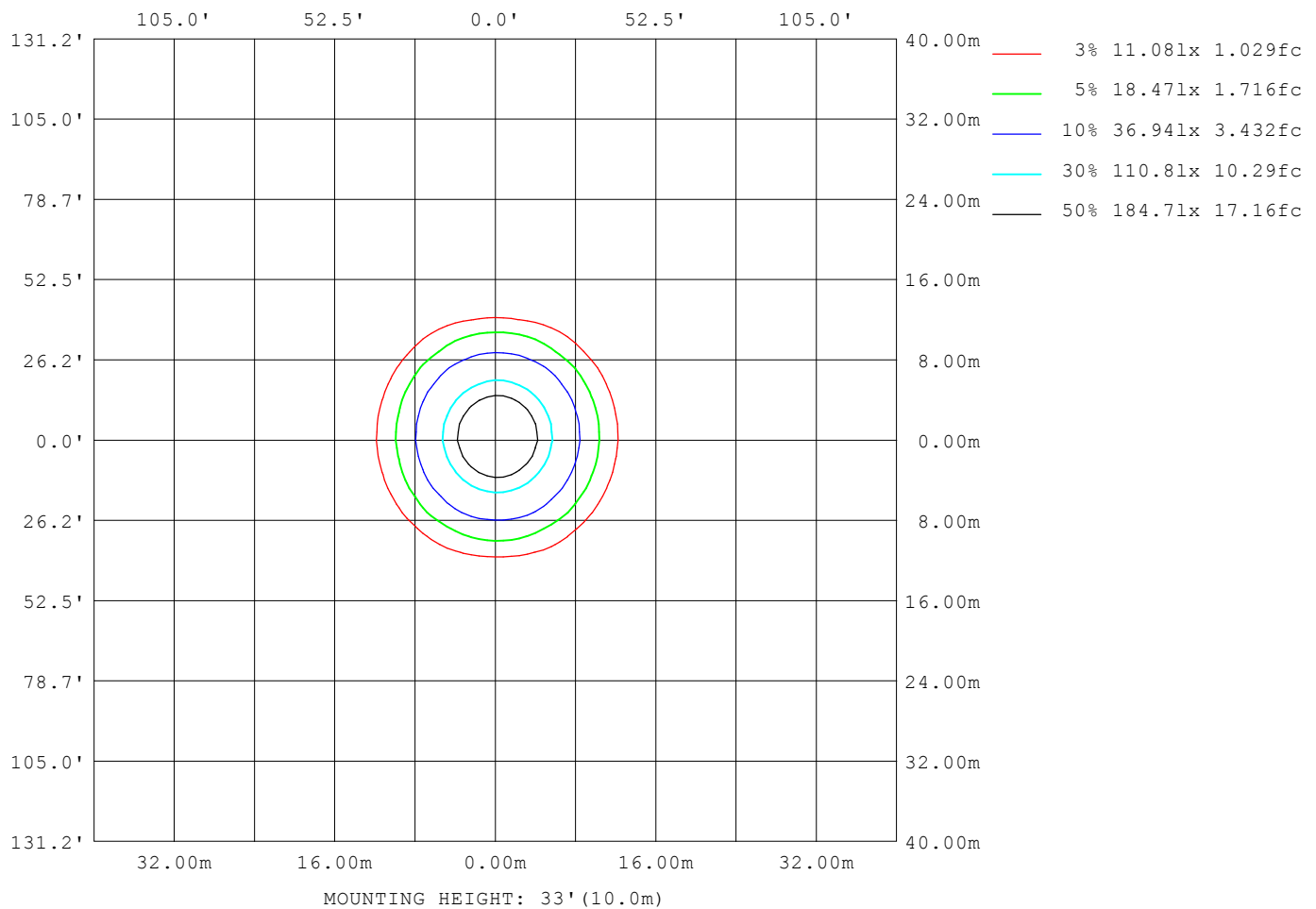
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range: -90 - 90DEG  
 H(β) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: J.W  
 Test Date: 19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-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:19 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:478.09V I:0.6203A P:281.69W PF:0.9498 Freq:49.99Hz Lamp Flux:39631.5x1 lm		
NAME: Crane Master Series	TYPE: Floodlight	WEIGHT: N/A
SPEC.: CMF-300-347-480-5K-60-HS-CP-GRY-YKE	DIM.: N/A	SERIAL No.: N/A
MFR.: Red Sky Lighting	SUR.: N/A	Shielding Angle: N/A

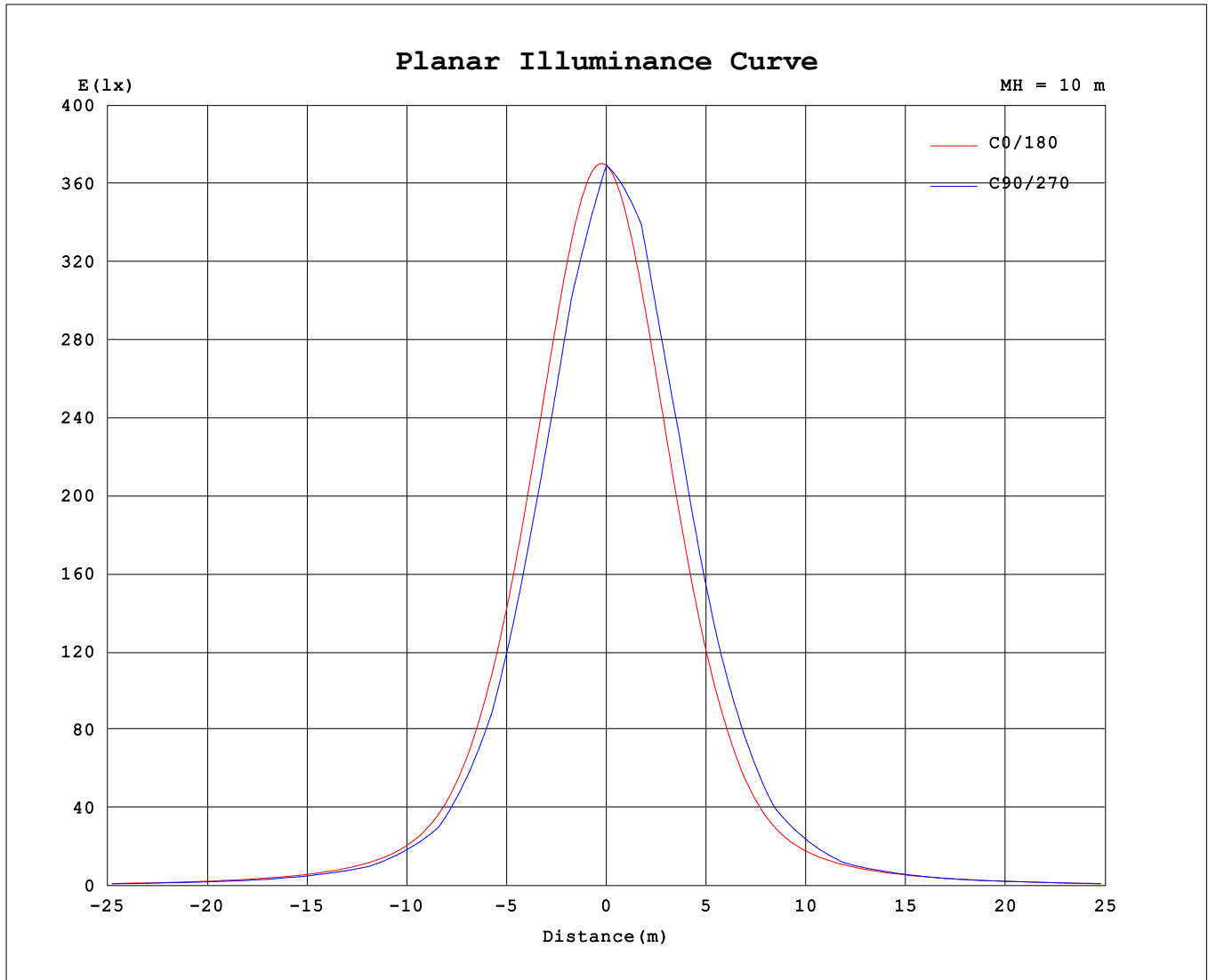
AvgL	cd/m2
L_0~180 (65) av	60902
L_0~180 (75) av	52859
L_0~180 (85) av	44165
L_90~270 (65) av	57611
L_90~270 (75) av	68704
L_90~270 (85) av	0
L_45 (65) av	57390
L_45 (75) av	55167
L_45 (85) av	30717

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:19 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( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:J.W  
Test Date:19 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:
```