



LM-79-08 TEST REPORT: ISF 2017705

CATALOG: HMLD4 30K 70CRI

LM-79-08 Test

Test #: ISF 2017705

Test Date: 2/13/2020

Catalog: HMLD4 30K 70CRI

Photometric Data

Luminous Flux(LU):	102760
SP Ratio:	1.23
CCT:	3028
CRI:	70.54
Chroma x:	0.4377
Chroma y:	0.4094
Chroma u:	0
Chroma v:	0
Chroma u':	0.2488
Chroma v':	0.5236
Duv Value:	0.002

Electrical

Input Power(Watts):	840.8
Input Volts(Volts AC):	277
Input Current(Amps):	3.13
Frequency(Hertz):	60
Power Factor:	0.97
THD:	12.54

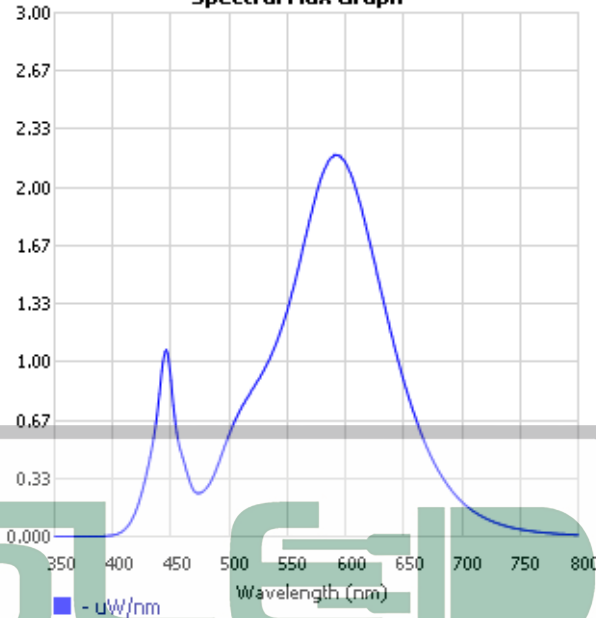
Calculated

Efficacy(LU/Watts):	122.22
---------------------	--------

R Values

Ra:	70.54
R1:	65.52
R2:	81.75
R3:	94.80
R4:	66.17
R5:	66.05
R6:	76.04
R7:	75.70
R8:	38.29
R9:	-45.29
R10:	60.33
R11:	61.71
R12:	55.78
R13:	68.49
R14:	97.18

Spectral Flux Graph



M/P Ratio

	Melanopic	Photopic	M/P Ratio
Method 1:	231986.076	102730.029	2.258
Method 2:	55038.215	102730.029	0.536
Method 3:	6.28E-01	1.41E+00	0.446
Method 4:	5.75E-03	1.42E-02	0.404

Melanopic Calculation Methods

Method 1:

Photopic function scaled to a maximum of 683 lm/W

Melanopic function scaled to a maximum of 4215 lm/W

Method 2:

Photopic and Melanopic functions normalized to a maximum of 1. When evaluating light source SPD Photopic results are multiplied by 683 lm/W and Melanopic results are multiplied by 1000.

Method 3:

WELL Building Standard v2

Photopic and Melanopic functions normalized to equal area under curve when evaluating the Equal-Energy spectrum

Method 4:

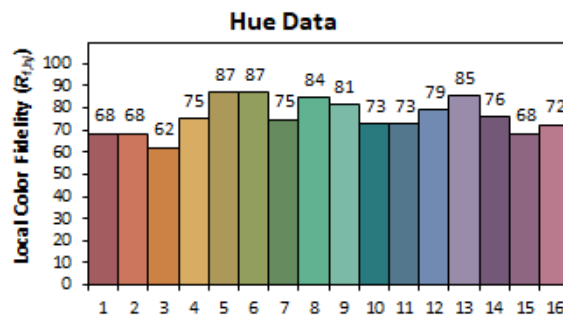
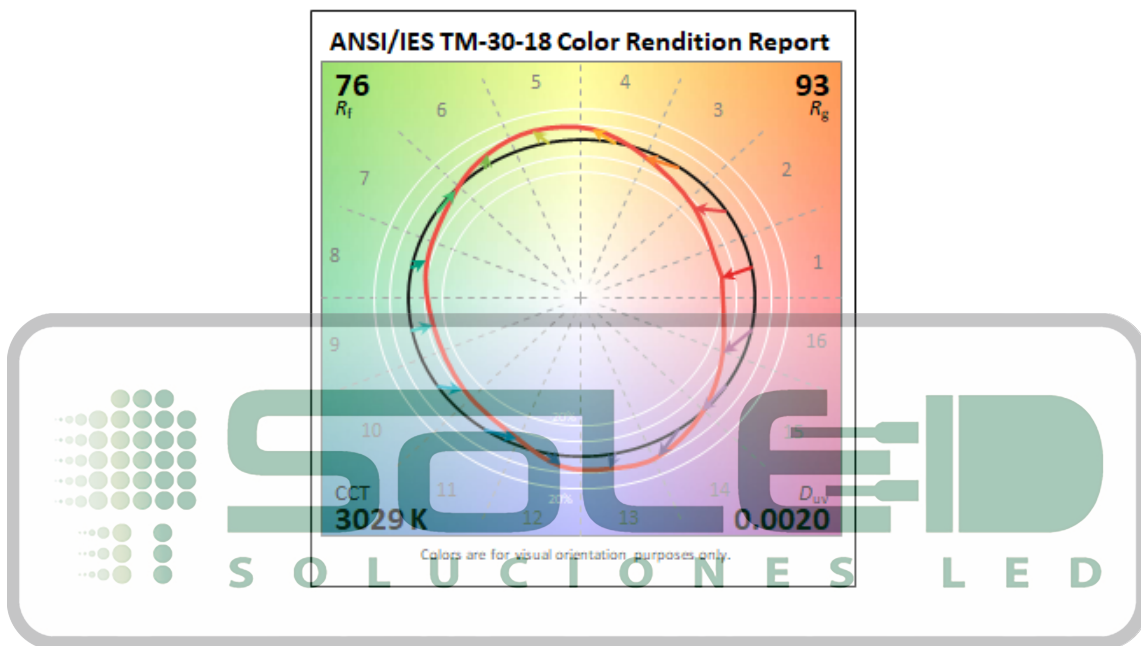
CIE S026-2018 System for Metrology of Optical Radiation for ipRGC-Influenced Responses to Light

Photopic and Melanopic functions normalized to equal area under curve when evaluating the CIE D65 Daylight spectrum



TM-30 Color Vector Graphic

The Color Vector Graphic (CVG) shows a normalized version of the average change in (a', b') coordinates of CAM02-UCS for the CES within each hue-angle bin.





LM-79-08 TEST REPORT: ISF 202524S

CATALOG: HMLED4 40K 70CRI

LM-79-08 Test

Test #: ISF 202524S

Test Date: 5/13/2020

Catalog: HMLED4 40K 70CRI

Photometric Data

Luminous Flux(LU):	81231
SP Ratio:	1.53
CCT:	3921
CRI:	72.32
Chroma x:	0.3851
Chroma y:	0.3829
Chroma u:	0
Chroma v:	0
Chroma u':	0.2257
Chroma v':	0.505
Duv Value:	0.0016

Electrical

Input Power(Watts):	585.5
Input Volts(Volts AC):	120
Input Current(Amps):	4.89
Frequency(Hertz):	60
Power Factor:	1
THD:	5.73

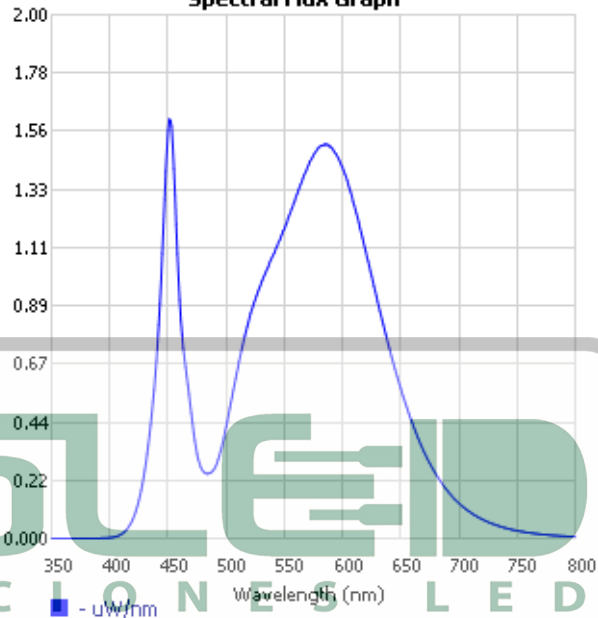
Calculated

Efficacy(LU/Watts):	138.74
---------------------	--------

R Values

Ra:	72.32
R1:	68.44
R2:	80.65
R3:	90.05
R4:	69.42
R5:	68.31
R6:	72.32
R7:	80.49
R8:	48.91
R9:	-35.59
R10:	54.23
R11:	64.49
R12:	43.13
R13:	70.88
R14:	94.46

Spectral Flux Graph



M/P Ratio

	Melanopic	Photopic	M/P Ratio
Method 1:	244498.156	81201.875	3.011
Method 2:	58006.680	81201.875	0.714
Method 3:	6.62E-01	1.11E+00	0.595
Method 4:	6.06E-03	1.13E-02	0.539

Melanopic Calculation Methods

Method 1:

Photopic function scaled to a maximum of 683 lm/W

Melanopic function scaled to a maximum of 4215 lm/W

Method 2:

Photopic and Melanopic functions normalized to a maximum of 1. When evaluating light source SPD Photopic results are multiplied by 683 lm/W and Melanopic results are multiplied by 1000.

Method 3:

WELL Building Standard v2

Photopic and Melanopic functions normalized to equal area under curve when evaluating the Equal-Energy spectrum

Method 4:

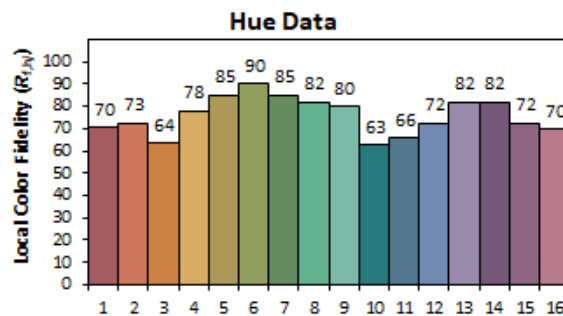
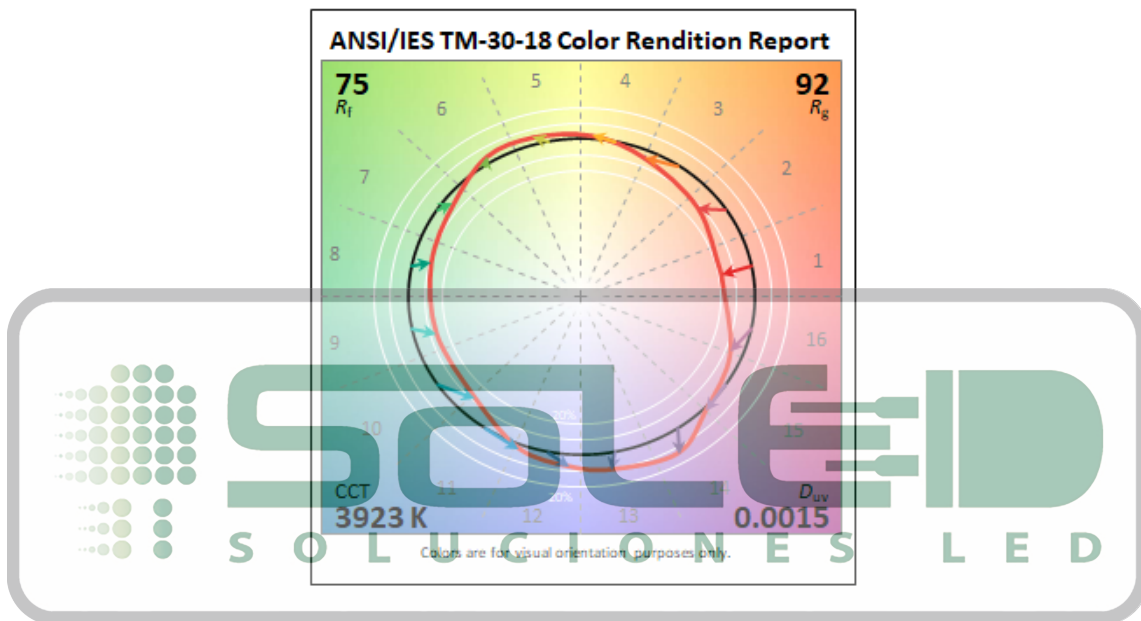
CIE S026-2018 System for Metrology of Optical Radiation for ipRGC-Influenced Responses to Light

Photopic and Melanopic functions normalized to equal area under curve when evaluating the CIE D65 Daylight spectrum



TM-30 Color Vector Graphic

The Color Vector Graphic (CVG) shows a normalized version of the average change in (a', b') coordinates of CAM02-UCS for the CES within each hue-angle bin.





LM-79-08 TEST REPORT: ISF 229475

CATALOG: HMLED4 P5 5K 70CRI

LM-79-08 Test

Test #: ISF 229475

Test Date: 3/21/2022

Catalog: HMLED4 P5 5K 70CRI

Photometric Data

Luminous Flux(LU):	102838.55
SP Ratio:	1.8
CCT:	4883
CRI:	74.02
Chroma x:	0.349
Chroma y:	0.3592
Chroma u:	0.2111
Chroma v:	0.3259
Chroma u':	0.2111
Chroma v':	0.4889
Duv Value:	0.0023

Electrical

Input Power(Watts):	711.7
Input Volts(Volts AC):	480
Input Current(Amps):	1.5
Frequency(Hertz):	60
Power Factor:	0.99
THD:	4.64

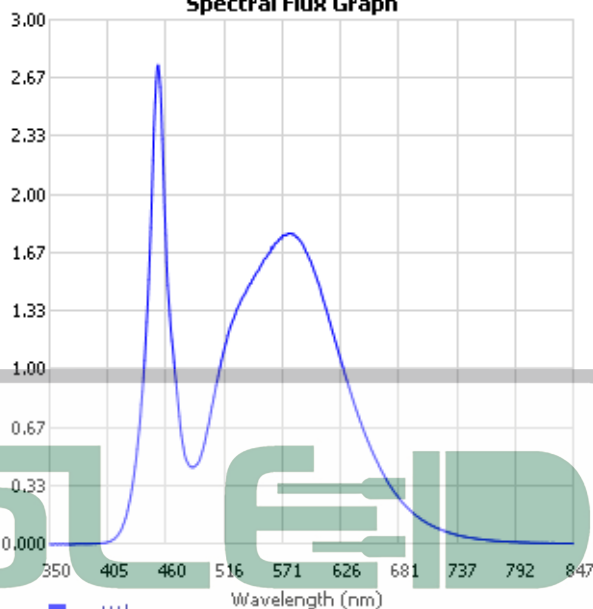
Calculated

Efficacy(LU/Watts):	144.5
---------------------	-------

R Values

Ra:	74.0234
R1:	70.3329
R2:	81.4301
R3:	88.4341
R4:	71.1429
R5:	70.4357
R6:	72.7912
R7:	82.9458
R8:	54.6748
R9:	-30.4528
R10:	54.8286
R11:	66.5522
R12:	41.7542
R13:	72.9361
R14:	93.6343

Spectral Flux Graph



M/P Ratio

	Melanopic	Photopic	M/P Ratio
Method 1:	386494.970	102801.928	3.760
Method 2:	91695.129	102801.928	0.892
Method 3:	1.05E+00	1.41E+00	0.742
Method 4:	9.58E-03	1.42E-02	0.673

Melanopic Calculation Methods

Method 1:

Photopic function scaled to a maximum of 683 lm/W

Melanopic function scaled to a maximum of 4215 lm/W

Method 2:

Photopic and Melanopic functions normalized to a maximum of 1. When evaluating light source SPD Photopic results are multiplied by 683 lm/W and Melanopic results are multiplied by 1000.

Method 3:

WELL Building Standard v2

Photopic and Melanopic functions normalized to equal area under curve when evaluating the Equal-Energy spectrum

Method 4:

CIE S026-2018 System for Metrology of Optical Radiation for ipRGC-Influenced Responses to Light

Photopic and Melanopic functions normalized to equal area under curve when evaluating the CIE D65 Daylight spectrum



TM-30 Color Vector Graphic

The Color Vector Graphic (CVG) shows a normalized version of the average change in (a', b') coordinates of CAM02-UCS for the CES within each hue-angle bin.

