HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

Catalog Number	
Notes	Type

Phuzion™ PHS Twin

LED High Bay with uplight

Arm will be field assembled and installed. See page 2 for ordering logic.

Description

The Phuzion PHS twin LED High Bay luminaire takes high-bay lighting to new levels of lumen output with intentional uplight. By marrying the latest in LED technology with the legendary illuminating dynamics of Holophane's prismatic glass, PHST is designed for use in applications where uplight may be desired. Certain airborne contaminants may adversely affect the functioning of LEDs and other electronic components, depending on various factors such as concentrations of the contaminants, ventilation, and temperature at the end-user location. **Click here for a list of substances that may not be suitable for interaction with LEDs and other electronic components.**

Optics

- Prismatic borosilicate glass maintains highest levels of luminosity over time.
- Glass doesn't fade, discolor or otherwise degrade in harsh environments.
- Two distributions (narrow and wide).
- Highly engineered LED system ensures superior uniformity and maximizes spacing.
- 86% Downlight; 14% Uplight is standard.

Mechanical

- Robust cast aluminum housing with low copper content (0.6% CU content) withstands hot and dirty environments.
- Two pendant mount (3/4" entry) fixtures with a 3 foot cord on each is standard.
- Twin arm is painted cold rolled steel with 3/4" nipples for easy fixture attachment.

Electrical

- 70, 80 and 90 CRI are available.
- 3000K, 3500K, 4000K or 5000K CCT available.
- Fault-tolerant LED light engine continues to provide light even in failure of one LED.
- Luminaire Surge Protection Level: Designed to withstand up to 10kV/5kA per ANSI C82.77-5-2015.
- 93% lumen maintenance at 60,000 hours per fixture.
- 0 -10V dimming driver is standard, dims to 10%.

Wireless Networking

- nLight® AIR is the ideal solution for retrofit or new construction spaces where additional wiring can be labor intensive. It is available with or without an integral sensor. Integrated smart sensors or dimming and switching modules must be part of each luminaire in the nLight Air network, which can be grouped to control multiple luminaires. It pairs to other luminaires and wall switches through our mobile app. CLAIRITY PRO, which allows for simple sensor adjustment. The granularity of control with the digital PIR occupancy detection and daylight sensing makes this a great solution for any application.

Listings

- CSA certified to US and Canadian standards
- Suitable for use in damp locations
- -40 °F (-40 °C) up to 122 °F (50 °C) ambient temperature rating (see chart on page 4)
- Patent D 780,972
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
The product images shown are for illustration purposes only and may not be an exact representation of the product.
Specifications subject to change without notice.

Typical Applications

- Heavy industrial
- Light manufacturing
- Warehousing
- Large indoor

Dimensions: *Inches (millimeters) unless otherwise noted.*

Length: 47.53 (1207.26)
Width: 21.22 (538.99)
Height: 19.02-23.46 (483.11-595.88)
Weight: 110 lbs. (49.8 kg)

A+ Capable Luminaire

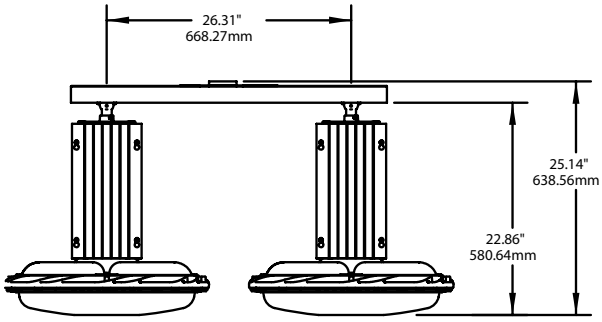
This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks marked by a shaded background*

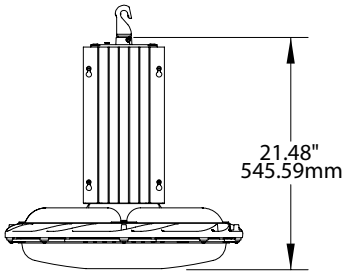
To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

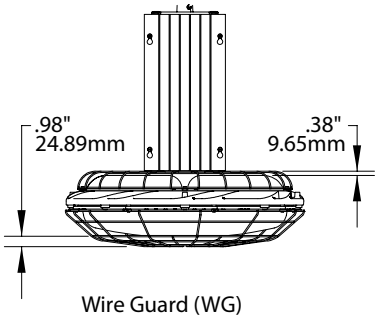
DIMENSIONAL DATA



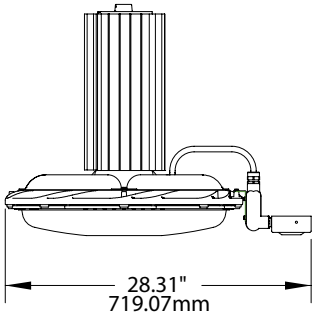
Twin Configuration



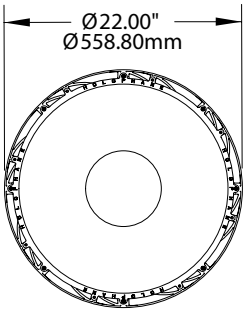
Pendant (PM)



Wire Guard (WG)



Occupancy Sensor



Diameter

A+ Capable options indicated by this color background.

Example: PHST 60000LM ND MVOLT 40K 80CRI PM CNP16W3FT MISC DWHXD
Breakouts: PHS 30000LM ND MVOLT 40K 80CRI PM CNP163FT MISC DWHXD (Quantity of 2)
TWINARM DWHXD (Quantity of 1)

ORDERING INFORMATION

Series	Lumens	Distribution	Voltage	Color temperature	Color rendering index	Mounting
PHST	48000LM 48,000 nominal lumens 60000LM 60,000 nominal lumens 70000LM 70,000 nominal lumens 80000LM 80,000 nominal lumens 90000LM 90,000 nominal lumens	ND Narrow Glass WD Wide Glass NDFR Narrow Frosted Glass WDFR Wide Frosted Glass	MVOLT Auto sensing (120-277V, 50/60Hz) 120 120V, 50/60Hz 208 208V, 50/60Hz 240 240V, 50/60Hz 277 277V, 50/60Hz HVOLT Auto sensing (347-480V, 50/60Hz) 347 347V, 50/60Hz 480 480V, 50/60Hz	30K 3000K CCT 35K 3500K CCT 40K 4000K CCT 50K 5000K CCT	70CRI 80 CRI 90CRI	PM Pendant ‡

Cordsets

CNP16W3FT	Cord only (no plug), 16 gauge, 3 conductor, white, 3FT ‡
CNP165CDW3FT	Cord only (no plug), 16 gauge, 5 conductor for 0-10V dimming, white, 3FT ‡

Options

nLight® Air Wireless: ‡

NLTAIR2 RLSXR6	nLight® Air Generation 2 enabled, 360° high mount sensor, (15 to 45' heights) (LINK) ‡
NLTAIR2 RLSXR6 EM	nLight® Air Generation 2 enabled, 360° high mount sensor, (15 to 45' heights),UL924 operation, via power interrupt detection (not available with battery pack) (LINK)
NLTAIR2 RLSXR10	nLight® Air Generation 2 enabled, 360° low mount sensor, (7 to 15' heights) (LINK) ‡
NLTAIR2 RLSXR10 EM	nLight® Air Generation 2 enabled, 360° low mount sensor, (7 to 15' heights), UL924 operation via power interrupt detection (not available with battery pack) (LINK)
NLTAIR2 RPP20 D	nLight® Air Generation 2 enabled, power/relay pack, 0-10V dimming output (LINK) ‡
NLTAIR2 RPP20 D EM	nLight® Air Generation 2 enabled, power/relay pack, 0-10V dimming output, UL924 operation via power interrupt detection (not available with battery pack) (LINK)
NLTAIR2 RPP20 D ER	nLight® Air Generation 2 enabled, power/relay pack, 0-10V dimming output, UL924 operation via power sense leads (not available with battery pack) (LINK)
NLTAIR2 2XRPP20 D	nLight® Air Generation 2 enabled, 2 power/relay packs, 0-10V dimming output,controls uplight and downlight separately (LINK)
NLTAIR2 2XRPP20 D EM	nLight® Air Generation 2 enabled, 2 power/relay packs, 0-10V dimming output, UL924 operation via power interrupt detection (not available with battery pack), controls uplight and downlight separately (LINK)
NLTAIR2 2XRPP20 D ER	nLight® Air Generation 2 enabled, 2 power/relay packs, 0-10V dimming output, UL924 operation via power sense leads (not available with battery pack),controls uplight and downlight separately (LINK)

Individual Non-dimming Sensors: ‡

CMRB6	360° High Bay Sensor, (15-45' mounting heights), on/off occupancy (LINK)
CMRB6 P	360° High Bay Sensor, (15-45' mounting heights), on/off photocell (LINK)

nLight® Wired: ‡

NPP16 D	nLight® wired power/relay pack, 0-10VDC dimming output (LINK)
2XNPP16 D	2 nLight® wired power/relay packs, 0-10VDC dimming output, controls uplight and downlight separately (LINK)

Other Options:

AO	Adjustable output (step dimming) ‡
DIM	Dimming terminal ‡
DIM2	2 Dimming terminals for independent control of uplight and downlight ‡
JP8	Bulk pack of 8 units
SCKX	X Inch stainless steel safety chain factory installed ‡
WGX	Wire guard installed
MISC	Mex

Finish

DWHXD	White super durable
DGXD	Gray super durable
DBXD	Black super durable
DNXD	Satin nickel super durable
DGRXD	Graphite super durable

Accessories: *Order as separate catalog number.*

PHSCHAIN XIN	X Inch stainless steel safety chain kit ‡
PHCB	Cord with non NEMA locking plug for use with universal power hook (UPH), 16 gauge, 3 conductors, white, 2FT, includes LPMD (PF-105) loop (120-347V) ‡
PHCBL8480	Cord with L8 NEMA locking plug for use with universal power hook (UPH), 16 gauge, 3 conductors, white, 2FT, includes LPMD (PF-105) loop (480V) ‡

UPH 35SM XXX DWHXD	Universal power hook for use with PHCB accessory, thru-wire/surface mounting. (120-347V) ‡
UPH 35SM L8480 DWHXD	Universal power hook for use with PHCB accessory, thru-wire/surface mounting. (480V) ‡
UPH 36SM XXX DWHXD	Universal power hook for use with PHCB accessory, pendant mount. (120-347V) ‡
UPH 36SM L8480 DWHXD	Universal power hook for use with PHCB accessory, pendant mount. (480V) ‡

LPFD	¾" female loop (PF-116)
HKFD	¾" female safety hook (PF-122-A)
HKMAR	¾" male anti-rotational hook (PF-129)
LPMD	¾" male loop (PF-105-B)
HKMD	¾" male safety hook (PF-121-A)
WGPHS	wire guard

Ordering/Shipping Logic ‡

PHS 70000LM ships as: (qty 1) TWINARM XXX ‡ (qty 2) PHS 35000LM XXX CNP16W3FT	PHS 90000LM ships as: (qty 1) TWINARM XXX ‡ (qty 2) PHS 45000LM XXX CNP165CDW3FT

‡ Option Value Ordering Restrictions & Notes	
Option value	**Restriction**
A0	Not available with DIM, DIM2, other dimming controls or sensors.
CNP16W3FT	Individual PHS fixtures will break out with this cord to be routed through the TWINARM unless optional CNP165CDW3FT cord with DIM option is chosen.
CNP165CDW3FT	Available with DIM only. Not available with DIM2, A0, other dimming controls or sensors. Individual PHS fixtures will break out with this cord to be routed through the TWINARM for power and 0-10V dimming.
DIM	Not available with A0, DIM2, other dimming controls or sensors.
DIM2	Not available with A0, DIM, other dimming controls or sensors.
Ordering/Shipping Logic	The standard configuration will always break out with a TWINARM and (2) standard PHS fixtures with 3 conductor, 3ft cords on each. When ordered with the CNP165CDW3FT option, the 3 conductor, 3ft cords will be replaced by 5 conductor, 3ft cords. The extra leads are for dimming.
nLight® Air Wireless	Not available with A0, DIM, DIM2, other controls or sensors.
nLight® Wired	Available with AS, 120, 208, 240 or 277 only. Not available with A0, DIM, DIM2, other controls or sensors.
NLTAIR2 RLSXR6, NLTAIR2 RLSXR10, NLTAIR2 RPP20 D	Normal luminaires (non-emergency) can be used as a normal power sensing device for nearby nLight AIR devices and luminaires with EM emergency options.
Individual Non-dimming Sensors	Available with 120, 277 or 347V only. Not available with other controls or sensors.
PHCB, PHCBL8840	Must specify voltage. For new installations, order matching UPH accessory. For existing installations, match PHCB voltage to existing UPH. Shipped separately to be installed on twin arm.
PHSCHAIN XIN	To be connected to the optical assembly of each individual fixture, order a QTY for each twin. X denotes length. Chain shipped separately as an accessory. Available in multiple sizes. Replace X with size in inches. Example: PHSCHAIN 120IN = 120 inches or 10 feet.
PM	Ship level breakout of individual fixtures will include 3' cord to be routed through twin arm for electrical connections.
SCKX	Factory installed to the optical assembly of each individual fixture, will include 2 total sets of safety chain per twin. X denotes length. Safety Chain is available in multiple sizes. Replace X with size in inches. Example: SCK120 = 120 inches or 10 feet
TWINARM XXX	XXX denotes color, will match the chosen finish.
UPH 35SM L8480 DWHXD,UPH 36PM L8480 DWHXD	Available with PHCBL8480 option only.
UPH 35SM XXX DWHXD, UPH 36PM XXX DWHXD	Available with PHCB option only. XXX denotes voltage.

OPERATIONAL DATA

Ambient Temperature Ratings

Lumen Package	Mounting	Occupancy Sensor	Voltage	Max. Ambient	Min. Supply Wire Temp.
24000LM	PM	No	All	55°C	75°C
24000LM	PM	Yes	All	50°C	75°C
30000LM	PM	No	All	50°C	75°C
30000LM	PM	Yes	All	40°C	75°C
35000LM	PM	Yes	All	50°C	75°C
35000LM	PM	No	All	40°C	75°C
40000LM	PM	Yes	All	50°C	75°C
40000LM	PM	No	120V-277V	30°C	75°C
45000LM	PM	Yes	All	50°C	75°C
45000LM	PM	No	120V-277V	30°C	75°C

Note
Chart based on one of two PHS fixtures that will be attached to the twin arm.

Operating Characteristics

Lumen Package	Distribution	Input Watts	70CRI				80CRI				90CRI				
			3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	
24000LM	ND	185	23299	23893	25482	26075	22495	23089	24486	25080	18111	18513	18915	18513	Lumens
			126	129	138	141	122	125	132	136	98	100	102	100	LPW
	NDFR	185	19512	20009	21340	21837	18839	19336	20506	21003	15167	15504	15840	15504	Lumens
			105	108	115	118	102	105	111	114	82	84	86	84	LPW
	WD	185	23894	24502	26132	26740	23069	23678	25111	25720	18573	18985	19398	18985	Lumens
			129	132	141	145	125	128	136	139	100	103	105	103	LPW
	WDFR	185	20010	20520	21884	22394	19319	19829	21029	21539	15554	15899	16245	15899	Lumens
			108	111	118	121	104	107	114	116	84	86	88	86	LPW

Note

All data shown based on one of the two PHS fixtures that will be attached to the twin arm. Actual lumen output and wattage of a twin will be double the amount shown.

Operating Characteristics

Lumen Package	Distribution	Input Watts	70CRI				80CRI				90CRI				
			3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	
30000LM	ND	246	29206	29950	31941	32685	28198	28942	30693	31437	22702	23206	23710	23206	Lumens
			119	122	130	133	115	118	125	128	92	94	96	94	LPW
	NDFR	246	24458	25081	26749	27372	23614	24237	25704	26327	19012	19434	19856	19434	Lumens
			99	102	109	111	96	99	104	107	77	79	81	79	LPW
	WD	246	29951	30714	32756	33519	28917	29680	31477	32239	23281	23798	24315	23798	Lumens
			122	125	133	136	118	121	128	131	95	97	99	97	LPW
	WDFR	246	25082	25721	27432	28071	24217	24856	26360	26999	19497	19930	20363	19930	Lumens
			102	105	112	114	98	101	107	110	79	81	83	81	LPW

Lumen Package	Distribution	Input Watts	70CRI				80CRI				90CRI				
			3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	
35000LM	ND	296	33934	34799	37113	37977	32763	33628	35663	36527	26378	26963	27549	26963	Lumens
			115	118	125	128	111	114	120	123	89	91	93	91	LPW
	NDFR	296	28418	29142	31080	31804	27438	28161	29866	30590	22090	22580	23071	22580	Lumens
			96	98	105	107	93	95	101	103	75	76	78	76	LPW
	WD	296	34800	35686	38060	38946	33599	34485	36573	37459	27051	27651	28252	27651	Lumens
			118	121	129	132	114	117	124	127	91	93	95	93	LPW
	WDFR	296	29143	29886	31873	32616	28138	28880	30628	31370	22654	23157	23660	23157	Lumens
			98	101	108	110	95	98	103	106	77	78	80	78	LPW

Lumen Package	Distribution	Input Watts	70CRI				80CRI				90CRI				
			3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	
40000LM	ND	354	38681	39666	42304	43290	37346	38331	40652	41637	30068	30735	31403	30735	Lumens
			109	112	120	122	105	108	115	118	85	87	89	87	LPW
	NDFR	354	32393	33219	35428	36253	31276	32101	34044	34869	25180	25739	26298	25739	Lumens
			92	94	100	102	88	91	96	99	71	73	74	73	LPW
	WD	354	39668	40678	43384	44394	38299	39309	41689	42699	30835	31519	32204	31519	Lumens
			112	115	123	125	108	111	118	121	87	89	91	89	LPW
	WDFR	354	33220	34066	36332	37178	32074	32920	34912	35759	25823	26396	26969	26396	Lumens
			94	96	103	105	91	93	99	101	73	75	76	75	LPW

Lumen Package	Distribution	Input Watts	70CRI				80CRI				90CRI				
			3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	3000K	3500K	4000K	5000K	
45000LM	ND	379	40674	41710	44484	45520	39270	40306	42746	43782	31617	32319	33020	32319	Lumens
			107	110	117	120	104	106	113	116	83	85	87	85	LPW
	NDFR	379	34062	34930	37253	38121	32887	33755	35798	36665	26477	27065	27653	27065	Lumens
			90	92	98	101	87	89	94	97	70	71	73	71	LPW
	WD	379	41712	42774	45619	46681	40272	41335	43837	44899	32423	33143	33863	33143	Lumens
			110	113	120	123	106	109	116	118	86	87	89	87	LPW
	WDFR	379	34932	35821	38204	39094	33726	34616	36711	37601	27153	27756	28359	27756	Lumens
			92	95	101	103	89	91	97	99	72	73	75	73	LPW

Note

All data shown based on one of the two PHS fixtures that will be attached to the twin arm. Actual lumen output and wattage of a twin will be double the amount shown.

OPERATIONAL DATA CONTINUED

Projected Lumen Maintenance

Lumen Maintenance 24000LM Package

Ambient °C	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
25	1	0.98	0.96	0.95	0.93	0.89
30	1	0.98	0.96	0.94	0.93	0.88
35	1	0.98	0.96	0.94	0.92	0.87
40	1	0.97	0.95	0.93	0.91	0.85
45	1	0.97	0.94	0.92	0.90	0.84
50	1	0.97	0.94	0.91	0.89	0.82
55	1	0.96	0.93	0.90	0.87	0.80

Lumen Maintenance 30000LM Package

Ambient °C	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
25	1	0.98	0.96	0.94	0.92	0.88
30	1	0.97	0.95	0.93	0.91	0.86
35	1	0.97	0.95	0.92	0.90	0.84
40	1	0.97	0.94	0.92	0.89	0.83
45	1	0.96	0.93	0.91	0.88	0.81
50	1	0.96	0.93	0.90	0.87	0.79

Lumen Maintenance 35000LM Package

Ambient °C	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
25	1	0.96	0.93	0.90	0.88	0.81
30	1	0.95	0.93	0.90	0.87	0.80
35	1	0.95	0.92	0.89	0.86	0.79
40	1	0.95	0.92	0.89	0.86	0.78
45	1	0.94	0.90	0.87	0.83	0.75
50	1	0.93	0.89	0.85	0.81	0.72

Lumen Maintenance 40000LM Package

Ambient °C	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
25	1	0.95	0.92	0.89	0.87	0.80
30	1	0.95	0.92	0.89	0.86	0.78
35	1	0.94	0.91	0.87	0.84	0.76
40	1	0.94	0.90	0.86	0.82	0.73
45	1	0.93	0.88	0.84	0.80	0.69
50	1	0.92	0.87	0.82	0.77	0.65

Lumen Maintenance 45000LM Package

Ambient °C	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
25	1	0.95	0.92	0.89	0.86	0.79
30	1	0.95	0.91	0.88	0.85	0.77
35	1	0.94	0.90	0.86	0.82	0.74
40	1	0.93	0.88	0.84	0.80	0.70
45	1	0.92	0.87	0.82	0.77	0.66
50	1	0.91	0.85	0.79	0.74	0.62

OPERATIONAL DATA CONTINUED

Performance with AO Adjustable Output

AO Position	% Light Output	% Power Consumption
8	100%	100%
7	94%	93%
6	83%	80%
5	72%	67%
4	59%	55%
3	47%	42%
2	34%	30%
1	20%	18%

Number of LED Boards and Drivers Used

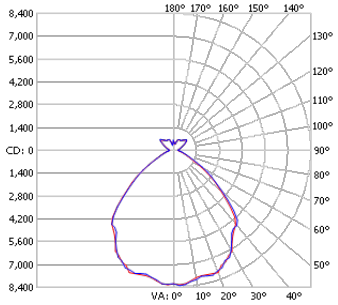
Lumen Package	Number of Uplight LED Boards Per Fixture	Number of Downlight LED Boards Per Fixture	Number of Drivers Per Fixture
24000LM	4	4	1
30000LM	4	4	2
35000LM	4	4	2
40000LM	4	4	2
45000LM	4	4	2

Note
Chart based on one of two PHS fixtures that will be attached to the twin arm.

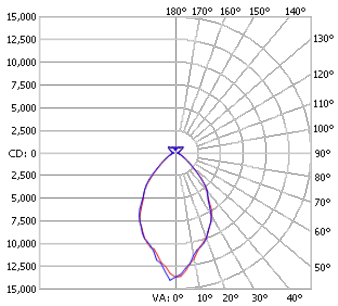
LAT Factors

Ambient °C	45000LM	35000LM	40000LM	45000LM
25	1.00	1	1	1
30	0.99	0.99	0.99	0.99
35	0.98	0.98	0.98	0.98
40	0.97	0.97	0.97	0.97
45	0.96	0.96	0.96	0.96
50	0.95	0.95	0.95	0.95

DISTRIBUTION DATA



Wide



Narrow

COMPONENTS & OPTIONS DATA

HKMAR (PF-129-A)
Hook

HKFD (PF-122-A)
Hook

LPFD (PF-166)
Loop

Uplight optics
Standard prismatic, borosilicate glass that doesn't fade or degrade. Optional frosted optics.

CMRB Sensor

nLight Air RLSXR Sensor

nLight Wired NPP16 D Power Pack

nLight Air RPP20 D Power Pack

nLight Air RPP20 D EM or ER Power Pack

Adjustable Output Module

PHST DGXD

Individual PHS DGXD with Sensor

Individual PHS DGXD with Wire Guard (WGX)