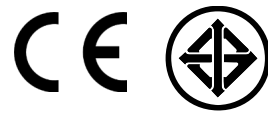


“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

FEATURES:

- High Efficiency (130 lumens/W)
- Wide input voltage range (90/100-305VAC) for protection against voltage fluctuation
- Up to 10kV surge protection for protection against transient voltage
- PHILIPS LUMILEDS or SAMSUNG LED (LM80)
- Over 50,000 hours design life
- Suitable for heavy duty industrial applications
- CE and TIS (Thailand) certified



TIS 1955-2551



SPECIFICATIONS¹:



MODELS	HBCO2 -800	HBCO2 -1000	HBCO2 -1200	HBCO2 -1500	HBCO2 -1800	HBCO2 -2000	HBCO2 -2200	HBCO2 -2500
System Power	80W	100W	120W	150W	180W	200W	220W	250W
LED Chips	Philips Lumileds 3030 2D				Samsung LH351			
Color Temperature	3000K, 4000K, 5000K, 5700K, 6500K (standard model)							
CRI	>80 Ra				70~80 Ra			
Luminous Efficacy ²	130 lumens/W							
Driver ³	Meanwell						Inventronics	
Input Voltage ³	100-305 Vac						90-305 Vac	
Driver Efficiency ³	Efficiency >92%; PF>0.97/230VAC							
Surge Protection ³	4kV (Line-Line); 6kV (Line-Earth)						6kV(L-L); 10kV(L-E)	
Dimming	Non-dimmable (Optional dimmable)						Dimmable (0-5V/0-10V/PWM/Timer)	
Sensor (Optional)	Microwave motion sensor, detection range 360° up to 15m high, daylight harvesting							
Beam Angle	110° (Optional reflector is available: 80°)							
Operating Temp.	-40 ~ +50°C							
Operating Humidity	95% RH							
Design Life	>>50,000 hours (B50, L70)							
Housing Color	Black							
Housing Material	Aluminum							
Diffuser Material	PMMA							
Ingress Protection	IP65							
Net Weight (kg)	4.2	4.9	4.9	5.5	8.2	8.2	8.8	9.0
Product Size (cm)	φ24xH15	φ24xH19	φ24xH19	φ24xH21	φ24xH23	φ24xH23	φ24xH25	φ24xH25

1. Specifications are subject to changes without notice.

2. Luminous efficacy is about 5~10% lower with reflector.

3. Power supply specifications may vary depending on the specific power supply brand and model.

REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 1 of 10

Version: 9.4

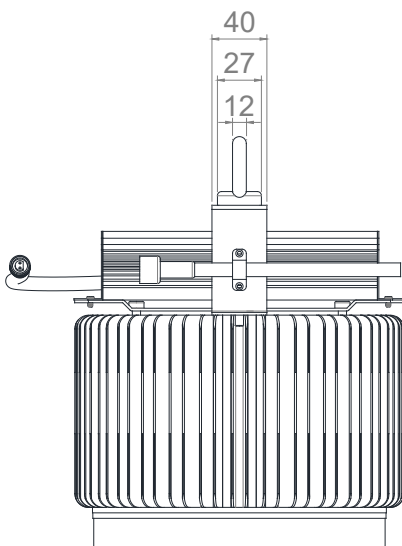
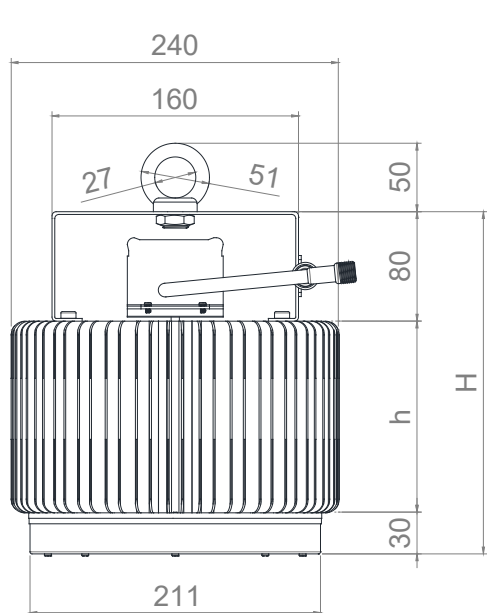
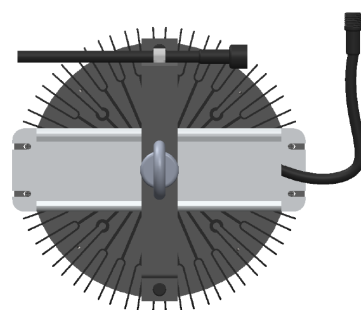
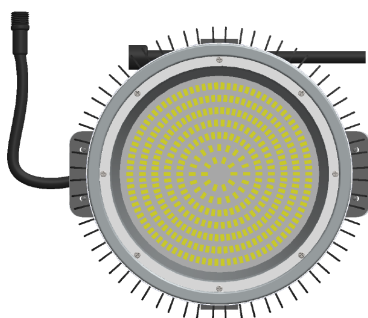
“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PRODUCT PHOTOS:



TIS 1955-2551

CAD DESIGN WITHOUT ANTI-GLARING SHADE (REFLECTOR)



Power	h (mm)	H (mm)
80W	40	150
100W	80	190
120W	80	190
150W	100	210
180W	120	230
200W	120	230
220W	140	250
250W	140	250

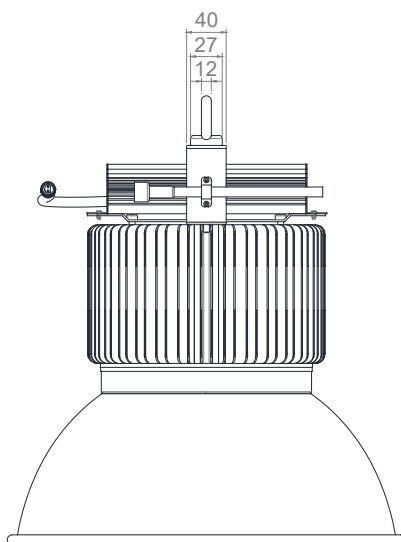
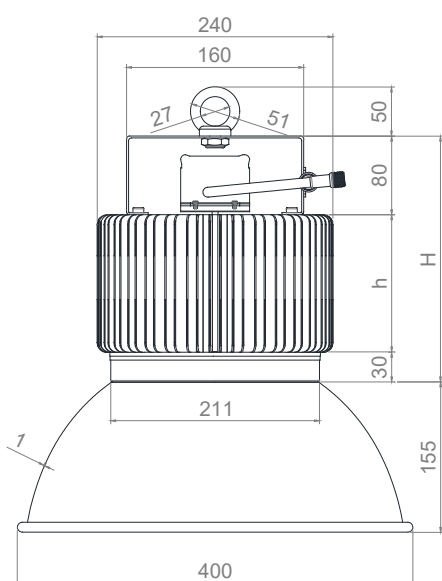
“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PRODUCT PHOTOS:



TIS 1955-2551

CAD DESIGN WITH ANTI-GLARING SHADE (REFLECTOR)



Power	h (mm)	H (mm)
80W	40	150
100W	80	190
120W	80	190
150W	100	210
180W	120	230
200W	120	230
220W	140	250
250W	140	250

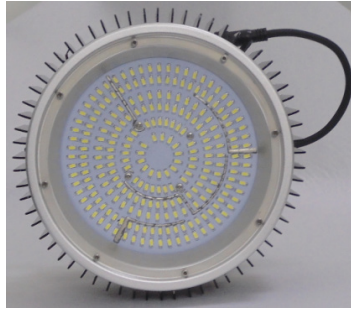
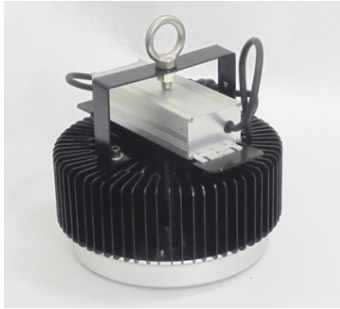
“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PRODUCT PHOTOS:



TIS 1955-2551

WITHOUT ANTI-GLARING SHADE (REFLECTOR)



WITH ANTI-GLARING SHADE (ALUMINUM REFLECTOR)



WITH ANTI-GLARING SHADE (PLASTIC REFLECTOR)



REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 4 of 10

Version: 9.4

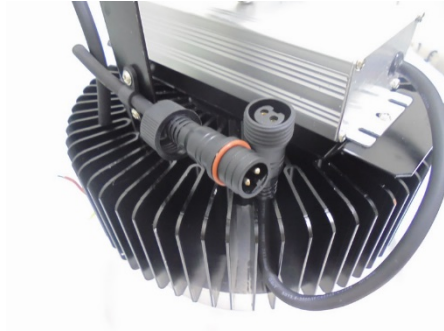
“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PRODUCT PHOTOS:

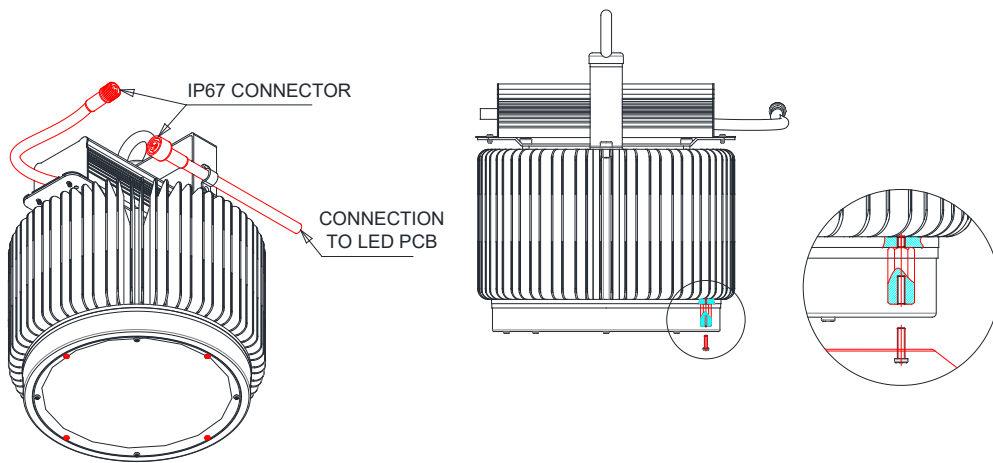


TIS 1955-2551

IP67 POWER SUPPLY CONNECTION (EASY MAINTENANCE)



ANTI-GLARING SHADE (REFLECTOR) INSTALLATION DIAGRAM



ORDERING INFORMATION: e.g., HBCO2-120065N-80110

Series	Wattage		Color Temperature (CCT)		Dimming		CRI		Beam Angle (deg)	
	800	80W	30	3000K	N	Non-dimmable	80	Ra80	110	110 degree
HBCO2	1000	100W	40	4000K	D	Dimmable	80	Ra80	110	110 degree
	1200	120W	50	5000K						
	1500	150W	57	5700K						
	1800	180W	65	6500K						
	2000	200W								
	2200	220W								
	2500	250W								

“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

Motion Sensor (Optional)*:



TIS 1955-2551

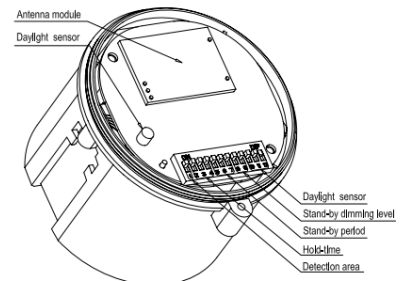
Features

- Mounting height up to 15m, suitable for factories and warehouses
- Waterproof sensing with IP65 rating
- Automatic dimming in combination with 0-10V dimming driver
- Built-in adjustable daylight sensor for daylight harvesting
- Optional mounting brackets for various applications



Specifications

- Input voltage: 120~277Vac (Nominal)
- Rated load: 800W @120Vac; 1200W @220-277Vac (Resistive load)
- Detection area: 8m max. radius (adjustable)
- Hold time: 5s/30s/1min/3min/5min/10min/20min/30min
- Daylight sensor (lux): 5/15/30/50/100/150/disable
- Stand-by dimming level (%): 10/20/30/50
- Stand-by period: 0s/10s/1min/3mi/5min/10min/30min/+∞
- Sensor principle: Microwave motion detector (5.8GHz ± 75MHz)
- Transmitting power: <0.5mW
- Mounting height: 3-15m
- Detection angle: 150° (wall mount); 360° (ceiling mount)
- Motion detection: 0.3-3m/s
- Operating temperature: -35°C ~ 70°C
- Ingress protection: IP65



*Only standard model motion sensor is presented. Various other models of motions sensors are available to meet specific customer requirements.

REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 6 of 10

Version: 9.4

“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PHOTOMETRIC TEST REPORT: 100W without reflector



TIS 1955-2551

Filename: HBCO2PM-1000 100mA - No reflector v1.0

Manufacturer: CLARO RESEARCH (SHENZHEN) CO., LTD.

Luminaire: CLARO OPTIMA 2 HIGHBAY 100W (No reflector)

Luminaire Cat: HBCO2PM-1000

Lamp Output: Total luminaire Lumens: 12960

Max Candela: 5,117.7 at Horizontal: 0°, Vertical: 0°

Input Wattage: 102.3

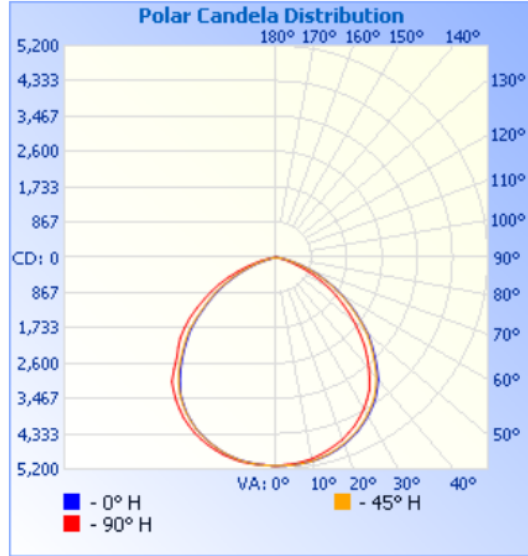
Luminous Opening: Vertical Cylinder (Dia : 0.24M, H: 0.19M)

Test: HBCO2PM-1000 100mA - No reflector

Photometry : Type C

Cutoff Class: Cutoff

Nema Type: 7 X 7

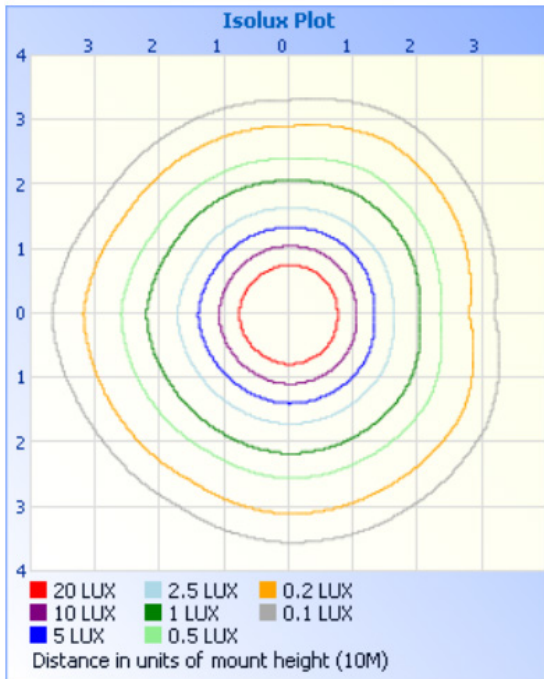


Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98%	12,706.8	145.7	146.2
Beam (50%):	75.3%	9,755.1	105.1	105.1
Total:	100%	12,957.5		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	4,039.6	31.2%
0-40	6,627.0	51.1%
0-60	11,222.1	86.6%
60-90	1,737.9	13.4%
0-90	12,960.0	100%



	Illuminance at a Distance	
	Center Beam LUX	Beam Width
8.33M	73.7 LUX	21.76 M
16.67M	18.4 LUX	43.52 M
25.00M	8.19 LUX	65.28 M
33.33M	4.61 LUX	87.04 M
41.67M	2.95 LUX	108.79 M
50.00M	2.05 LUX	130.55 M

■ Beam Spread: 105.1°

REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 7 of 10

Version: 9.4

“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PHOTOMETRIC TEST REPORT: 100W with reflector



TIS 1955-2551

Filename: HBCO2PM-1000 100mA - Reflector v1.0

Manufacturer: CLARO RESEARCH (SHENZHEN) CO., LTD.

Luminaire: CLARO OPTIMA 2 HIGHBAY 100W (Reflector)

Luminaire Cat: HBCO2PM-1000 (Reflector)

Lamp Output: Total luminaire Lumens: 11248.7

Max Candela: 7,528.2 at Horizontal: 0°, Vertical: 0°

Input Wattage: 100

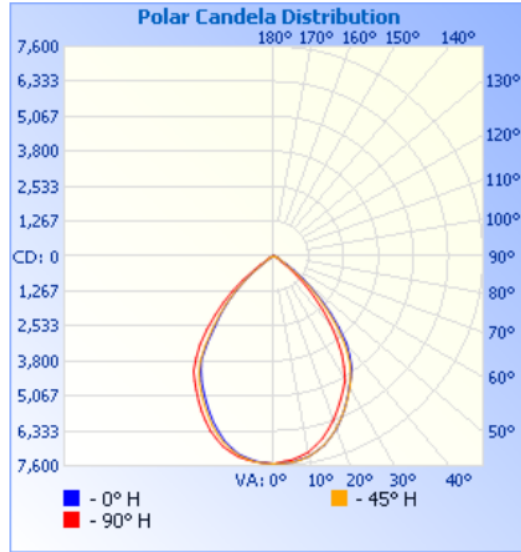
Luminous Opening: Vertical Cylinder (Dia : 0.24M, H: 0.19M)

Test: HBCO2PM-1000 100mA - Reflector

Photometry : Type B

Cutoff Class: Cutoff

Nema Type: 6 X 6

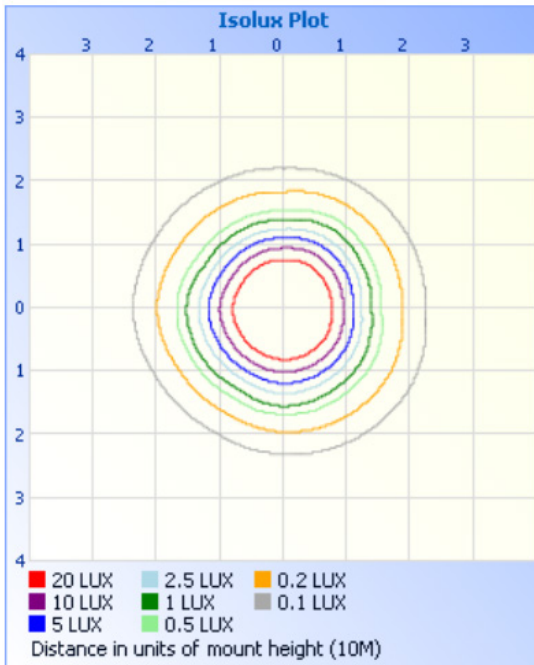


Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	95.3%	10,719.1	108.1	109.2
Beam(50%):	73.2%	8,241.5	79.2	79.7
Total:	100%	11,248.7		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	5,414.5	48.1%
0-40	8,308.7	73.8%
0-60	10,958.7	97.4%
60-90	294.0	2.6%
0-90	11,252.6	100%



	Illuminance at a Distance	
	Center Beam LUX	Beam Width
8.33M	108 LUX	13.90 M 13.79 M
16.67M	27.1 LUX	27.81 M 27.57 M
25.00M	12.0 LUX	41.71 M 41.36 M
33.33M	6.78 LUX	55.62 M 55.15 M
41.67M	4.34 LUX	69.52 M 68.93 M
50.00M	3.01 LUX	83.43 M 82.72 M

■ Vert. Spread: 79.7°
■ Horiz. Spread: 79.2°

REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 8 of 10

Version: 9.4

“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PHOTOMETRIC TEST REPORT: 250W without reflector



TIS 1955-2551

Filename: HBCOSI-2500 - No reflector v1.0

Manufacturer: CLARO RESEARCH (SHENZHEN) CO., LTD.

Luminaire: CLARO OPTIMA HIGHBAY 250W (No reflector)

Luminaire Cat: HBCOSI-2500

Lamp Output: Total luminaire Lumens: 30042.8

Max Candela: 11,863.4 at Horizontal: 0°, Vertical: 0°

Input Wattage: 243

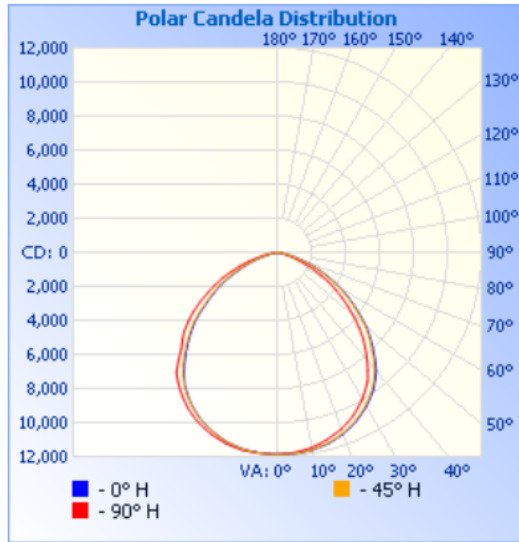
Luminous Opening: Vertical Cylinder (Dia : 0.24M, H: 0.25M)

Test: HBCOSI-2500 (No reflector)

Photometry : Type C

Cutoff Class: Cutoff

Nema Type: 7 X 7

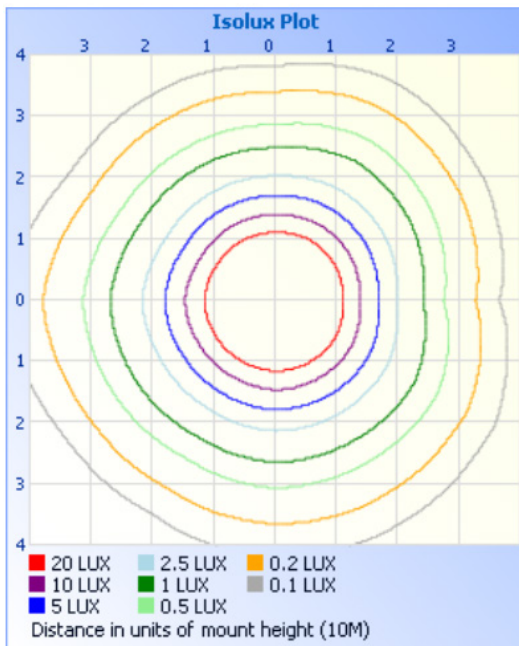


Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98%	29,455.9	145.7	146.2
Beam (50%):	75.3%	22,613.4	105.1	105.1
Total:	100%	30,037.0		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	9,364.3	31.2%
0-40	15,362.2	51.1%
0-60	26,014.2	86.6%
60-90	4,028.6	13.4%
0-90	30,042.8	100%



	Center Beam LUX	Beam Width
8.33M	171 LUX	21.76 M
16.67M	42.7 LUX	43.52 M
25.00M	19.0 LUX	65.28 M
33.33M	10.7 LUX	87.04 M
41.67M	6.83 LUX	108.79 M
50.00M	4.75 LUX	130.55 M

■ Beam Spread: 105.1°

REVISION: 21

Date: 2018.04.30

Title: CLARO “OPTIMA 2” LED HIGHBAY

Model: HBCO2

SHEET No: 9 of 10

Version: 9.4

“OPTIMA 2” LED HIGHBAY (Model: HBCO2)

PHOTOMETRIC TEST REPORT: 250W with reflector



TIS 1955-2551

Filename: HBCOSI-2500 - Reflector v1.0

Manufacturer: CLARO RESEARCH (SHENZHEN) CO., LTD.

Luminaire: CLARO OPTIMA HIGHBAY 250W (Reflector)

Luminaire Cat: HBCOSI-2500 (Reflector)

Lamp Output: Total luminaire Lumens: 27157.1

Max Candela: 18,174.8 at Horizontal: 0°, Vertical: 0°

Input Wattage: 246

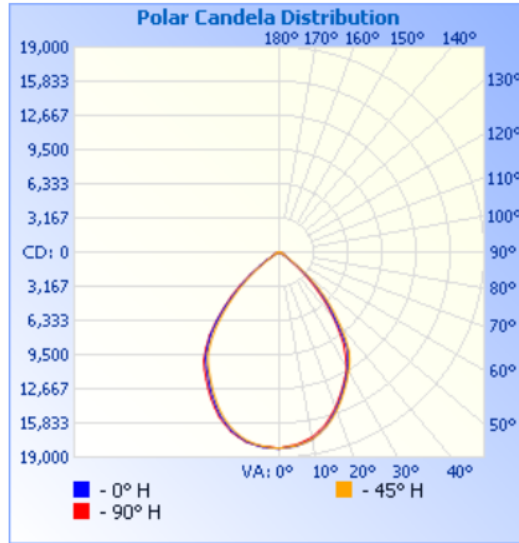
Luminous Opening: Vertical Cylinder (Dia : 0.24M, H: 0.25M)

Test: HBCOSI-2500 - Reflector

Photometry : Type B

Cutoff Class: Cutoff

Nema Type: 6 X 6

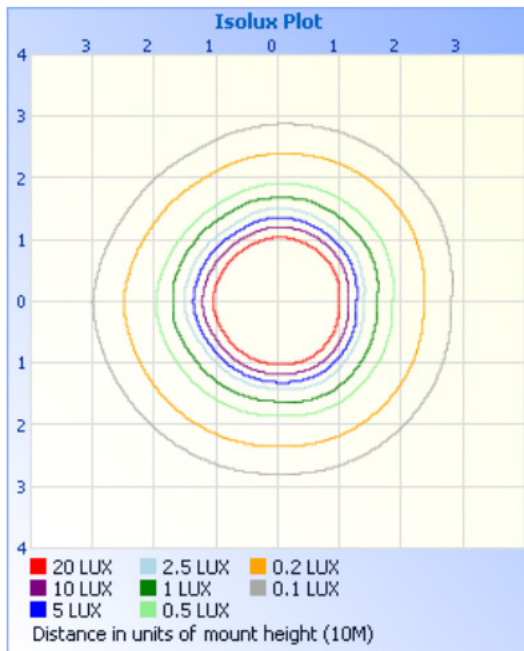


Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	95.3%	25,878.6	108.1	109.2
Beam (50%):	73.2%	19,896.9	79.2	79.7
Total:	100%	27,157.1		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	13,071.9	48.1%
0-40	20,059.3	73.8%
0-60	26,456.9	97.4%
60-90	710.1	2.6%
0-90	27,167.0	100%



Illuminance at a Distance

	Center Beam LUX	Beam Width	
8.33M	262 LUX	13.90 M	13.79 M
16.67M	65.4 LUX	27.81 M	27.57 M
25.00M	29.1 LUX	41.71 M	41.36 M
33.33M	16.4 LUX	55.62 M	55.15 M
41.67M	10.5 LUX	69.52 M	68.93 M
50.00M	7.27 LUX	83.43 M	82.72 M

■ Vert. Spread: 79.7°
■ Horiz. Spread: 79.2°