



Exude R600

Photometric and Optical Testing Services Test Report POTS/DC14105

Meadowbank Business Park
Tweedale Way
Oldham
OL9 8EH

contact@constant-lighting.com

0845 313 2752

PHOTOMETRIC TEST REPORT

Report Number: POTS/DC14105	Report Date: 15/05/2014	Prepared By: D CHAMBERS
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Details of Product Tested

Manufacturer: CONSTANT GROUP	Source Type: LED
Model: 60x60cm panel	Luminaire Type: DOWNLIGHT
Power Supply Used: Uninterruptible AC power supply	
Voltage(AC V) = 230.0	Current (mA)= 132
Power (Watts)= 28.26	Power factor= 0.931

Results

Flux (lumens): 2334.9	
CIE 1931 Chromaticity Cx:0.3806	CIE 1931 Chromaticity Cy: 0.3750
CRI (%):86.85	CCT (K): 3984

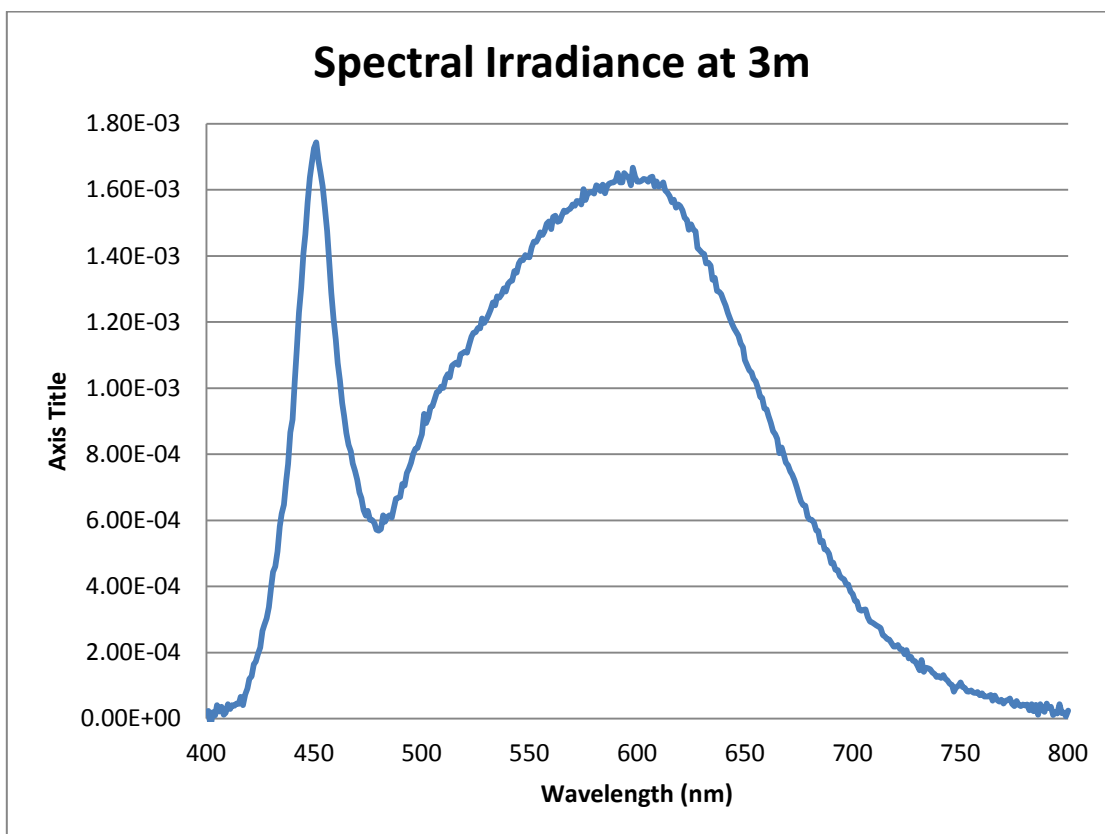


Figure 1: Spectral Irradiance

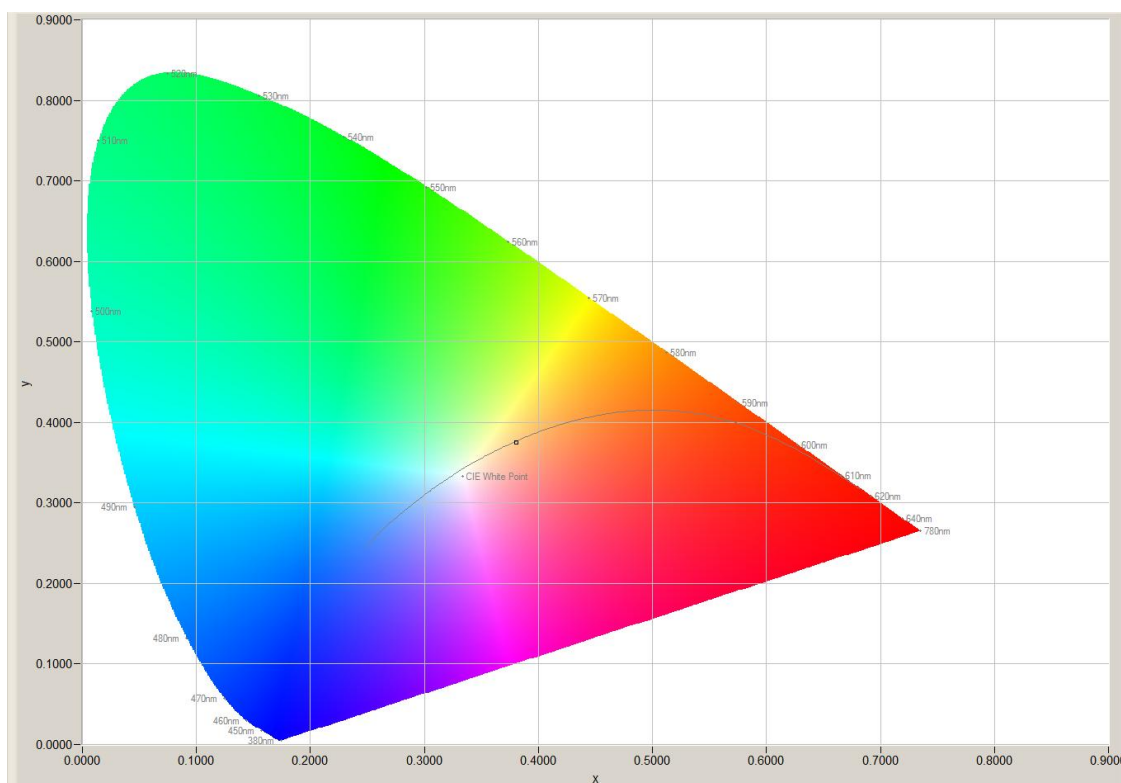


Figure 2: CIE 1931 diagram.

GONIOPHOTOMETER TEST		
Date of Test: 09/05/2014	Ambient Temperature: 25°C	
Measurement Filename: 60x60cm		
Instrument Used: Radiant Imaging NFMS0800 Goniometer with ProMetric PM-1200N-1 Imaging Photometer		
Photometer Working Distance: 3m	Measurement Geometry: Near-Field	
Comments:		
Reference Photometer Used: Specbos1201	Reference Photometer Serial Number: 2911670	
Traceable: to NPL standards, UKAS Accredited	Calibration Certificate Number: 13201	
Calibration Certificate Date: 15 th March 2013	Sample Stabilisation Time (minutes): 60	
Reference Photometer Calibration Uncertainty: $\pm 2.4\%$ ($k=2$, 20-200 lux, CIE illuminant A source)		
Scan Set Up		
Direction	Range	Increment
Inclination Zone 1	0-90°	3°
Azimuth	0-360°	10°
Results		
Integrated Luminous Flux (lumens):2334.9	Peak Intensity (3° Spot, candelas): 857.5	Efficacy (lumens/Watt): 82.6
Beam Angle (50% of max intensity C0-180, degrees): 101.8		
Photometric Filename (IES LM-63-2002): 60x60cm		
IES File – Absolute or Relative Format? RELATIVE		
Photometric Filename (EULUMDAT): 60x60cm		
EULUMDAT File – Absolute or Relative Format? RELATIVE		

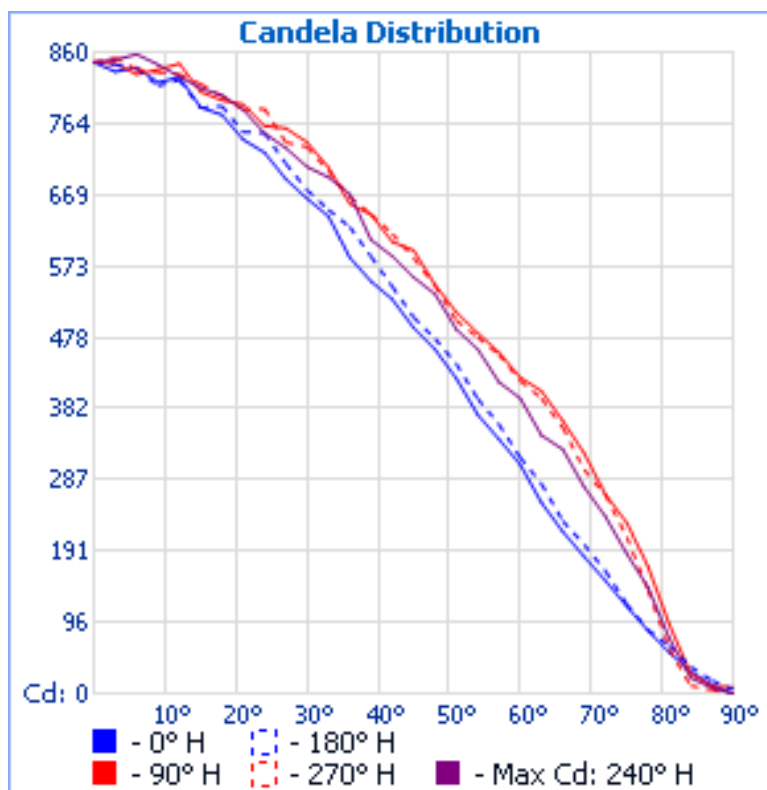


Figure 3: Far-Field Luminous Intensity (C0-180, Cartesian Coordinates)

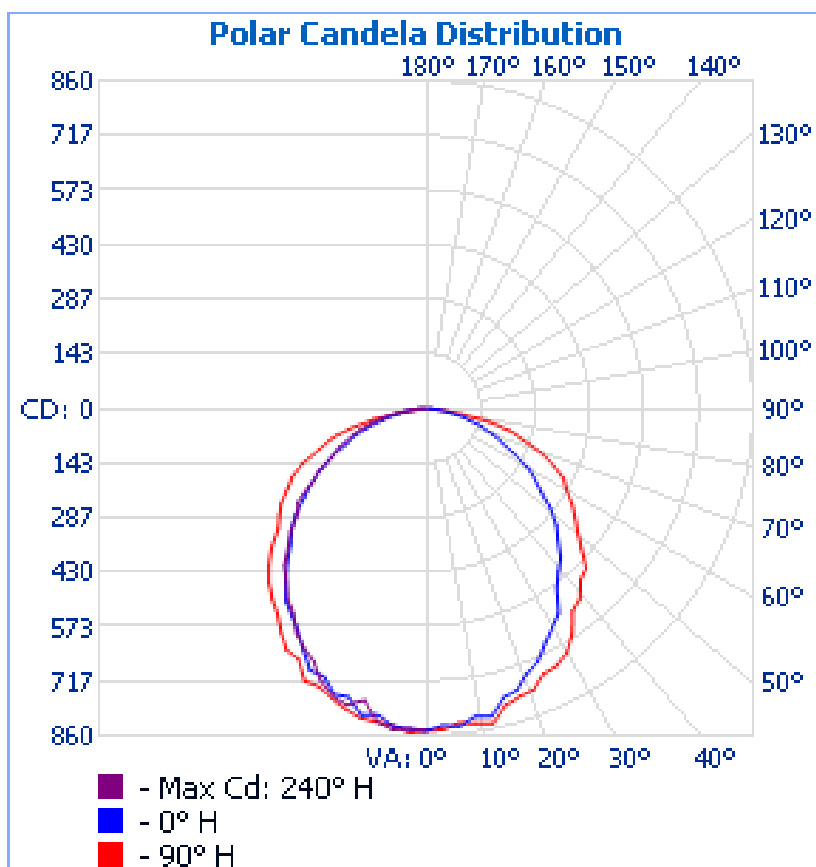


Figure 4: Far-Field Luminous Intensity (C0-180, C90-270, Polar Coordinates)

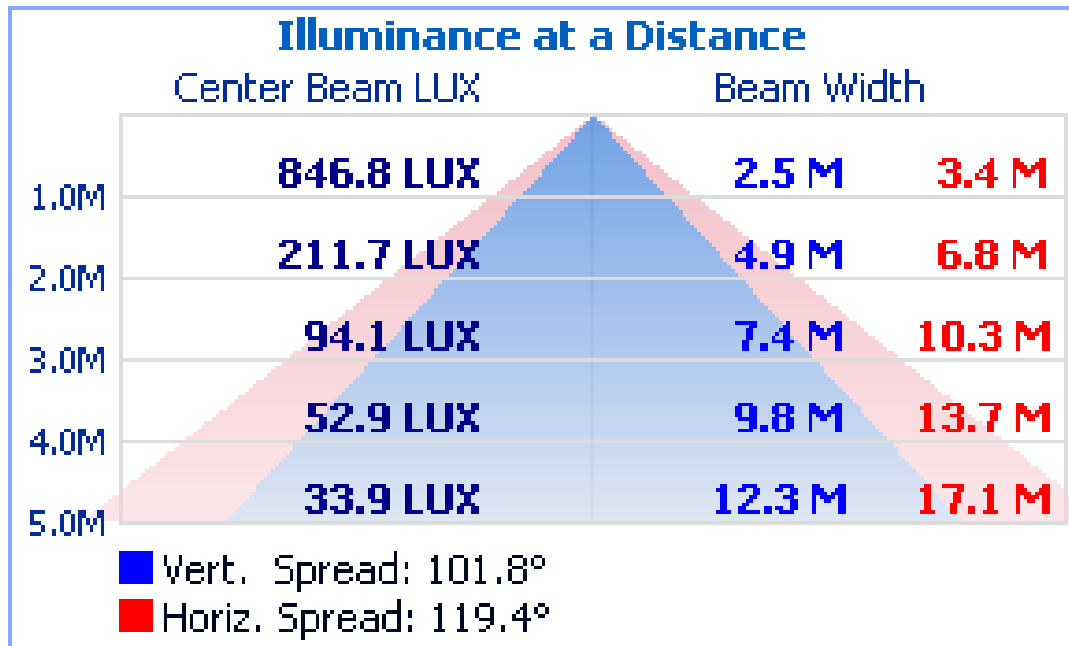


Figure 4. Cone diagram for mounting height of 5 metres.

Reflectance of										
Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor Cavity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		View endwise (C0)					View crosswise (C90)				
x	y										
2H	2H	13.2	14.9	13.6	15.2	15.5	14.6	16.3	15.0	16.6	16.9
	3H	14.4	15.9	14.8	16.2	16.6	16.4	17.9	16.8	18.3	18.6
	4H	14.8	16.2	15.2	16.6	16.9	17.1	18.5	17.5	18.9	19.3
	6H	15.1	16.4	15.5	16.7	17.1	17.5	18.8	17.9	19.1	19.5
	8H	15.1	16.3	15.5	16.7	17.1	17.4	18.7	17.9	19.1	19.5
	12H	15.1	16.3	15.5	16.7	17.1	17.4	18.6	17.8	19.0	19.4
4H	2H	14.0	15.5	14.4	15.8	16.2	15.2	16.6	15.6	16.9	17.3
	3H	15.4	16.6	15.8	17.0	17.4	17.1	18.4	17.6	18.7	19.1
	4H	16.0	17.0	16.4	17.5	17.9	18.0	19.1	18.4	19.5	19.9
	6H	16.3	17.2	16.7	17.7	18.1	18.4	19.3	18.8	19.8	20.2
	8H	16.3	17.2	16.8	17.7	18.1	18.4	19.3	18.8	19.7	20.2
	12H	16.4	17.2	16.8	17.6	18.1	18.4	19.2	18.8	19.6	20.1
8H	4H	16.4	17.3	16.9	17.7	18.2	18.2	19.0	18.6	19.5	19.9
	6H	16.8	17.5	17.3	18.0	18.5	18.6	19.3	19.1	19.8	20.3
	8H	16.9	17.6	17.5	18.1	18.6	18.7	19.3	19.2	19.8	20.3
	12H	17.0	17.5	17.5	18.0	18.5	18.7	19.2	19.2	19.7	20.2
12H	4H	16.4	17.3	16.9	17.7	18.2	18.2	19.0	18.6	19.4	19.9
	6H	16.9	17.5	17.4	18.1	18.5	18.7	19.3	19.2	19.8	20.3
	8H	17.0	17.6	17.6	18.1	18.6	18.7	19.2	19.2	19.8	20.3

Distance between luminaires: 0.25

Due to missing symmetry characteristics the values apply only to the indicated line of sight.

Table 1. UGR values

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847
3	834	832	832	840	844	848	848	845	845	845	846	846	847	850	850	849	846	845	843
6	840	838	828	831	842	845	848	844	834	830	837	837	842	835	831	837	836	831	838
9	820	828	836	827	833	839	828	827	826	837	843	829	822	829	836	833	839	824	815
12	827	815	800	804	819	814	822	807	827	845	822	825	825	822	826	810	820	813	823
15	786	795	791	800	793	793	807	821	807	807	823	813	812	798	793	805	796	798	786
18	776	780	795	764	786	786	788	795	808	796	805	790	796	788	787	795	780	775	788
21	743	757	750	774	746	769	780	770	798	790	786	783	768	783	756	773	764	746	753
24	726	732	737	717	740	730	749	766	754	761	772	754	763	739	745	755	736	731	752
27	690	701	693	731	711	716	747	731	754	758	738	738	727	727	730	715	713	722	711
30	664	664	677	677	674	688	707	728	714	740	715	720	728	682	691	696	666	685	675
33	640	627	648	662	661	673	671	693	706	706	692	708	684	666	659	649	637	658	649
36	585	609	611	614	626	651	651	671	667	657	659	664	635	657	631	624	610	616	626
39	553	569	567	573	587	604	620	636	634	642	641	627	614	632	598	568	571	578	586
42	529	530	533	552	553	587	592	598	621	606	613	600	583	589	561	538	549	556	546
45	491	487	503	513	533	537	559	563	591	595	569	569	552	550	533	510	520	510	505
48	462	468	463	468	502	495	519	556	531	548	533	548	527	503	479	487	476	461	476
51	423	425	427	441	442	466	490	512	509	512	507	505	497	469	443	443	450	435	442
54	374	373	388	399	430	447	451	478	486	484	496	474	454	425	403	399	405	396	396
57	341	343	359	358	385	415	435	434	445	458	456	460	428	392	376	361	369	367	361
60	307	316	311	325	355	367	379	415	427	424	434	405	374	363	353	327	334	306	317
63	256	277	286	299	303	328	344	380	404	406	404	379	351	328	301	304	279	277	281
66	217	231	244	258	274	305	337	348	371	366	368	356	325	321	293	277	248	247	232
69	184	184	202	223	236	266	286	296	320	323	318	300	287	275	245	229	217	205	200
72	151	152	168	191	215	239	253	274	282	267	274	273	257	230	215	195	170	165	165
75	117	121	140	154	174	197	196	231	244	229	228	223	211	206	181	150	142	126	120
78	85	91	103	119	140	153	166	163	177	171	170	166	166	157	143	123	98	98	86
81	55	52	69	77	93	104	98	93	85	93	87	98	106	104	97	87	79	61	64
84	30	38	40	47	40	42	39	33	30	27	31	36	45	48	45	47	41	39	36
87	12	17	14	14	16	11	12	9	10	10	9	12	13	14	17	16	16	16	18
90	0	9	11	7	8	9	11	10	8	9	9	9	9	9	8	9	10	7	6

Table 2a. Luminous intensity values, azimuth 0-180°

	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350
0	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847
3	840	836	840	842	848	850	851	853	853	851	849	847	845	843	841	840	837
6	852	853	835	833	845	857	846	833	837	848	847	831	822	832	848	844	835
9	833	831	826	827	817	844	836	835	833	841	842	819	842	831	832	833	821
12	826	809	820	824	841	828	845	834	831	838	810	813	828	820	783	814	825
15	800	801	807	805	802	812	814	819	818	816	812	819	808	809	806	801	789
18	782	781	783	794	797	803	788	803	801	800	790	777	783	786	795	777	778
21	748	768	763	774	776	783	784	799	783	784	791	784	778	761	769	761	759
24	728	760	744	738	753	752	765	765	785	787	737	755	744	743	728	715	723
27	698	718	718	709	733	732	754	744	739	741	742	740	712	727	707	705	697
30	665	687	706	714	701	707	717	722	733	730	721	715	713	698	683	661	674
33	633	656	668	657	675	693	683	700	701	711	689	670	666	664	642	627	626
36	607	626	646	630	634	670	676	655	666	671	664	647	625	625	619	596	605
39	567	588	605	615	606	609	630	665	643	632	629	621	619	607	583	571	567
42	534	540	551	586	583	587	603	613	617	600	605	591	577	566	557	521	524
45	500	510	532	549	560	558	572	569	584	568	570	568	537	535	512	508	490
48	468	470	498	500	523	536	533	562	547	545	527	527	492	485	479	460	461
51	429	428	449	458	481	488	504	520	501	502	498	494	465	447	434	426	418
54	398	397	405	428	453	462	476	472	478	472	464	453	439	426	418	403	378
57	350	361	371	369	397	418	448	455	455	454	425	412	404	381	359	365	353
60	316	317	341	347	361	396	402	430	420	420	401	371	354	337	325	314	300
63	270	287	296	313	332	346	369	394	396	388	373	343	311	299	278	277	265
66	230	247	248	278	299	328	344	342	357	364	342	318	287	265	250	237	226
69	201	199	216	247	262	277	290	302	301	303	292	270	262	244	213	201	187
72	168	174	188	211	230	237	255	261	266	253	242	235	220	211	183	174	154
75	127	134	155	168	187	188	195	201	210	207	191	193	174	167	146	125	114
78	90	94	116	127	135	143	139	144	139	140	145	141	137	123	117	92	86
81	56	71	78	87	85	74	68	53	60	62	71	76	85	83	78	67	56
84	39	35	42	33	26	21	12	9	11	9	12	20	28	36	40	31	30
87	17	13	12	10	7	8	5	0	5	5	5	8	9	11	12	13	16
90	6	0	0	0	0	0	0	0	0	0	0	11	12	0	0	0	5

Table 2b. Luminous intensity values, azimuth 190-350°



Photo 1: Luminaire for test

Tested by:

Signature:

Print Name: D CHAMBERS

Date: 15/05/2014

Test Engineer

Checked by:

Signature:

Print Name: GH JOHN

Date: 16/05/2014

Partner / Director