



Light Emission Distribution Laboratory

Division of Photometry & Electrical Testing Pty. Ltd ABN 11 166 255 134
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Accredited for Compliance with ISO/IEC 17025 Accreditation No. 19541

PHOTOMETRIC TEST REPORT No. 210148PH

Date: 1st February 2021

Client: Offspring Profiles Ltd
Address: 55 Cuba Street, Petone, Lower Hutt 5012
Contact: Robin Campbell

Luminaire: Handrail Series

Catalogue No. RICHIE RAIL 20 (sample tested),
RICHIE RAIL 26



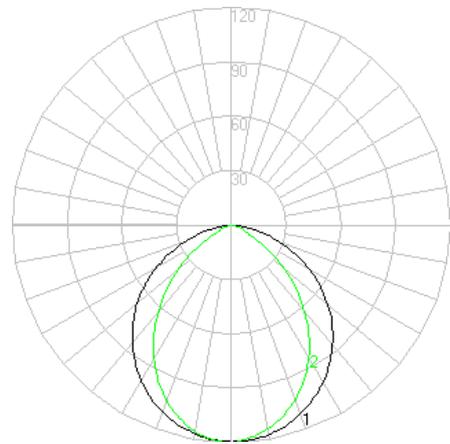
Description: LED Handrail Series (520mm length)

Optical System: Spec Series 24V 4000K LED strip

Control Gear: Tridonic LCU 96W 24V SR TOP Constant Voltage LED Control Gear

Test Specification:

The luminaire was tested in accordance with the procedures given in IES LM79-19, "Optical and electrical measurements of Solid-State Lighting Products" using the **absolute** method.

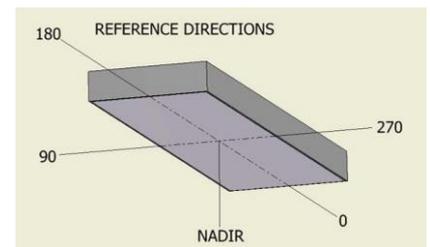


C0-C180° Vertical Plane
C90-C270° Vertical Plane

Results:

When tested at an ambient of 25°C at a supply voltage of 240.2V, 50Hz, the luminaire consumed 0.059A and 9.236W at a Power factor of 0.655. That is, Lamp Circuit Power (LCP), which includes power supply losses, is 9.236W.

The Correlated Colour Temperature was measured as 4031K average.
The Total Luminous Flux was measured as 247 Lumens, that is 494 lumens per meter.



Luminous Intensity Distribution (I-TABLE) is given on Page 5.

Tested by: J. King on 1st February 2021

Authorised Signatory: _____

A. Yetendje



Test Configuration

The luminaire was photometered in IESNA Horizontal – Vertical Reference angles such that:

- The luminaire was mounted with photometric centre aligned with photometric zero (in the direction of nadir), centred on the light emitting area.
- The supply wires were located on the 0° Horizontal angle, photometric horizontal, in the zero-degree photometric plane.
- In accordance with CIE S 025/E:2015 Clause 5.3.2 the light aperture opening was co-incident with centre of the goniophotometer.
- The long dimension of the optical opening in the direction of the H= 0° - 180° Plane.
- The photometric test distance of 9.857m, is referenced to the photometric centre of the luminaire and the photocell.

Due to the Type B mounting arrangement, a correction factor to achieve correct orientation was determined but not applied as it was less than 0.5% and accounted for in the Uncertainty Budget. Should these Uncertainties be required contact LEDLab.

Test Procedures and Equipment

<i>Calibration report:</i>	200627CAL using N.M.I. report RN 181690 on standard lamp M14192
<i>Technical Procedure:</i>	P113 & P118
<i>Angular Resolution:</i>	Test Configuration and issued .ies file C Plane Interval 15 Deg Gamma Angle Interval 1.0 Deg Abbreviated Test Report File (I-Table) C Plane Interval 15 Deg Gamma Angle Interval 5.0 Deg
<i>Software:</i>	Lisun LSG-1800B
<i>Obstructions:</i>	None
<i>Lab. Book Page:</i>	PH4/1770
<i>Primary Orientation Correction:</i>	1.0
<i>Colour correction:</i>	1.028
<i>Goniophotometer:</i>	Lisun Electronics Model LSG-1800B, Serial No. GSGHF070010.
<i>Photocell:</i>	Lisun Electronics Detector Serial No. 330220-1
<i>Lux meter:</i>	Lisun Electronics Model PM 400, Serial No. GSRXK090021
<i>Lux meter integration time (PLC):</i>	5
<i>Power meter:</i>	Lisun Electronics Model RT-200, Serial No. GSXY0100021
<i>Power meter integration time (s):</i>	0.5
<i>Luminaire thermometer:</i>	AMA 1362983 0.1°C Serial No 526,10942
<i>Temperature Data Logger:</i>	Lisun TMP-8 Multiplex Serial No GSJWM010028
<i>Auxiliary Photocell:</i>	Delta Ohm HD 2102.1 & LP471PHOT

TEST REPORT and IES file archive

The data files for this report are contained in the *archive file: 210148PH.zip*

IES file: 210148PH.IES

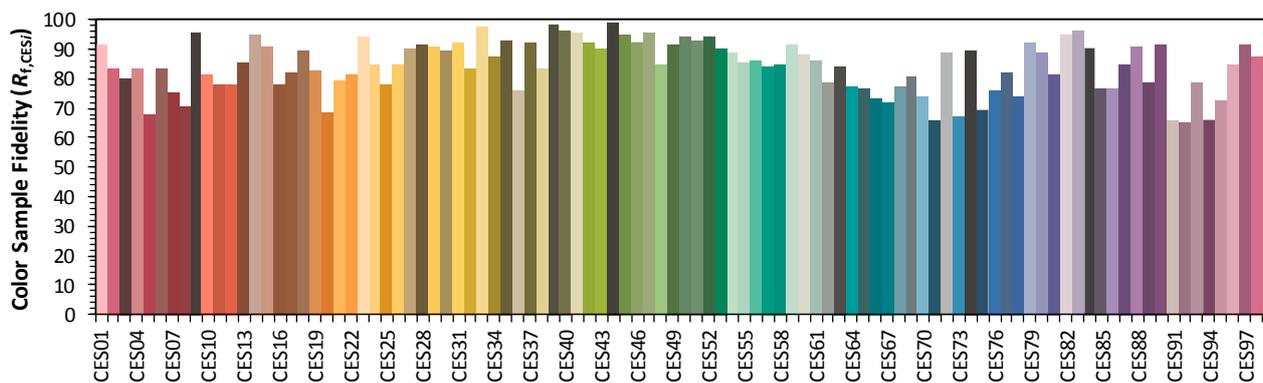
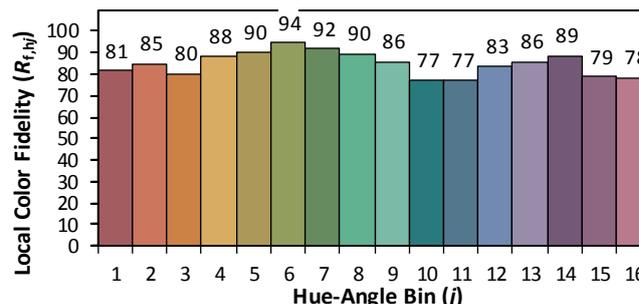
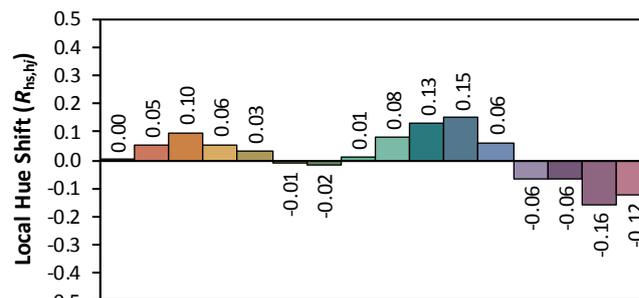
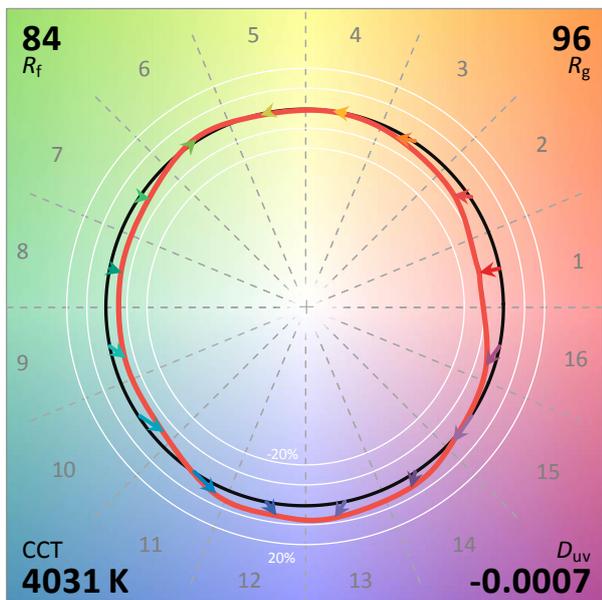
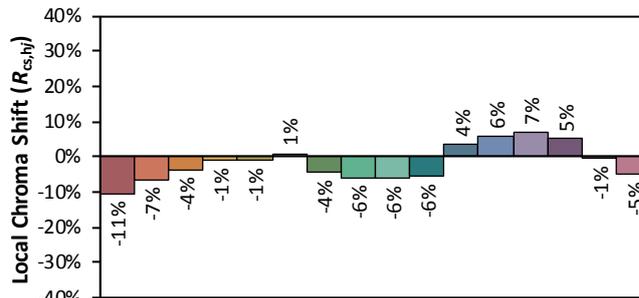
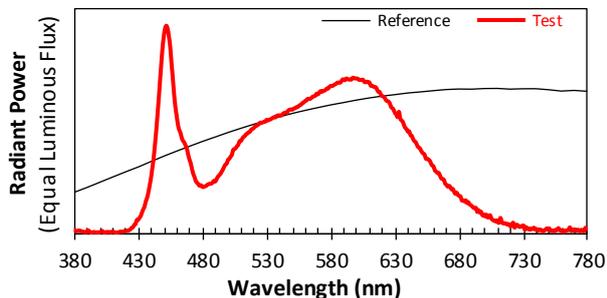
Document File: 210148PH.pdf



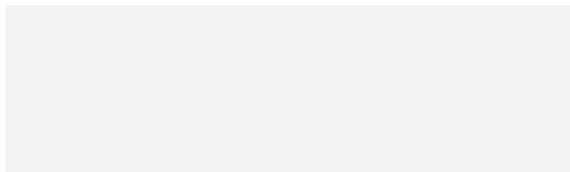
TRIDONIC
LCU 96W 24V SR TOP
Art. No. 28000413
Constant Voltage LED Control Gear
Tridonic GmbH & Co KG
Faerbergasse 15
6851 Dornbirn / Austria
www.tridonic.com

CE, RoHS, and other regulatory symbols are also present on the label.

ANSI/IES TM-30-18 COLOR RENDITION REPORT



Notes:



x 0.3786
y 0.3741
u' 0.2250
v' 0.5001

CIE 13.3-1995	
(CRI)	
R_a	85
R_g	19

The photometric data includes all the requirements of the report section of IESNA LM-79-19 or CIE S 025/E.

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Date: 1st February 2021

LUMINOUS INTENSITY DISTRIBUTION (I-Table) - cd																									
Vertical Angle (V) Degrees	Horizontal Angle (H Plane) - Degrees																								
	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
0	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
5	119	120	119	119	118	118	118	118	118	118	119	119	119	119	119	120	119	119	119	120	119	120	119	120	119
10	118	117	116	116	115	114	114	114	115	116	116	117	117	118	117	117	116	116	116	116	116	117	118	118	118
15	115	114	113	111	110	109	110	110	110	111	112	114	114	115	113	113	112	111	111	111	112	113	114	115	115
20	111	110	108	106	104	103	103	103	104	106	107	109	110	109	109	107	105	104	104	105	105	108	109	111	111
25	106	105	102	99	97	95	94	95	96	99	101	104	105	105	102	100	97	96	95	96	98	101	103	106	106
30	101	98	95	91	88	85	85	85	88	90	94	97	99	98	95	92	88	86	85	86	88	93	96	99	101
35	94	91	87	82	78	75	74	75	78	81	86	90	92	91	87	83	78	75	74	76	78	83	87	92	94
40	86	83	78	72	67	63	63	63	67	71	77	82	85	83	77	72	66	64	62	64	67	73	78	84	86
45	78	74	68	61	56	51	51	51	55	60	67	73	76	74	68	61	55	52	50	52	55	62	68	75	78
50	69	64	57	49	43	39	38	39	43	49	57	64	68	65	57	49	43	40	38	40	43	50	57	65	69
55	60	54	46	37	31	26	25	26	31	37	46	54	58	54	45	37	31	28	26	28	32	38	46	55	60
60	50	44	35	26	18	13	13	13	17	25	34	43	48	44	34	26	18	15	13	15	19	26	35	44	50
65	39	33	23	12	8	7	8	8	7	12	23	32	38	33	22	14	7	7	7	8	8	14	23	33	39
70	29	22	12	4	5	6	6	6	5	4	11	21	27	22	11	4	4	6	6	6	4	4	12	22	29
75	19	11	2	2	1	0	1	1	1	2	1	11	17	11	1	2	1	1	0	1	1	1	1	12	19
80	9	2	0	0	0	0	0	0	0	0	0	1	7	2	0	0	0	0	0	0	0	0	2	9	
85	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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