

IES INDOOR REPORT

PHOTOMETRIC FILENAME : OVVIO COMBO RM_TESTA SQ_12V_9W.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] T191011050
[TESTDATE] 2019-10-11
[TESTLAB] Dongguan Hongnuo Product Testing Service Co., Ltd.
[ISSUEDATE] 2019-10-11 11:59:25
[MANUFAC] BELUCE CANADA INC.
[LUMINAIRE] OVVIO COMBO RM_TESTA SQ_12V_9W
[LUMCAT] OVVIO COMBO RM_TESTA SQ_12V_9W
[LAMP] LED
[_TOTALLUMINAIRELUMENS] 1105.1
[_LAMPPOSITION] 0,0

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1125
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	8.996
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.42
Spacing Criterion (90-270)	0.36
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	12674	12023	11300
55	10903	10318	9585
65	10235	8957	8324
75	8869	7156	6034
85	7417	4675	1947

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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	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29
5	3168.16	3078.03	3004.99	2960.35	2947.17	2960.69	2981.08	2993.97	2995.95	2992.05
10	2178.92	2008.92	1886.51	1815.34	1817.02	1867.78	1919.93	1935.32	1921.91	1907.49
15	1227.23	1090.87	1020.43	1013.72	1072.72	1172.08	1245.40	1237.96	1157.43	1075.13
20	829.36	747.99	712.52	706.42	754.71	836.41	895.57	876.97	797.89	731.39
25	542.95	502.27	483.24	476.41	496.75	529.51	559.47	551.77	515.76	486.42
30	323.33	308.63	300.05	292.42	292.39	297.77	301.08	299.93	293.92	292.99
35	176.94	169.88	164.57	158.77	159.93	158.80	159.81	160.39	161.82	164.21
40	102.85	98.85	97.29	93.64	91.11	89.71	89.91	91.15	93.12	94.57
45	75.00	72.22	71.15	69.42	66.87	65.79	65.64	66.49	67.96	69.20
50	63.29	60.54	60.18	58.10	55.77	55.81	58.43	57.19	56.69	57.62
55	52.34	50.94	49.53	48.72	46.01	47.95	49.78	50.60	46.76	48.15
60	43.84	42.41	39.02	39.18	37.65	40.08	38.47	41.08	37.88	39.50
65	36.20	33.86	31.68	31.66	29.44	29.25	27.84	30.39	28.90	30.39
70	27.97	25.43	23.52	22.31	21.13	20.31	19.46	19.79	20.03	21.50
75	19.21	17.40	15.50	14.03	13.07	12.33	11.62	11.62	12.61	13.67
80	11.27	10.14	8.60	7.11	6.41	5.29	4.94	4.98	5.59	6.77
85	5.41	4.45	3.41	2.27	1.42	0.73	0.48	0.55	0.98	1.82
90	1.07	0.53	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03
160	0.04	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.07	0.07
165	0.08	0.08	0.09	0.09	0.12	0.11	0.13	0.13	0.13	0.13
170	0.11	0.11	0.12	0.12	0.16	0.15	0.16	0.16	0.17	0.17
175	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.11
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	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29	3425.29
5	3004.01	3049.21	3127.00	3202.91	3245.68	3228.36	3168.16
10	1937.45	2023.55	2159.27	2295.02	2362.25	2318.59	2178.92
15	1043.51	1065.65	1157.23	1307.35	1398.74	1364.62	1227.23
20	706.72	717.63	764.98	855.81	930.44	921.06	829.36
25	476.20	480.99	503.34	549.08	583.37	585.29	542.95
30	296.82	302.75	310.56	321.68	337.59	336.96	323.33
35	167.11	172.38	176.52	179.94	184.73	183.42	176.94
40	99.60	101.29	102.95	104.42	106.03	105.63	102.85
45	71.97	74.21	75.33	76.93	77.12	77.43	75.00
50	60.19	61.66	62.49	64.95	66.75	66.20	63.29
55	49.38	52.15	51.03	54.39	56.56	57.53	52.34
60	38.04	41.13	42.00	46.27	46.46	48.89	43.84

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CANDELA TABULATION - (Cont.)

65	30.45	32.98	34.50	37.96	37.75	39.90	36.20
70	22.83	24.49	26.80	28.55	28.45	29.21	27.97
75	14.96	16.30	18.42	19.78	19.91	19.56	19.21
80	8.04	9.26	10.64	11.44	11.93	11.66	11.27
85	2.82	3.87	4.86	5.57	5.94	5.84	5.41
90	0.00	0.26	0.74	1.21	1.44	1.40	1.07
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	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.02	0.02	0.01	0.02	0.02	0.02	0.01
160	0.06	0.05	0.04	0.05	0.05	0.05	0.04
165	0.12	0.11	0.08	0.08	0.08	0.08	0.08
170	0.17	0.16	0.12	0.11	0.11	0.11	0.11
175	0.11	0.11	0.10	0.09	0.09	0.09	0.09
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	610.30	N.A.	54.30
0-30	853.32	N.A.	75.90
0-40	967.78	N.A.	86.10
0-60	1071.16	N.A.	95.30
0-80	1120.23	N.A.	99.60
0-90	1124.34	N.A.	100.00
10-90	865.06	N.A.	76.90
20-40	357.48	N.A.	31.80
20-50	415.41	N.A.	36.90
40-70	135.71	N.A.	12.10
60-80	49.07	N.A.	4.40
70-80	16.74	N.A.	1.50
80-90	4.11	N.A.	0.40
90-110	0.11	N.A.	0.00
90-120	0.11	N.A.	0.00
90-130	0.11	N.A.	0.00
90-150	0.11	N.A.	0.00
90-180	0.16	N.A.	0.00
110-180	0.05	N.A.	0.00
0-180	1124.5	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	259.28
10-20	351.02
20-30	243.02
30-40	114.46
40-50	57.93
50-60	45.45
60-70	32.33
70-80	16.74
80-90	4.11
90-100	0.11
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.01
160-170	0.03
170-180	0.01

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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	113	110	108	106	111	108	106	104	104	102	101	101	99	98	97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	94	86	80	76	92	85	80	76	83	79	75	81	77	74	80	76	74	72
6	90	81	76	72	88	81	75	71	79	74	71	78	74	71	76	73	70	69
7	86	78	72	68	85	77	72	68	76	71	67	74	70	67	73	70	67	65
8	83	74	69	65	82	73	68	65	72	68	64	71	67	64	71	67	64	63
9	80	71	66	62	79	70	65	62	70	65	62	69	64	61	68	64	61	60
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	65	62	59	58

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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

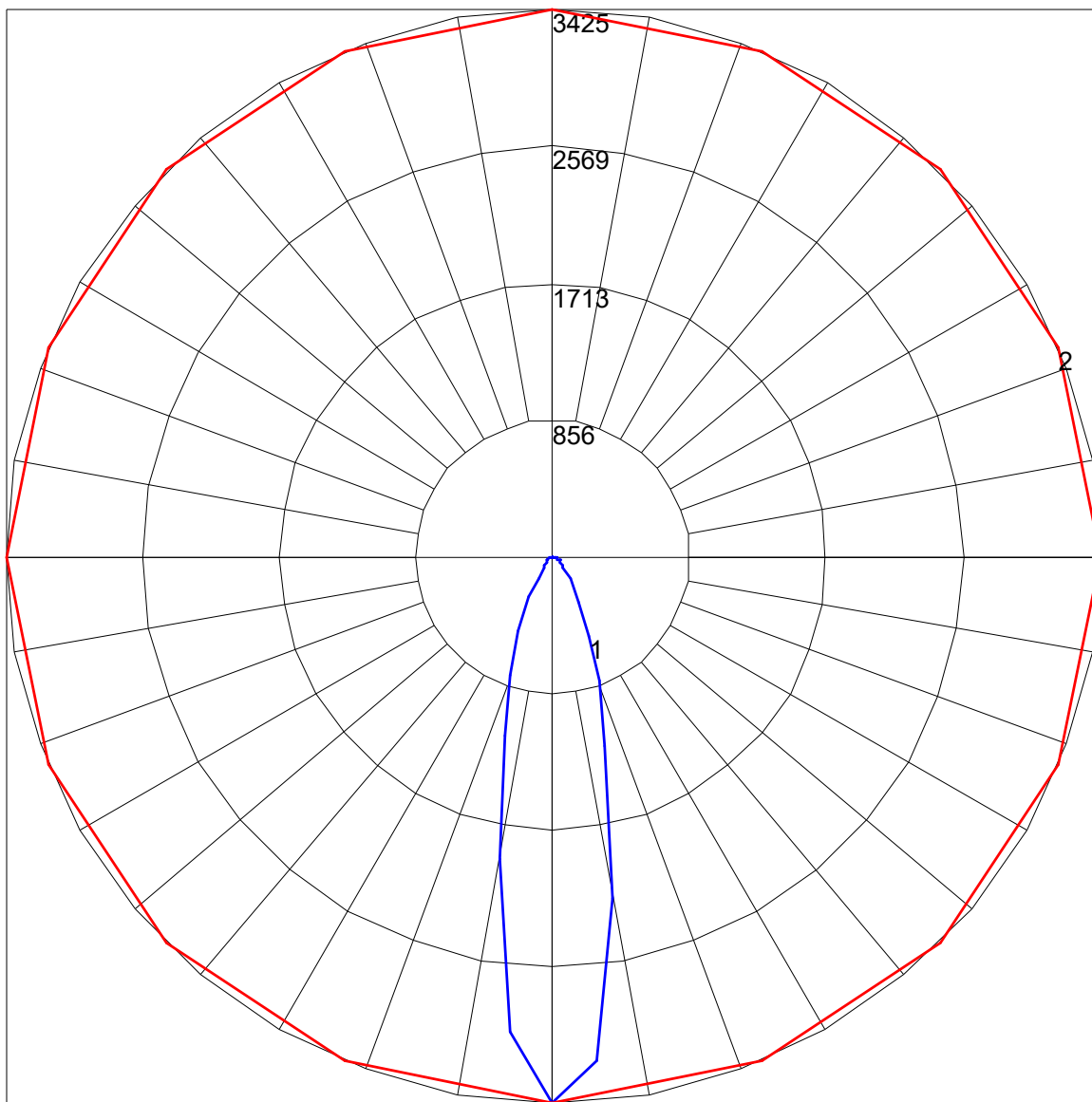
X=2H	Y=2H	16.6	17.7	17.0	18.0	18.3	15.7	16.8	16.1	17.1	17.4
	3H	18.3	19.3	18.7	19.6	20.0	17.1	18.1	17.5	18.4	18.8
	4H	18.9	19.8	19.3	20.2	20.6	17.5	18.4	17.9	18.8	19.2
	6H	19.3	20.2	19.7	20.5	20.9	17.7	18.5	18.1	18.9	19.3
	8H	19.5	20.2	19.9	20.6	21.0	17.7	18.5	18.2	18.9	19.3
	12H	19.6	20.3	20.0	20.7	21.1	17.7	18.5	18.2	18.9	19.3

UGR Viewed Endwise

4H	2H	17.1	18.0	17.5	18.3	18.7	16.2	17.0	16.6	17.4	17.8
	3H	19.0	19.7	19.4	20.1	20.5	17.7	18.5	18.1	18.9	19.3
	4H	19.7	20.3	20.1	20.8	21.2	18.2	18.9	18.7	19.3	19.8
	6H	20.2	20.8	20.7	21.2	21.7	18.5	19.1	19.0	19.5	20.0
	8H	20.4	20.9	20.9	21.4	21.9	18.5	19.1	19.0	19.5	20.0
	12H	20.5	21.0	21.0	21.5	22.0	18.5	19.0	19.0	19.5	20.0
8H	4H	19.9	20.4	20.3	20.8	21.3	18.4	18.9	18.8	19.3	19.8
	6H	20.5	20.9	21.0	21.4	21.9	18.7	19.1	19.2	19.6	20.1
	8H	20.8	21.2	21.3	21.7	22.2	18.8	19.2	19.3	19.7	20.2
	12H	21.0	21.3	21.5	21.8	22.4	18.8	19.1	19.3	19.6	20.2
12H	4H	19.9	20.3	20.3	20.8	21.3	18.4	18.8	18.8	19.3	19.8
	6H	20.6	20.9	21.1	21.4	21.9	18.7	19.1	19.3	19.6	20.1
	8H	20.8	21.2	21.4	21.7	22.2	18.8	19.2	19.4	19.7	20.2

Maximum UGR = 22.4

POLAR GRAPH



Maximum Candela = 3425.29 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)