

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat. #: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Quantity: \_\_\_\_\_

LED

## ECL G2 4 | LED Strip

### Features:

- High performance LED technology
- 0-10V dimming drivers standard
- DALI drivers available
- Field replaceable LED boards and drivers
- Frosted diffuser available to help minimize glare and improve aesthetics
- A wide variety of lumen packages and lengths allows for flexibility in design and helps maximize energy savings
- Advanced controls available

### Applications:

Suitable for most commercial, industrial and institutional applications

- Office
- Retail
- Warehouse
- Coves
- Valences

### Ambient Operating Temp.:

- -30°C to 40°C

### Predicted Lifetime:

- L70: ≥ 129,000 hrs (calculated)
- L80: ≥ 81,000 hrs (calculated)
- L90: ≥ 39,000 hrs (reported)
- 85% lumen maintenance @ 60,000 hrs  
(based on LM80 and insitu laboratory testing)

### Construction:

- Precision brake formed from heavy gauge cold rolled steel
- Highly durable, highly reflective white finish

### Certifications:

- UL 1598 listed for US and Canada, suitable for damp locations
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers)  
<http://designlights.org/>



### Warranty:

- 5 year limited system warranty - see [www.LumenFocus.com](http://www.LumenFocus.com) for complete warranty terms and conditions
- 10 year warranty option available on specific models  
(Not available on all models. Certain conditions apply. Consult factory or sales representative for details.)



## Ordering Guide:

example: ECL G2 4 MD UV FR 940

Series	Version	Length	Output	Voltage	Shielding	CRI/CCT	Hanging	Controls	Options	Finish
ECL	G2	4								
ECL	G2 Gen 2	4 4'	<b>LW</b> Low	<b>UV</b> 120-277	<b>Blank</b> No Lenses	<b>930</b> 90 CRI/3000K	<b>Blank</b> None	<b>Blank</b> No Controls	<b>Blank</b> No Options	<b>Blank</b> White
			<b>ML</b> Medium Low	<b>34</b> 347V	<b>FR</b> Frosted Acrylic Diffusers	<b>935</b> 90 CRI/3500K	<b>VC</b> V-Chain Hangers	<b>ZSOL</b> Leviton Intellect Solo PIR Sensor <sup>(1)</sup>	<b>EXT10</b> 10-Year Extended Warranty <sup>(8)</sup>	<b>BK</b> Matte Black
			<b>MD</b> Medium			<b>940</b> 90 CRI/4000K	<b>QC</b> 10' Quick Hang Cable Kit	<b>ZLD1</b> Leviton Bluetooth-enabled Programmable Dimming/ Occupancy/Daylight Harvesting Sensor with Grouping (120-277V) <sup>(2)</sup>	<b>C6</b> 6' Single Circuit Cord	<b>SL</b> Metallic Silver
			<b>MH</b> Medium High			<b>950</b> 90 CRI/5000K	<b>QC20</b> 20' Quick Hang Cable Kit	<b>ZLDU</b> Leviton Bluetooth-enabled Programmable Dimming/ Occupancy/Daylight Harvesting Sensor with Grouping, Scheduling (120-480V) <sup>(2)</sup>	<b>C65W</b> 6' Single Circuit Cord with Low Voltage Connections	
			<b>HI</b> High				<b>SH</b> Slide Hanger		<b>C10</b> 10' Single Circuit Cord	
			<b>VH</b> Very High						<b>C105W</b> 10' Single Circuit Cord with Low Voltage Connections	
			<b>SH</b> Super High							

## Notes

- <sup>(1)</sup> Max mounting height 10'. See Page 4 for more details.  
<sup>(2)</sup> Max mounting height 40'. See Page 4 for more details.  
<sup>(3)</sup> " \_ " = lens type. See Page 4 for lens descriptions.  
<sup>(4)</sup> Max mounting height 40'. See Page 4 for more details.  
<sup>(5)</sup> Max mounting height 16.4'. See Page 5 for more details.  
<sup>(6)</sup> See Page 5 for more details.  
<sup>(7)</sup> Max mounting height 15'. See Page 5 for more details.  
<sup>(8)</sup> Not available on all models. Certain conditions apply. Consult factory or sales representative for details.  
<sup>(9)</sup> EM1 and EM2: 120-277V / 0°C-50°C ambient.  
<sup>(10)</sup> " \_ " for 2-circuit wiring, specify circuit A or B here.

## Accessories (order separately)

**WG(ECL4)** Wire Guard

## Controls Accessories (order separately)



### For Douglas Controls

BT-DMSW-U-A Bluetooth 1 Zone Dimmer  
 BT-4BTSW-U-A Bluetooth 4-Button Wall Station  
 BT-8BTSW-U-A Bluetooth 8-Button Wall Station



### For Enlighted Controls

WS-2-00 Switch  
 WS-2-00-IL Switch  
 WS-2-00-IL Switch  
 WS-2-00-IL Switch



### For WattStopper Controls

FSIR-100 Wireless IR Programming Tool  
 (For Z211Lx)



### For Leviton Intellect Solo Controls

ZLSOR-RA1 Wireless IR Programming Tool  
 (For ZSOL)

**Z211L\_**  
 Wattstopper FSP Programmable Photo/Motion Multi-Voltage Sensor (high/low/off)<sup>(3)</sup>

**Z311L\_**  
 Wattstopper FSP Bluetooth-enabled Programmable Photo/Motion Multi-Voltage Sensor (high/low/off)<sup>(3)</sup>

**ZOSMD**  
 Microwave Daylight/Motion Sensor With Step-Dimming (High/Low/Off)<sup>(4)</sup>

**ZIFS**  
 Douglas IFS sensor with dimming/occupancy/daylight harvesting and network capabilities<sup>(5)</sup>

**ZIFC**  
 Douglas IFC controller with network capabilities<sup>(6)</sup>

**ZENLO**  
 Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted One System<sup>(7)</sup>

**ZENLC**  
 Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System<sup>(7)</sup>

**ZENLI**  
 Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System<sup>(7)</sup>

**D6**  
 6' Dual Circuit Cord

**D10**  
 10' Dual Circuit Cord

**P(NEMA)**  
 Plug (Specify NEMA configuration)

**SC**  
 Safety Cable

**F**  
 Fuse

**EM1**  
 Emergency Pack - Up to 8W<sup>(9)</sup>

**EM2**  
 Emergency Pack - Up to 16W<sup>(9)</sup>

**QWH(\_)**  
 Quick Wire Harness<sup>(10)</sup>

**SDT(480V)**  
 480V to 277V Step Down Transformer

**CC**  
 Conformal Coating

**LVL**  
 0-10V Dimming Leads for Easy Field Access

**BAA**  
 Buy American Act Compliant



## Performance Chart:

Catalog #	Watts	Lumens (930)	LPW (930)	Lumens (935)	LPW (935)	Lumens (940)	LPW (940)	Lumens (950)	LPW (950)
ECL G2 4 LW UV FR 9xx	15.4	2124.9	138.2	2133.9	138.8	2184.6	142.1	2184.6	142.1
ECL G2 4 ML UV FR 9xx	22.3	3158.3	141.7	3171.6	142.3	3246.9	145.7	3246.9	145.7
ECL G2 4 MD UV FR 9xx	29.6	4110.6	138.7	4127.9	139.3	4225.9	142.6	4225.9	142.6
ECL G2 4 MH UV FR 9xx	34.2	5054.2	147.8	5075.5	148.4	5196.1	151.9	5196.1	151.9
ECL G2 4 HI UV FR 9xx	43.5	6253.9	143.8	6280.2	144.4	6429.4	147.9	6429.4	147.9
ECL G2 4 VH UV FR 9xx	56.3	8202.0	145.7	8236.6	146.4	8432.2	149.8	8432.2	149.8
ECL G2 4 SH UV FR 9xx	73.0	10264.3	140.6	10307.6	141.2	10552.4	144.6	10552.4	144.6
ECL G2 4 LW UV 9xx	15.4	2233.5	145.2	2243.0	145.9	2296.2	149.3	2296.2	149.3
ECL G2 4 ML UV 9xx	22.3	3319.7	149.0	3333.7	149.6	3412.9	153.2	3412.9	153.2
ECL G2 4 MD UV 9xx	29.6	4320.6	145.8	4338.9	146.4	4441.9	149.9	4441.9	149.9
ECL G2 4 MH UV 9xx	34.2	5312.6	155.3	5334.9	156.0	5461.7	159.7	5461.7	159.7
ECL G2 4 HI UV 9xx	43.5	6573.5	151.2	6601.2	151.8	6758.0	155.4	6758.0	155.4
ECL G2 4 VH UV 9xx	56.3	8621.2	153.2	8657.6	153.8	8863.2	157.5	8863.2	157.5
ECL G2 4 SH UV 9xx	73.2	10788.9	147.5	10834.4	148.1	11091.7	151.6	11091.7	151.6

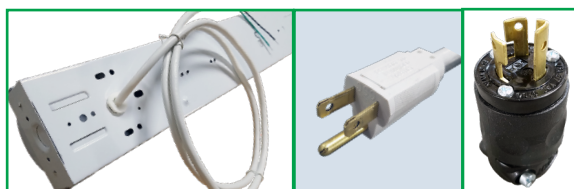
## Options:



**Shielding** Frosted acrylic diffuser lenses minimize glare and improve aesthetics.

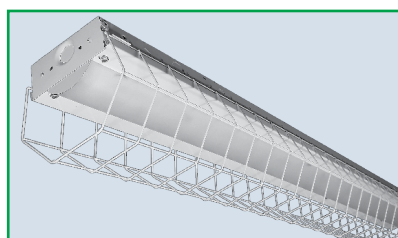


**Conformal coating** Grants LED boards added protection from moisture and corrosion in more hazardous environments.



**Cords** are available in single circuit or dual circuit, 6' or 10'. Standard plug is optional, as are other NEMA configurations if specified.

**Wireguards** are available for added protection (shipped separately).

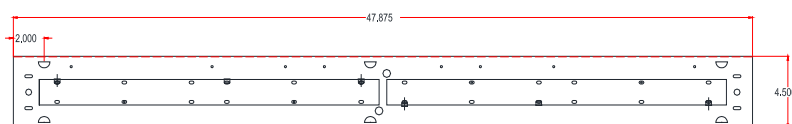


**Hanging** The QC hanging kit (1) comes in 10' or 20'. Cables are pre-looped for easy installation and designed for easy fixture height adjustment. V-hangers and slide hangers are also optional.

**Finish** in addition to the standard white finish, the ECL G2 is also available in matte black (pictured) and metallic silver.



## Schematic:



## LUMENFOCUS Re-boardABILITY

The ECL G2 features field replaceable boards and drivers. This allows you to upgrade to more efficient technology in the future. Or, in the rare event of a failure, you can rapidly replace defective components. Re-boardABILITY helps to ensure you won't get stuck with an obsolete light fixture. [Learn more about Re-boardABILITY here.](#)



## Controls Summary:

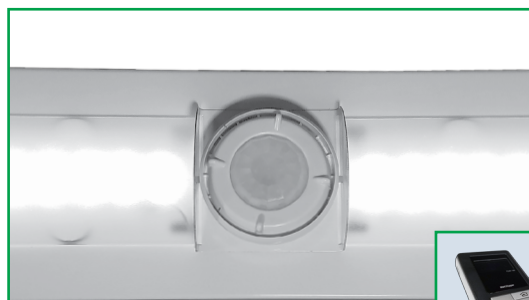
Control Code	Type	Capabilities	Communication
ZSOL	Motion (PIR), Daylight Harvesting	High/Low/Off	Wired 0-10V, Programmable via IR remote (sold separately)
ZLD1	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZLDU	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
Z211Lx	Motion (PIR), Photosensor	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via IR remote (sold separately)
Z311Lx	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZOSMD	Motion (Microwave), Photosensor	On/Low/Off	Wired 1-10V
ZIFS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
ZIFC	Controller, No Sensors	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
ZENLO	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Upgradable to Connected (ZENLC) or IoT (ZENLI)	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted Room Controller WS-2-00-IL (sold separately)
ZENLC	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, Upgradable to IoT (ZENLI), LLLC (Enlighted IoT)*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software
ZENLI	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, LLLC (Enlighted IoT)*, Space - Building Utilization*, Where - Real Time Location Services*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software

LLLC = Luminaire Level Lighting Control

\* Additional equipment required. Contact LumenFocus representative for details

## Dimming Sensors (Z211/Z311)

- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the fixture
- Rated for cold locations
- Parameters for Bluetooth-enabled Z311 adjustable via phone app - iOS or Android
- Parameters for Z211 adjustable via wireless configuration tool (FSIR-100 - sold separately)
- Available with black lens for black finishes (pictured right)
- Three lenses available, tailored for the ideal detection area and mounting height:
  - **L2:** 360° lens, maximum coverage 48', diameter from 8' height
  - **L3:** 360° lens, maximum coverage 40', diameter from 20' height



The Wattstopper FSP sensor integrated with the ECL.



FSIR-100



Phone app interface for Z311 sensor

## Microwave Occupancy Sensor (ZOSMD)

The Leviton OSM3D-DDW (or equivalent) detects motion through low density materials using high frequency electromagnetic waves. This means it can sit discretely behind the ECL G2's frosted lens. The ZOSMD features automatic switching based on motion and ambient light level. ZOSMD option adds step-dimming functionality - standby dimming level 10% / 20% / 30% / 50%. Max mounting height for ZOSMD 40 feet.



## Leviton Intellect Solo Dimming Sensor (ZSOL)

The ECL G2 can be equipped with an integrated Leviton Intellect Solo Sensor ("ZSOL" option). This is a 0-10V dimming Passive Infrared (PIR) occupancy and daylight harvesting sensor.

Other features:

- Partial-on
- Partial-off
- 8' to 10' mounting height
- IP20 rated
- Detection angle: 120 degrees
- IR remote available for programming sensor from the floor (sold separately)
- Can be used to comply with IECC, ASHRAE 90.1 and 2019 Title 24, Part 6 dimming, occupancy/vacancy sensing and daylight harvesting requirements.



## Smart Sensors (ZLD1/ZLDU)



The ZLDx option includes high bay and low bay lenses along with aisleway masks that can easily be installed or

swapped out in the field. The high bay lens is good for 20'-40' mounting heights, while the low bay lens is good for 8'-20' mounting heights.

- Leviton Smart IP66 passive infrared (PIR) sensors
- Features mesh grouping (16 devices per group), occupancy sensing, daylight harvesting, scheduling (for ZLDU only), single-level switching
- Comes pre-installed on the center face of the fixture
- Rated for cold locations
- Configurable through the Leviton Smart Sensor App using a smartphone or other Bluetooth-enabled iOS or Android device



## Universal Douglas: Cloud-based controls

The ECL G2 can be equipped with the Douglas Bluetooth Intelligent Fixture Sensor (IFS) as well as the Intelligent Fixture Controller.

### IFS



- Occupancy, vacancy, partial-on and partial-off
- Occupancy timeout adjustable from 5 to 90 minutes
- Primary and secondary daylight harvesting

### IFC



- Listed for emergency control when used on dedicated emergency power bus
- Same occupancy and daylight controls as the IFS when networked with one or more IFS sensors

### Available with both IFS and IFC:

- 0-10V dimming with dim-to-off
- Bluetooth beacon for digital ceiling, IoT and location service strategies
  - 150-foot clear line of sight, 50 feet through standard walls
- May be used with dual-channel, tunable white LED drivers providing auxiliary power and dim-to-off capability
  - Commissioning through Douglas Lighting Controls, Inc. app from Apple app store

**Note:** Additional equipment required for IoT capabilities; max mounting height for sensor: 16.4 ft

## CheckLight® Energy Management System

Douglas controls can be integrated with the CheckLight® Energy Management system. This system can help you uncover energy conversion opportunities, create conservation strategies, analyze lighting load inefficiencies, and make configuration changes from anywhere with Douglas' user-friendly interface. You can get measurements, reports, and control your system from a web-based application.

CheckLight® has the capability to look at different facilities within a portfolio and use data benchmarks to compare building performances.

- Find energy conservation opportunities
- Create energy saving strategies
- Analyze load inefficiencies
- Optimize energy management

## Enlighted: All-in-one sensors, upgradeable systems

Enlighted's SMART Micro Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. Max installation height is 15 feet.

Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.



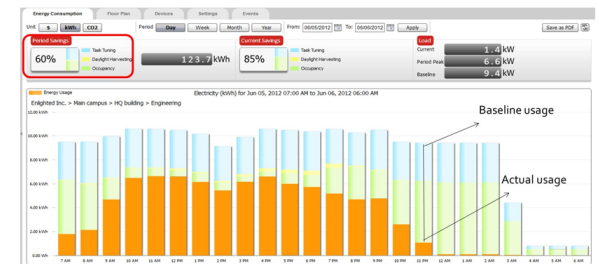
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
Where & Space Applications			✓
Location & Occupancy APIs & Beacons			✓
Future App & API Ready			✓

**Note:** Additional equipment required for ZENLC and ZENLI

## Real-time data analytics

Enlighted's control units compile data in real-time, which can be viewed via the Energy Manager. The Energy Manager is part of the Enlighted Connected and Enlighted IoT configurations.

- Real-time measurements and verification of energy savings
- Space analytics - data can be compiled into motion trails and heat maps
- Analyze traffic density and congestion in a space



Learn more about our available advanced controls options here:

[www.lumenfocus.com/controls-overview](http://www.lumenfocus.com/controls-overview)

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## Photometric Data:

### ECL G2 4 SH UV 950

Test No.: LLIA001735-016

Luminaire Lumens: 11,092 lm

Luminaire Watts: 73.2W

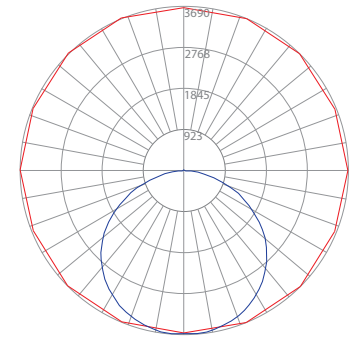
Efficacy: 151.6 LPW

Spacing Criterion (0-180): 1.30

Spacing Criterion (90-270): 1.32

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	26364	25480	25318
55	25916	24719	24038
65	24491	22492	21673
75	20865	17646	16519
85	11718	7923	7122



— Vert. Plane  
— Horiz. Cone

#### Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	1356.53	12.20
0-30	2905.02	26.20
0-40	4809.58	43.40
0-60	8701.86	78.50
0-80	10912.54	98.40
0-90	11090.75	100.00
90-120	0.97	0.00
90-130	0.97	0.00
90-150	0.97	0.00
90-180	0.97	0.00
0-180	11091.72	100.00

#### Coefficients Of Utilization - Zonal Cavity Method

RC	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08

### ECL G2 4 SH UV FR 950

Test No.: LLIA001735-018

Luminaire Lumens: 10,553 lm

Luminaire Watts: 73.0W

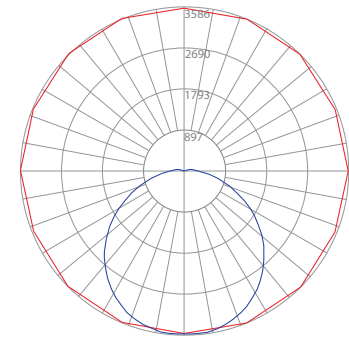
Efficacy: 144.6 LPW

Spacing Criterion (0-180): 1.26

Spacing Criterion (90-270): 1.30

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	22229	21400	21380
55	19375	19420	19637
65	15573	16982	17334
75	11302	14513	14676
85	6483	13505	12873



— Vert. Plane  
— Horiz. Cone

#### Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	1311.98	12.40
0-30	2790.06	26.40
0-40	4568.43	43.30
0-60	8008.15	75.90
0-80	9982.62	94.60
0-90	10364.20	98.20
90-120	188.48	1.80
90-130	188.48	1.80
90-150	188.48	1.80
90-180	188.48	1.80
0-180	10552.68	100.00

#### Coefficients Of Utilization - Zonal Cavity Method

RC	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86
2	98	89	82	76	95	87	81	75	83	78	73	80	75	71
3	89	78	70	63	86	77	69	63	73	67	61	70	65	60
4	82	69	60	54	79	68	60	53	65	58	52	63	56	51
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39
7	64	51	42	36	62	50	41	35	48	40	35	46	40	35
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08

