

IES INDOOR REPORT

PHOTOMETRIC FILENAME : OVVIO COMBO RM_TESTA SQ_12V_14W.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] T190827050
[TESTDATE] 2019-08-27
[TESTLAB] Dongguan Hongnuo Product Testing Service Co., Ltd.
[ISSUEDATE] 2019-08-27 21:12:53
[MANUFAC] BELUCE CANADA INC.
[LUMINAIRE] OVVIO COMBO RM_TESTA SQ_12V_14W
[LUMCAT] OVVIO COMBO RM_TESTA SQ_12V_14W
[LAMP] LED
[_TOTALLUMINAIRELUMENS] 1460.7
[_LAMPPOSITION] 0,0

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1487
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	13
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.32
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.46
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.30 ft
Luminous Width (90-270)	0.30 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	12182	14221	15762
55	10010	12420	12055
65	7945	9186	11253
75	4349	5743	8375
85	0	302	3071

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14
5	3588.93	3881.06	4213.98	4507.02	4679.28	4730.65	4694.50	4612.18	4488.61	4298.82
10	2025.83	2401.62	2883.91	3374.43	3719.47	3808.50	3744.55	3589.92	3363.44	3050.52
15	1255.05	1454.68	1753.90	2036.44	2197.01	2215.92	2141.61	2008.97	1887.24	1823.25
20	858.24	997.50	1199.12	1341.64	1345.90	1273.74	1214.11	1184.65	1196.54	1216.06
25	539.10	632.89	751.57	858.06	892.34	874.72	848.14	825.77	813.02	790.95
30	292.28	349.46	434.67	512.60	557.32	562.50	551.97	529.80	502.79	458.18
35	155.72	182.49	219.26	259.93	292.06	302.92	304.37	290.01	264.59	235.01
40	95.98	106.53	121.43	138.79	151.16	156.97	159.99	153.01	143.12	130.26
45	72.09	76.54	84.16	90.68	93.28	95.79	97.12	94.41	90.85	86.94
50	57.94	61.67	69.06	72.92	71.22	70.80	70.81	69.91	70.32	71.36
55	48.05	51.29	59.62	61.33	57.87	56.89	58.37	57.88	56.29	59.78
60	38.67	41.87	46.69	50.01	48.54	46.61	46.75	47.55	46.82	51.33
65	28.10	30.92	32.49	35.86	39.80	38.30	36.73	38.08	38.74	41.11
70	18.49	20.03	22.59	25.67	27.75	28.29	28.20	28.77	29.96	29.68
75	9.42	11.26	12.44	15.07	18.14	19.18	19.62	19.79	20.33	19.35
80	3.03	3.87	4.73	6.30	9.11	10.37	11.49	11.63	11.50	10.04
85	0.00	0.03	0.22	0.87	2.24	3.53	4.30	4.54	4.21	3.19
90	0.00	0.00	0.00	0.00	0.00	0.03	0.21	0.28	0.19	0.04
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.03	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.01	0.01
155	0.07	0.07	0.06	0.05	0.04	0.03	0.03	0.03	0.03	0.04
160	0.13	0.12	0.10	0.09	0.08	0.08	0.07	0.07	0.07	0.08
165	0.19	0.18	0.16	0.14	0.15	0.14	0.13	0.13	0.13	0.14
170	0.23	0.21	0.20	0.18	0.23	0.22	0.20	0.19	0.19	0.19
175	0.17	0.17	0.17	0.17	0.20	0.20	0.19	0.18	0.17	0.17
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14	4575.14
5	4043.80	3772.08	3533.06	3380.07	3326.70	3396.01	3588.93
10	2701.70	2334.62	2034.46	1840.04	1770.71	1822.68	2025.83
15	1704.25	1525.22	1317.80	1186.52	1139.03	1159.71	1255.05
20	1167.29	1042.86	888.78	798.04	772.40	794.56	858.24
25	737.92	640.66	541.23	485.41	469.68	488.69	539.10
30	402.84	337.11	279.51	254.15	248.96	261.56	292.28
35	206.79	177.71	152.25	139.23	136.75	143.42	155.72
40	123.08	108.61	96.72	90.58	88.37	90.45	95.98
45	87.52	83.68	76.06	71.25	69.59	70.35	72.09
50	76.45	73.10	63.20	58.48	58.21	58.29	57.94
55	64.14	62.69	53.44	48.49	46.20	46.01	48.05
60	49.48	47.77	43.59	39.09	36.00	35.51	38.67

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65	38.06	36.16	33.11	29.35	26.57	26.73	28.10
70	26.96	24.25	22.32	19.61	17.45	17.51	18.49
75	16.30	13.81	12.45	10.71	9.21	9.27	9.42
80	7.72	5.98	4.70	3.62	2.81	2.56	3.03
85	1.80	0.92	0.33	0.10	0.02	0.01	0.00
90	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.01	0.01	0.01	0.01	0.00
150	0.02	0.03	0.04	0.03	0.03	0.03	0.03
155	0.05	0.07	0.08	0.08	0.08	0.07	0.07
160	0.10	0.12	0.14	0.14	0.14	0.14	0.13
165	0.15	0.17	0.19	0.20	0.21	0.20	0.19
170	0.20	0.21	0.21	0.22	0.23	0.23	0.23
175	0.16	0.16	0.15	0.16	0.17	0.17	0.17
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	839.83	N.A.	56.50
0-30	1166.73	N.A.	78.50
0-40	1315.24	N.A.	88.50
0-60	1433.71	N.A.	96.40
0-80	1483.77	N.A.	99.80
0-90	1486.53	N.A.	100.00
10-90	1138.09	N.A.	76.60
20-40	475.41	N.A.	32.00
20-50	544.03	N.A.	36.60
40-70	152.55	N.A.	10.30
60-80	50.05	N.A.	3.40
70-80	15.98	N.A.	1.10
80-90	2.77	N.A.	0.20
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.10	N.A.	0.00
110-180	0.09	N.A.	0.00
0-180	1486.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	348.45
10-20	491.39
20-30	326.90
30-40	148.51
40-50	68.62
50-60	49.85
60-70	34.08
70-80	15.98
80-90	2.77
90-100	0.01
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.03
160-170	0.04
170-180	0.02

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	83
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	79	78
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74
6	91	83	77	73	89	82	77	73	81	76	73	79	75	72	78	74	72	70
7	87	79	73	70	86	78	73	69	77	72	69	76	72	69	75	71	68	67
8	84	75	70	66	83	75	70	66	74	69	66	73	69	66	72	68	65	64
9	81	72	67	64	80	72	67	63	71	66	63	70	66	63	69	66	63	62
10	78	69	64	61	77	69	64	61	68	64	61	68	63	61	67	63	60	59

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

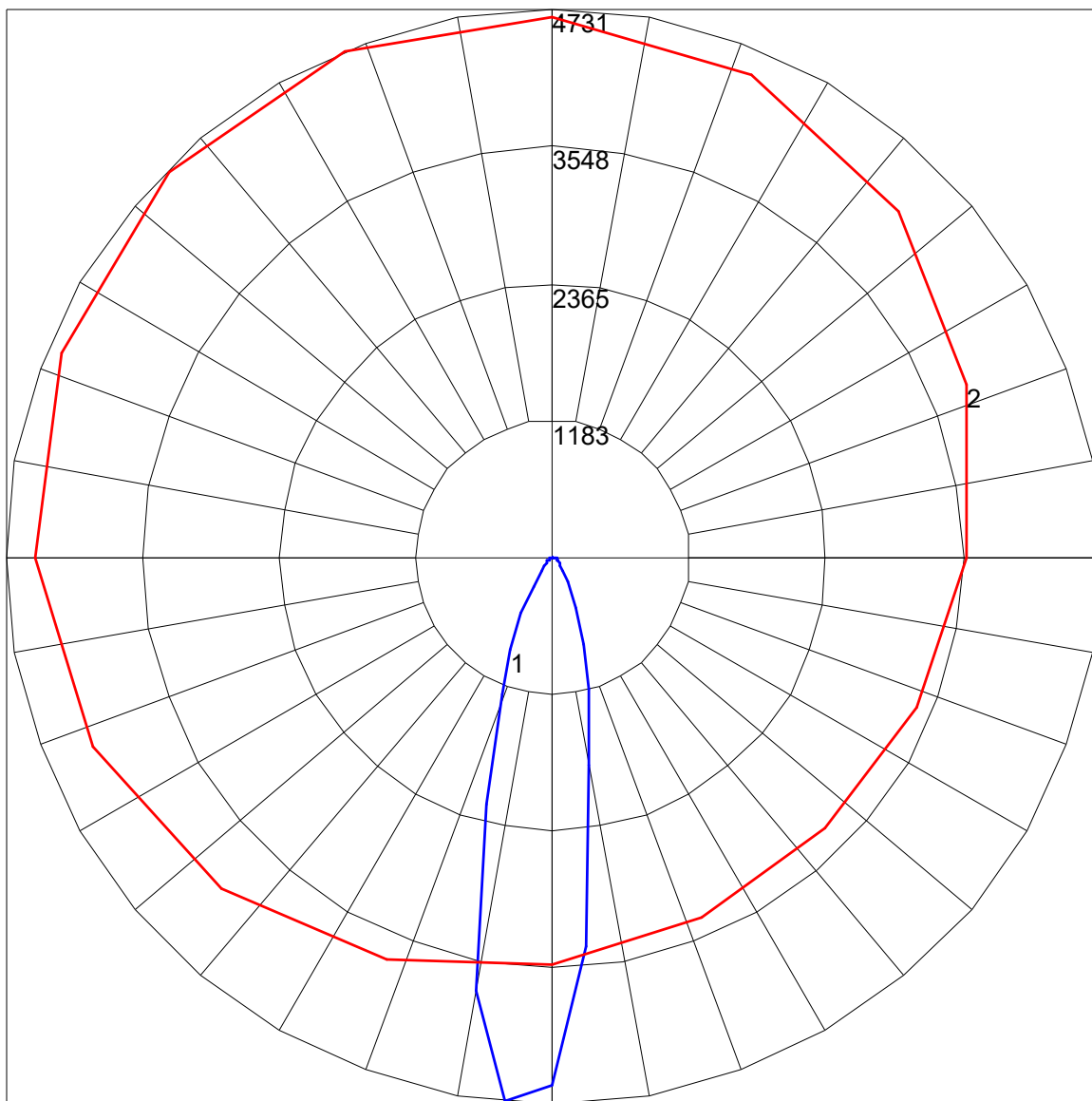
X=2H	Y=2H	14.8	15.9	15.2	16.2	16.5	16.3	17.3	16.6	17.6	17.9
	3H	16.0	16.9	16.4	17.2	17.6	17.8	18.7	18.2	19.0	19.4
	4H	16.2	17.1	16.6	17.4	17.8	18.2	19.1	18.6	19.5	19.8
	6H	16.2	17.0	16.7	17.4	17.8	18.5	19.3	18.9	19.7	20.1
	8H	16.2	16.9	16.6	17.3	17.7	18.6	19.3	19.0	19.7	20.1
	12H	16.1	16.8	16.6	17.2	17.7	18.5	19.2	19.0	19.6	20.1

UGR Viewed Endwise

4H	2H	15.2	16.1	15.6	16.5	16.8	16.6	17.5	17.0	17.8	18.2
	3H	16.5	17.2	16.9	17.7	18.1	18.3	19.0	18.7	19.4	19.8
	4H	16.8	17.5	17.3	17.9	18.3	18.9	19.5	19.3	19.9	20.4
	6H	16.9	17.4	17.4	17.9	18.4	19.2	19.8	19.7	20.2	20.7
	8H	16.9	17.4	17.3	17.8	18.3	19.3	19.8	19.8	20.3	20.7
	12H	16.8	17.2	17.3	17.7	18.2	19.3	19.7	19.8	20.2	20.7
8H	4H	16.9	17.4	17.4	17.9	18.3	19.0	19.5	19.5	20.0	20.4
	6H	17.0	17.4	17.5	17.9	18.4	19.4	19.8	19.9	20.3	20.8
	8H	16.9	17.3	17.5	17.8	18.3	19.5	19.9	20.1	20.4	20.9
	12H	16.9	17.2	17.4	17.7	18.3	19.6	19.9	20.1	20.4	21.0
12H	4H	16.9	17.3	17.4	17.8	18.3	19.0	19.4	19.5	19.9	20.4
	6H	16.9	17.3	17.5	17.8	18.3	19.4	19.8	19.9	20.3	20.8
	8H	16.9	17.2	17.5	17.7	18.3	19.6	19.9	20.1	20.4	21.0

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 4730.65 Located At Horizontal Angle = 112.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (112.5 - 292.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)