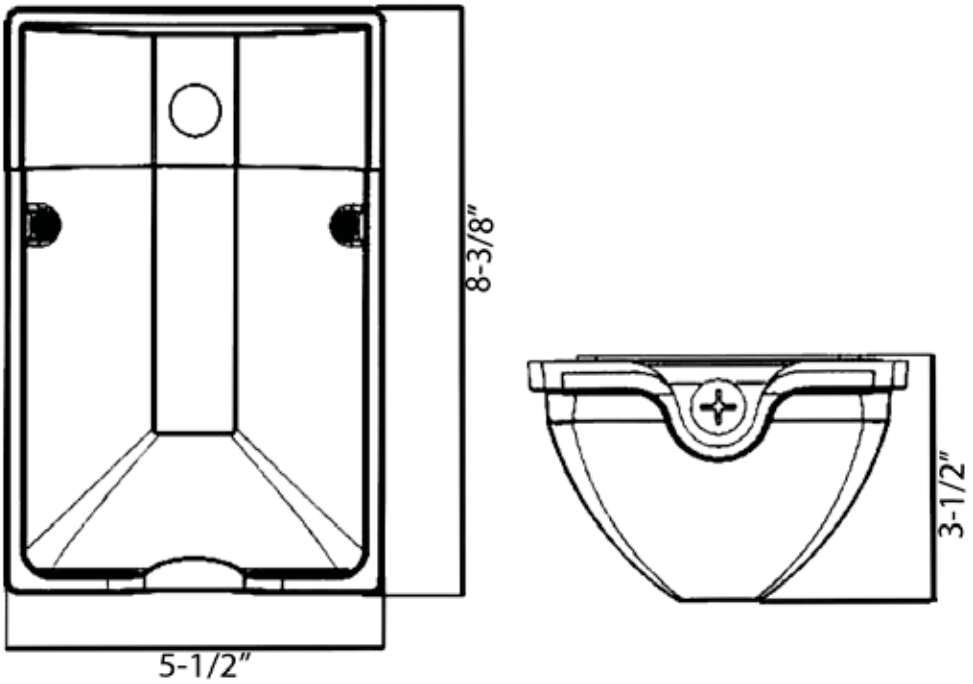
Cat# 71521
LED Designer MINI Wall-PACK

Model :		71521
OVERALL FIXTURE PARAMETERS	Input Voltage	100-277 VAC
	Input Current	0.50A Max.@120V 0 .20A@277V
	Input Power	17W
	Power Factor	PF≥ 0.95
	Luminance	1600 LM
	Luminous Efficiency	94 LM/W
	CRI	>80
	Beam Angle	180°
	Main Structure	Aluminum Housing + Frosted Polycarbonate Lens
	Surface	Powder Coat Enamel
	Photocell	120-277V Photocell Included
LED DRIVER	Output Voltage	18.2-36 VDC
	Output Current	.9A
	Driver Efficiency	88%
LED	LED Type	Philips LUMILED LUXEON 3030
	LED Quantity	14PCS
	LED Manufacturer	Philips
	LED Efficacy	110 lm/W
	Color Temperature	4000K
LIFESPAN & ENVIRONMENT	Lifespan	50000 Hrs.+
	Warranty	5 Years
	IP Rating	IP54
	Operating Temperature	-40F to 131F
	Storage Temperature.Humidity	-40℃—+80℃ , 10—90% RH
SAFETY&EMC	Safety Norms	EN60598, EN61347-2-13, EN62031, EN62471, UL1598, UL8750
	Withstand Voltage	I/P-FG: 2121VDC
	Grounding Resistance	25A 100mΩ
	Electromagnetic Compatibility	EN55015, EN61000-2-3, EN61000-3-3, EN61547
OTHERS	Diamension	Pls refer to attached dimension drawing
	Net Weight(Kg)	4.3
	Gross Weight(Kg)	5.2
	Box Size	--
	Carton Size	390*230*315
	Q'ty / Carton	1

Dimensions: 71521



NVLAP LAB CODE 200707-0

IES LM-79-08

MEASUREMENT AND TEST REPORT

For

Morris Products Inc.

53 Carey Rd Queensbury, NY 12804

Test Model: 71521

Report Type:	Electrical and Photometric tests including: Luminous Flux, Color, Luminous Intensity Distribution, THD, Power Factor
Test Engineer:	Daniel Duan
Report Number:	RSZ150804505-10
Test Date:	2015-07-23 to 2015-08-06
Report Date:	2015-08-11
Reviewed By:	Jeanne Han/Safety Manager
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008
Test Facility:	Test facility was located at Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China.
Accreditation:	The NVLAP Lab Code is 200707-0.

1. Product Description

General Information:

One sample was received on 2015-07-21 and used for testing. Sample No.: RSZ150804505-S01
Model: 71521

Model Tested:	71521
Manufacturer:	Morris Products Inc.
Brand Name:	Morris
Product Designation:	Outdoor Wall-Mounted Area Luminaires
Dimmable:	Non-Dimmable
Burning Time Before Test:	0 hour(For New Products)

Rated Values:

Rated Voltage/Frequency:	AC120-277V 60Hz
Rated Power:	17W
Nominal CCT:	4000K
Nominal Light Output:	1684lm

2. Standards Used

- IESNA LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-2002: Harmonic Emission Limits – Related Power Quality Requirements for Lighting

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
Integrating Sphere	SENSING	SPR-600	S09008	1.5 meter	2015-03-24	2016-03-24
Spectral photometer	SENSING	SPR3000	90902027	380nm~800nm	2015-03-24	2016-03-24
Power Meter	YOKOGAWA	WT-210	91j926132	15/30/60/150/300/600 V	2015-03-05	2016-03-05
AC Power Supply	ALL Power	APW-105N	970613	0V-300V 50-400Hz	2015-03-05	2016-03-05
Standard Light Source	EVERFINE	D204	LSD090808	N/A	2014-08-05	2015-08-05
Thermal Meter	SENSING	N/A	N/A	25℃,45℃,55℃	2015-03-05	2016-03-05
DC Power Supply	ITECH	IT6154	0061 0417 6471 0010 19	0~60V	2015-03-05	2016-03-05
AC Power Supply	EVERFINE	VPS1030 PWM	1012017	0-150V， 0-300V	2015-03-05	2016-03-05
DC Power Supply	EVERFINE	WY12010	1009009	30V/5A	2015-03-05	2016-03-05
Power Meter	YOKOGAWA	WT-210	91KB35700	15/30/60/150/300/600 V	2015-03-05	2016-03-05
Goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	1600mm,3000W/10A	2015-03-20	2016-03-20
Thermal Meter	Victor	VC230	EE091	0~40℃0~90%	2013-04-01	2016-03-31
Standard Light Source	EVERFINE	D908	1012003	N/A	2015-05-15	2016-05-14

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25℃±1℃ during measurement. And relative humidity is less than 65%.

Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards.

4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the light output (luminous flux) measurements is U=2.1% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=32K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=2.1 (K=2) , at the 95% confidence level.

The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.15% of rdg, Power U=0.20%) (K=2), at the 95% confidence level.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the luminous intensity is U=2.82% (K=2) , at the 95% confidence level.

Additional Test

The Additional Test item may not be covered by IESNA LM-79-2008. Additional test including power factor, off-state power and THD, was measured by Digital Power Meter after stabilized at 25℃±1℃.Test voltage for THD and power factor test would be equal to rated voltage or, in case of a voltage range, maximum value of that range.

The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.15% of rdg, Power U=0.20%) (K=2), at the 95% confidence level.

5. Test Result

[Integrating Sphere System]

Total operating time for integrating sphere test: **1.0 hour**

Test orientation: **Downward**

Electrical Measurement

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
119.94	60.0	0.1461	17.47	0.997

Photometric Measurement

Luminous Flux (lm)	Radiant Flux (W)	Efficacy (lm/W)	CCT (K)	Duv
1684.535	5.184	96.424	4054	-1.90E-04

Chromaticity Coordinate

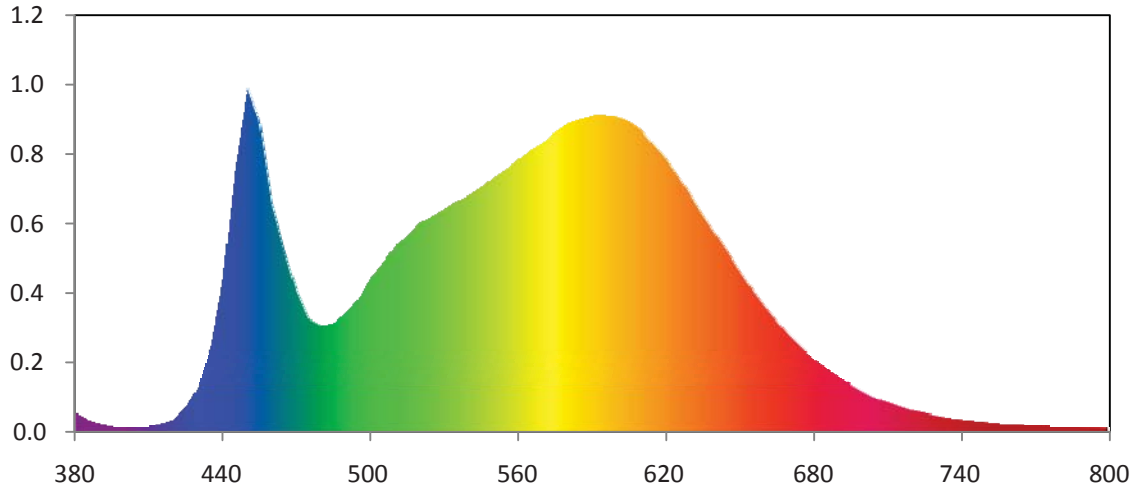
x	y	u	v	u'	v'
0.3780	0.3748	0.2243	0.3336	0.2243	0.5004

Color Rendering Index

Ra
83.3

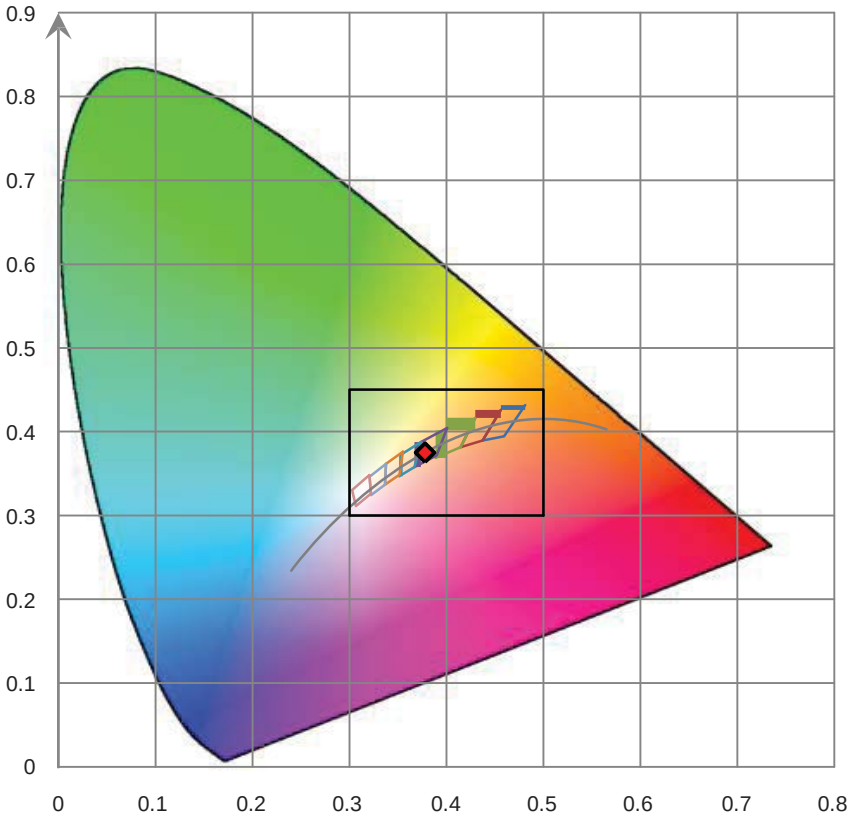
R1	R2	R3	R4
82	90	95	82
R5	R6	R7	R8
82	86	86	65
R9	R10	R11	R12
9	76	80	63
R13	R14	R15	
84	97	76	

Relative Spectral Power Distribution

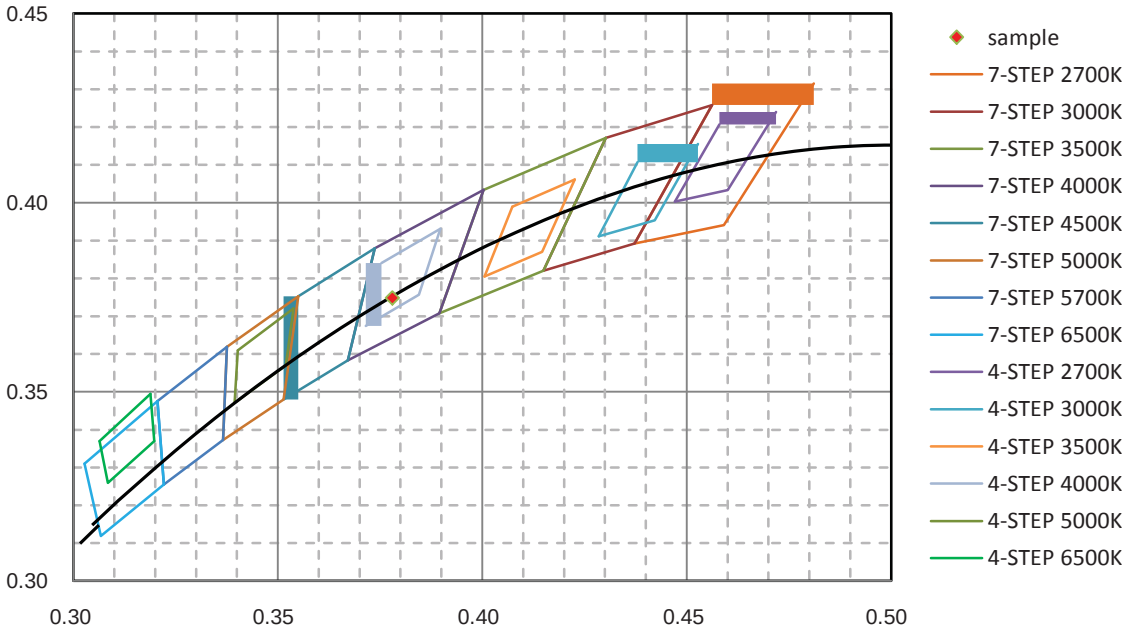


nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	8.022E-03	465	7.374E-02	550	1.030E-01	635	8.720E-02	720	8.885E-03
385	5.318E-03	470	5.692E-02	555	1.063E-01	640	8.013E-02	725	7.961E-03
390	3.832E-03	475	4.539E-02	560	1.100E-01	645	7.259E-02	730	6.750E-03
395	2.796E-03	480	4.283E-02	565	1.134E-01	650	6.481E-02	735	5.933E-03
400	2.319E-03	485	4.407E-02	570	1.170E-01	655	5.746E-02	740	5.247E-03
405	2.132E-03	490	4.834E-02	575	1.212E-01	660	5.075E-02	745	4.771E-03
410	2.476E-03	495	5.424E-02	580	1.242E-01	665	4.479E-02	750	4.175E-03
415	3.573E-03	500	6.206E-02	585	1.259E-01	670	3.898E-02	755	3.759E-03
420	5.600E-03	505	6.791E-02	590	1.274E-01	675	3.412E-02	760	3.330E-03
425	1.022E-02	510	7.559E-02	595	1.279E-01	680	2.945E-02	765	3.127E-03
430	1.834E-02	515	7.933E-02	600	1.269E-01	685	2.577E-02	770	2.822E-03
435	3.445E-02	520	8.395E-02	605	1.250E-01	690	2.215E-02	775	2.640E-03
440	6.137E-02	525	8.705E-02	610	1.216E-01	695	1.928E-02	780	2.371E-03
445	1.052E-01	530	9.004E-02	615	1.156E-01	700	1.642E-02	785	2.299E-03
450	1.394E-01	535	9.353E-02	620	1.100E-01	705	1.385E-02	790	2.081E-03
455	1.257E-01	540	9.567E-02	625	1.031E-01	710	1.233E-02	795	2.081E-03
460	9.223E-02	545	9.883E-02	630	9.531E-02	715	1.052E-02	800	1.997E-03

CIE 1931 x y Chromaticity Diagram



7-Step & 4-Step Chromaticity Quadrangles



[Goniophotometer System]

Total operating time for luminous intensity distribution: **1.0 hour**

Test orientation: **Downward**

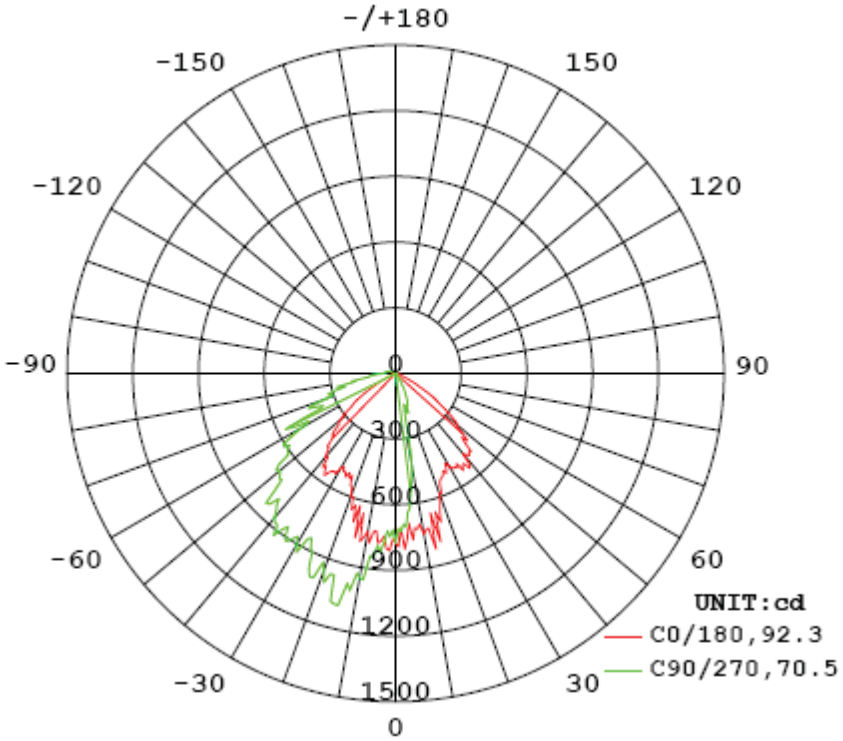
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60.0	0.1451	17.35	0.9961

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
1688.79	97.34	1093	0.92	0.32

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% Imax):	92.3	74.7	70.5	75.7	78.3
Field Angle (10% Imax):	125.3	114.8	110.4	115.9	116.6

Luminous Intensity (cd) Distribution Data

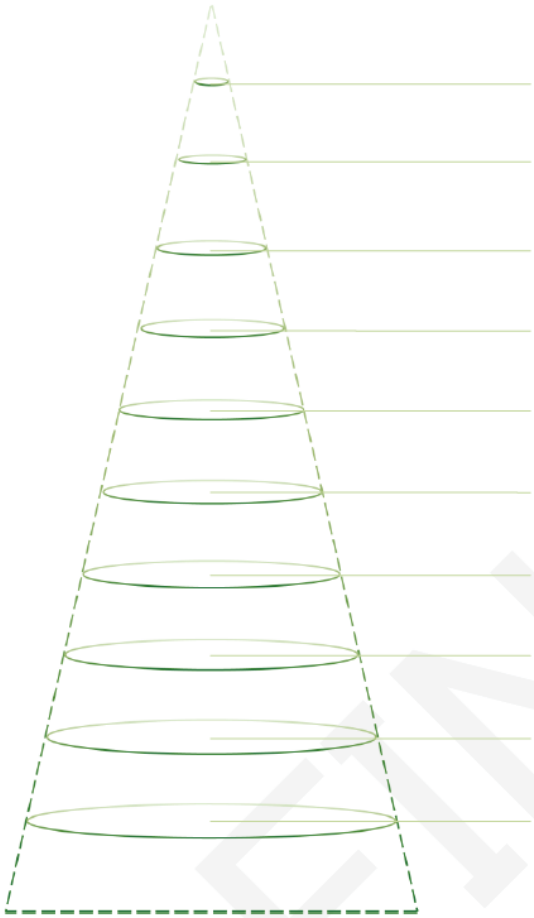
C / Y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	773	773	773	773	773	773	773	773
5.0°	767	719	755	788	819	813	784	782
10.0°	732	817	879	962	949	991	886	774
15.0°	626	682	960	1077	1090	1031	823	890
20.0°	598	783	941	915	958	1053	906	791
25.0°	502	708	863	956	905	987	815	704
30.0°	496	765	907	904	904	940	896	781
35.0°	568	742	843	888	855	931	861	767
40.0°	499	685	798	822	865	849	819	702
45.0°	397	604	719	753	838	793	736	616
50.0°	325	475	617	672	691	717	699	506
55.0°	227	359	503	602	605	591	549	425
60.0°	115	264	407	480	499	497	455	305
65.0°	39	173	317	395	372	454	357	213
70.0°	16	87	248	332	335	391	244	137
75.0°	10	41	170	237	239	281	171	66
80.0°	8	23	82	143	203	170	110	27
85.0°	6	19	38	75	113	78	52	20
90.0°	5	15	29	46	63	52	32	16
95.0°	3	13	24	38	51	41	26	13
100.0°	3	11	20	34	45	36	21	11
105.0°	3	9	18	30	38	31	18	10
110.0°	3	8	15	26	32	26	15	8
115.0°	3	7	13	22	28	22	13	7
120.0°	2	6	12	19	23	19	12	6
125.0°	2	6	11	16	19	17	10	5
130.0°	2	5	10	14	15	15	9	5
135.0°	2	5	8	12	13	13	8	5
140.0°	2	4	7	10	10	10	7	4
145.0°	2	3	6	8	9	8	6	4
150.0°	2	3	5	6	7	6	5	3
155.0°	1	2	4	5	5	5	4	2
160.0°	1	2	3	3	4	3	3	2
165.0°	1	1	2	2	2	2	2	1
170.0°	1	1	1	1	1	1	1	1
175.0°	1	1	1	1	1	1	1	1
180.0°	1	1	1	1	1	1	1	1

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	773	773	773	773	773	773	773	773
5.0°	686	610	716	636	637	739	595	718
10.0°	745	628	527	484	425	428	618	678
15.0°	796	727	529	327	146	247	561	656
20.0°	587	576	381	135	153	152	347	608
25.0°	513	472	136	167	113	197	142	480
30.0°	492	419	127	170	58	173	127	423
35.0°	540	301	103	80	21	72	100	277
40.0°	480	258	63	28	16	23	59	220
45.0°	448	201	27	8	6	8	24	184
50.0°	369	144	13	5	4	5	12	118
55.0°	255	66	7	4	4	4	7	46
60.0°	144	20	5	3	2	2	5	16
65.0°	56	10	4	2	2	1	4	10
70.0°	21	7	3	1	1	1	3	7
75.0°	13	5	2	1	1	1	2	6
80.0°	9	5	2	1	1	1	2	5
85.0°	6	4	2	1	1	1	2	4
90.0°	5	3	1	1	1	0	1	3
95.0°	4	2	1	0	0	0	1	2
100.0°	3	2	1	0	1	0	1	2
105.0°	3	2	1	0	0	0	1	2
110.0°	3	2	1	0	0	0	1	2
115.0°	2	1	1	0	0	0	1	2
120.0°	2	1	1	0	1	1	1	1
125.0°	2	1	1	1	1	1	1	1
130.0°	2	1	1	1	1	1	1	1
135.0°	2	1	1	1	1	1	1	1
140.0°	2	1	1	1	1	1	1	1
145.0°	1	1	1	1	1	1	1	1
150.0°	1	1	1	1	1	1	1	1
155.0°	1	1	1	1	1	1	1	1
160.0°	1	1	1	1	1	1	1	1
165.0°	1	1	1	1	1	1	1	1
170.0°	1	1	1	1	1	1	1	1
175.0°	1	1	1	1	1	1	1	1
180.0°	1	1	1	1	1	1	1	1

Average Area Illumination Figure

Angle: 78.30°. Flux out: 827.2 lm.



Height (m)	Diameter (cm)	E_{avg}(lx)	E_{max}(lx)
0.5	81.4	1496.0	4012.0
1.0	162.8	374.0	1003.0
1.5	244.2	166.2	445.8
2.0	325.7	93.5	250.8
2.5	407.1	59.8	160.5
3.0	488.5	41.6	111.5
3.5	569.9	30.5	81.9
4.0	651.3	23.4	62.7
4.5	732.7	18.5	49.5
5.0	814.1	15.0	40.1

Zonal Lumen Density Measurement

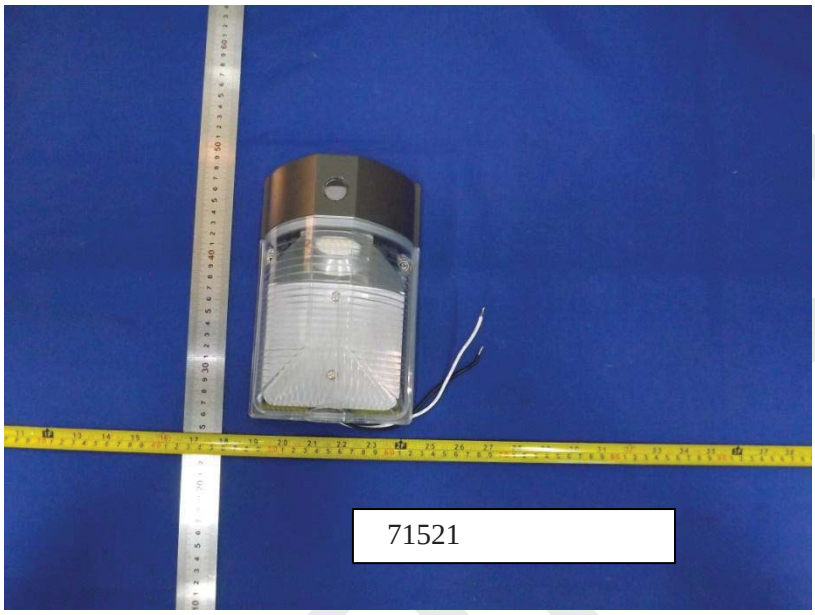
Deg	Flux (lm)	%
0-5	17.5	1.03
5-10	51.4	3.04
10-15	84.1	4.98
15-20	108.2	6.41
20-25	119.7	7.09
25-30	136.0	8.05
30-35	152.3	9.02
35-40	158.2	9.36
40-45	156.5	9.27
45-50	147.7	8.74
50-55	130.7	7.74
55-60	110.5	6.55
60-65	88.3	5.22
65-70	66.9	3.97
70-75	50.0	2.95
75-80	33.6	1.99
80-85	19.4	1.15
85-90	11.4	0.68
90-95	8.4	0.50
95-100	7.0	0.41
100-105	6.0	0.36
105-110	5.1	0.30
110-115	4.3	0.25
115-120	3.5	0.21
120-125	2.9	0.17
125-130	2.4	0.15
130-135	2.0	0.12
135-140	1.5	0.09
140-145	1.2	0.07
145-150	0.9	0.05
150-155	0.6	0.03
155-160	0.4	0.02
160-165	0.2	0.02
165-170	0.1	0.01
170-175	0.1	0.00
175-180	0.0	0.00

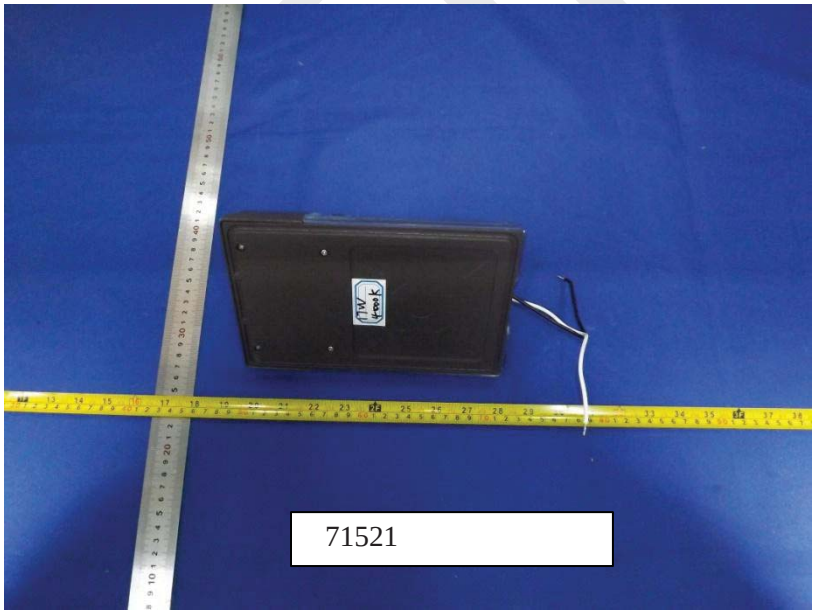
Deg	Flux (lm)	%
0-5	17.5	1.03
0-10	68.8	4.07
0-15	152.9	9.05
0-20	261.0	15.46
0-25	380.7	22.55
0-30	516.7	30.60
0-35	669.0	39.62
0-40	827.2	48.98
0-45	983.7	58.25
0-50	1131.4	66.99
0-55	1262.1	74.73
0-60	1372.6	81.28
0-65	1460.9	86.50
0-70	1527.8	90.47
0-75	1577.7	93.42
0-80	1611.3	95.41
0-85	1630.8	96.56
0-90	1642.1	97.24
0-95	1650.6	97.74
0-100	1657.6	98.15
0-105	1663.6	98.51
0-110	1668.7	98.81
0-115	1673.0	99.06
0-120	1676.5	99.27
0-125	1679.4	99.44
0-130	1681.8	99.59
0-135	1683.8	99.71
0-140	1685.4	99.80
0-145	1686.5	99.87
0-150	1687.4	99.92
0-155	1688.0	99.95
0-160	1688.4	99.97
0-165	1688.6	99.99
0-170	1688.7	100.00
0-175	1688.8	100.00
0-180	1688.8	100.00

[Additional Test]

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Power Factor:	277	60	0.9261
Total Harmonic Distortion:	277	60	19.54%
Total Harmonic Distortion:	120	60	20.83%

6. Product Photo





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