

**MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND AVIATION ADMINISTRATION**

MEMORANDUM

TO: Distribution

FROM: 
Peter D. Charles, AIA,
Manager, Division of Architecture
MAA Office of Design and Construction

DATE: April 1, 2013

SUBJECT: Design Standard (DST) 2013-01, Section 19.1, Lighting

Effective immediately, the attached modifications to Section 19.1 shall be incorporated into the MAA Design Standards, dated January 2013:

If you believe the above specifications conflict with any other codes or regulations, or if you should have any questions regarding this matter, please contact the Manager, Division of Architecture at 410-859-7260.

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19.1 LIGHTING

This lighting design guideline should be considered for general purpose lighting throughout the Terminal. The Maryland Aviation Administration is committed to using lighting products that maximize energy efficiency and promote good light quality. New lighting designs will receive review from the Office of Design and Construction and the Office of Maintenance & Utilities. All projects shall be designed to specify light fixtures that require lamps that the Office of Maintenance and Utilities (OMU) currently keeps in stock. The following Table 19.1 has been prepared as a list of acceptable general purpose lamps for Terminal use. Approval for any lamps not listed in this table must be obtained from OMU.

Neon and cold cathode lighting are not acceptable for general purpose lighting. The use of neon, cold cathode or in combination with LED for signage and retail use will be reviewed on a case by case basis by OMU, OCM, and the Office of Design & Engineering.

Maximum lamp fluorescent tube length shall be 4 feet; No U shaped fluorescent tubes shall be used.

The use of dimming systems shall be limited. When applicable, the design shall be kept small in size – that is: simple, manually controlled, and not connected to the building-wide control system. Dimming systems should avoid complicated operating scenarios that would be difficult to maintain. Dimming system plans and details and shall be submitted to the OMU for review. Specifications for comprehensive field commissioning and OMU training shall be included for any dimming control systems.

19.1.1 Lamps

Fixtures used at BWI Marshall and MTN airports shall be specified to use the types of lamps in the Table 19.1, below:

Approved equal lamps, or proposed substitutes shall have equal or better characteristics in the “Life”, and Color Rendering Index (“CRI”), columns, compared to the specified lamps, and shall have similar color temperatures.

19.1.2 Lamp Ballasts

Metal halide ballasts shall be electronic, for Pulse-start or Ceramic Metal Halide lamps.

Linear Tubular fluorescent ballasts shall be high efficiency and electronic, compatible with lamps listed below.

Compact fluorescent ballasts shall be electronic rapid-start, with end of lamp life cut-off circuiting and keyed, quick connect nylon plugs for secondary and primary wiring.

19.1.3 Light Emitting Diodes –LED

This is a developing and fast evolving field of lighting design & equipment. The Maryland Aviation Administration does not discourage the use of this lighting technology. The MAA is evaluating the durability, efficiency and cost of this new technology. Alternative lighting systems in LED will be considered by OMU, if it can be shown to have equal or better characteristics for life expectancy and color rendition compared to the specified lamps.

# Ref.	Type of Lamp	Lamp ID Code	Manufacturer	Product Code	Approved Equal	Life, hours@ 12 hours/ start	Base Type	Lamp Watts	CRI	Color Temperature	Location
Fluorescent Tube											
1	2 Foot 17 Watts T8	F17T8/XL/SPX41/ ECO	General Electric	15484	Osram Sylvania, Philips	24,000	G13 Medium bi-pin	17W	80+	4100K	Terminal and other Buildings
2	3 Foot 32 Watts T8	F25T8/XL/SPX41/ ECO	General Electric	15491	Osram Sylvania, Philips	24,000	G13 Medium bi-pin	25W	80+	4100K	Terminal and other Buildings
3	4 Foot 28 Watts T8	F28T8/XL/SPX41/ ECO	General Electric	72866	Osram Sylvania, Philips	30,000	G13 Medium bi-pin	28W	80+	4100K	Terminal and other Buildings
4	4 Foot 32 Watts T8	F32T8/XL/SPX50/ ECO	General Electric	16313	Osram Sylvania, Philips	36,000	G13 Medium bi-pin	32W	80+	5000K	Daily and Hourly Garage
5	4 Foot 49 Watts T5 HO	F54T5/841/HO/EA/ ALTO49W ECO	Philips	22052-5	General Electric	40,000	Miniature bi-pin	49W	85+	4100K	High Bay Lighting and Terminal and other building
Self-Ballasted Fluorescent Spiral											
6	15 Watt T3	FLE15HT3/2/841	General Electric	25183	TCP, Maxlite	8,000	Medium E26	15W	80+	4100k	Terminal and other Buildings
7	20 Watt T3	FLE20HT3/2/841	General Electric	25186	TCP, Maxlite	8,000	Medium E26	20W	80+	4100k	Terminal and other Buildings
Compact Fluorescent Plug-in											
8	27 Watt PL	PLT32W/ 841/XEW/ 4Pin /ALTO27W	Philips	26872-2	Osram Sylvania,	20,000	4 pin GX24Q4	27W	80+	4100K	Down lights in Terminal &

Table 19.1 Maryland Aviation Administration Approved Lamp List

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											Piers
9	42 Watt PL	F42BX/SPX41/A/4P	General Electric	97636	Sylvania, Philips	17,000	4 pin GX24Q4	42w	82	4100k	Lower level Arrival loop
Pulse Start Metal Halide											
10	70 Watt, ED17, Universal Operating Position	MH 70W/U/PS	Venture	78138	Osram Sylvania, Philips, General Electric	30,000	Medium E26	70W	65+	4000K	Daily Garage
11	150 Watt, ED17, Universal Operating Position	MH 150W/U/PS	Venture	99584	Osram Sylvania, Philips, General Electric	15,000	Medium E26	150W	68+	4000K	Lower level Arrival loop Road crossing
12	320 Watt, ED28, Vertical Operating Position	MS 320W/V/PS/740	Venture	59194	Osram Sylvania, Philips, General Electric	20,000	Mogul E39	320W	68+	4000K	Hourly Garage pole Fixtures

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Ceramic Metal Halide											
13	39 Watt Par 30, 25 Degree Beam, Screw Base	CMH39/PAR30/FL25	General Electric	42067	Osram Sylvania, Philips	10,000	Medium E26	39 W	81	3000K	Pier A Lower Baggage Claim Wood Wall
14	70 Watt, ED 17, Open Rated, Universal Operating Position	CMH70/C/U/830/MED/O	General Electric	31070	Osram Sylvania, Philips	16,000	Medium E26	70W	80	3000K	Open Lamp Applications
15	70 Watt Par 30, 40 Degree Beam, Screw Base	CMH70/PAR30L/830/FL	General Electric	22159	Osram Sylvania, Philips	10,000	Medium E26	70W	82	3000K	Red Column Accent Lights
16	70 Watt, Screw Base	CMH70/U/830/MED	General Electric	22119	Osram Sylvania, Philips	16,000	Medium E26	70W	80	3000K	Main Terminal Concourse
17	70 Watt, T6, Bi-Pin	CMH70/TU/830/G12	General Electric	20016	Osram Sylvania, Philips	15,000	G12 Bi-Pin	70W	83	3000K	Main Terminal Concourse
18	100 Watt Par 38, 25 Degree Beam, Screw Base	CMH100/PAR38/FL25	General Electric	45681	Osram Sylvania, Philips	15,000	Medium E26	100W	81	3000K	Main Terminal Concourse and Point Light Effect
19	150 Watt, T6, Bi-Pin	CMH150/TU/830/G12	General Electric	20017	Osram Sylvania, Philips	15,000	G12 Bi-Pin	150W	82	3000K	Pier A/B Exterior Canopy
20	150 Watt, ED 17, Open Rated, Universal Operating Position	CMH150/C/U/942/MED/O	General Electric	31067	Osram Sylvania, Philips	15,000	Medium E26	150W	90	4200K	Main Terminal Concourse

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