

## IES Report

# BoxRail® | 107 | 85° Asymmetric | 90 CRI | HO

107-BX-XX-4-48-XX-XX-XX-XX-X-X-Z-HO-359-A1-X-BL-X

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	48	49	50	51
Total Lumens, 4' rail length (1219mm)	2310	2383	2432	2456
Lumens per foot (305mm)	578	596	608	614
Input Power (W), 4' rail length (1219mm)	49.1	49.1	49.1	49.1
Watts per foot (305mm)	12.3	12.3	12.3	12.3
CRI	94	94	94	94

Due to the large number of options in Vode's product offering, most Vode IES reports are factored reports prepared from source reports. Source reports are the IES test reports prepared for Vode by an NVLAP accredited photometric test laboratory. Factored reports are based on data from the Vode source reports.

If the data above is in black, it is directly from a Vode source report. If it is in grey, it is factored from Vode source reports. Reference details on Vode source reports can be found on the [IES File Finder](#) page on [vode.com](#).



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : VODE\_107\_BX\_HO\_359\_A1\_BL.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] L121911514 (SOURCE REPORT FOR REFERENCE)

[TESTLAB] REPORT BASED ON DATA FROM NVLAP ACCREDITED LAB

[ISSUE DATE] 12/23/2019

[MANUFAC] Vode Lighting

[LUMCAT] 107-BX-48-Z-HO-359-A1-BL

[LUMINAIRE] BoxRail LED, 48", 3500K, 90 CRI, zipper board, 85° black asymmetric lens,

[MORE] high output, black anodized finish

[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2433
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	50
Total Luminaire Watts	49.06
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.08
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.04 ft
Luminous Width (90-270)	3.84 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	118489	92628	46961
55	94286	67031	28772
65	63270	44960	18706
75	23349	26669	12926
85	0	259	7677

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**CANDELA TABULATION**

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0</b>	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628
<b>5</b>	1628.338	1629.611	1629.611	1625.944	1618.781	1612.245	1603.163	1594.252	1584.543	1573.219
<b>10</b>	1771.674	1771.826	1771.826	1763.865	1754.156	1743.003	1730.102	1715.130	1697.460	1678.669
<b>15</b>	1831.562	1830.289	1828.693	1820.257	1810.377	1797.951	1782.181	1764.815	1742.851	1719.120
<b>20</b>	1824.874	1823.905	1821.207	1813.569	1802.568	1789.040	1772.472	1752.408	1728.677	1701.431
<b>25</b>	1772.624	1770.401	1765.784	1758.127	1745.872	1730.102	1712.432	1689.176	1661.303	1630.238
<b>30</b>	1674.204	1672.931	1667.839	1658.282	1643.785	1626.096	1602.859	1574.815	1541.527	1505.389
<b>35</b>	1547.113	1545.194	1538.183	1526.555	1509.531	1486.902	1459.352	1424.791	1384.663	1341.647
<b>40</b>	1384.017	1381.471	1373.358	1360.457	1340.222	1312.824	1279.536	1239.883	1195.290	1146.403
<b>45</b>	1196.715	1194.017	1185.258	1171.407	1150.374	1120.430	1082.050	1037.932	989.843	935.522
<b>50</b>	986.499	984.105	977.094	964.193	943.483	913.862	877.078	832.162	781.679	730.550
<b>55</b>	772.445	770.849	764.636	754.452	736.288	710.334	677.521	639.768	594.700	549.157
<b>60</b>	569.544	568.423	564.604	557.270	544.692	524.780	499.301	467.609	431.775	395.770
<b>65</b>	381.919	381.444	380.000	376.979	370.291	358.511	342.266	320.929	296.400	271.396
<b>70</b>	220.115	220.419	221.388	222.661	222.186	218.994	212.306	201.951	188.727	174.401
<b>75</b>	86.317	86.963	89.661	93.974	98.914	103.037	105.754	105.906	103.208	98.591
<b>80</b>	7.011	7.163	7.961	9.557	12.103	15.922	21.033	27.398	33.440	37.905
<b>85</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.323
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Angles**      **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
<b>0</b>	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628
<b>5</b>	1562.085	1548.215	1533.889	1523.705	1504.743	1485.306	1468.434	1534.687	1516.219	1497.903
<b>10</b>	1656.838	1632.309	1605.709	1580.401	1546.638	1511.583	1475.749	1518.442	1480.385	1439.763
<b>15</b>	1690.924	1658.909	1623.075	1585.816	1542.173	1491.994	1442.157	1463.646	1410.142	1352.971
<b>20</b>	1669.587	1633.107	1592.504	1549.488	1496.630	1438.490	1377.329	1378.279	1311.399	1235.589
<b>25</b>	1594.252	1552.851	1506.966	1459.352	1402.979	1336.080	1267.281	1250.390	1173.953	1092.728
<b>30</b>	1465.090	1419.224	1368.247	1314.268	1255.330	1188.450	1117.561	1088.263	1006.392	924.388
<b>35</b>	1295.154	1243.379	1188.754	1130.785	1071.543	1005.613	933.774	897.617	821.978	743.299
<b>40</b>	1092.082	1036.184	979.811	922.792	865.450	804.764	741.057	705.223	640.414	570.494
<b>45</b>	879.472	825.151	770.051	716.376	662.378	615.087	561.412	527.174	474.297	416.157
<b>50</b>	677.350	629.413	579.728	533.216	490.371	449.122	407.246	377.625	337.478	294.956
<b>55</b>	503.120	460.921	419.672	383.667	349.277	317.889	293.360	265.183	235.714	204.820
<b>60</b>	359.936	326.344	296.552	269.800	245.594	222.490	201.001	185.060	164.521	143.507
<b>65</b>	247.190	222.965	202.426	184.110	167.067	151.468	139.840	126.464	112.917	99.218
<b>70</b>	159.904	145.084	132.183	120.574	110.048	100.491	93.328	84.721	75.962	67.051
<b>75</b>	92.378	85.519	79.154	72.941	67.203	61.788	57.969	53.029	47.785	42.522
<b>80</b>	39.976	39.824	38.380	36.632	34.238	32.015	30.571	28.519	25.954	23.256
<b>85</b>	1.121	3.192	6.536	9.557	10.507	10.678	10.507	10.203	9.557	8.911
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Angles**      **Horizontal Angles**

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
<b>0</b>	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628
<b>5</b>	1480.689	1463.171	1446.603	1429.731	1414.284	1400.433	1385.936	1373.833	1361.559	1348.981
<b>10</b>	1402.010	1363.630	1324.775	1287.820	1250.086	1215.829	1183.985	1152.616	1124.097	1097.345
<b>15</b>	1296.750	1238.287	1179.843	1124.572	1067.724	1016.272	967.537	920.873	879.776	841.567
<b>20</b>	1164.225	1089.384	1014.676	944.604	872.461	810.027	751.583	696.939	649.496	606.955
<b>25</b>	1011.503	926.459	841.719	764.484	685.634	618.431	558.391	503.120	456.931	414.884
<b>30</b>	838.850	756.200	671.783	594.054	519.517	456.304	401.185	352.146	311.372	277.115
<b>35</b>	666.843	584.668	507.414	438.463	372.837	319.656	274.569	235.239	204.649	179.968

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**CANDELA TABULATION - (Cont.)**

<b>40</b>	502.797	431.775	369.341	313.120	261.193	220.267	186.504	158.308	135.527	119.130
<b>45</b>	362.178	308.332	260.718	218.519	180.291	150.347	129.010	107.502	92.701	80.902
<b>50</b>	255.303	216.448	182.039	151.145	129.637	105.906	89.509	76.133	66.253	58.444
<b>55</b>	176.624	150.347	131.556	105.431	88.711	75.012	64.030	55.271	48.887	43.795
<b>60</b>	123.918	106.229	89.832	76.285	64.353	55.423	48.108	42.370	38.057	34.713
<b>65</b>	86.488	74.537	63.859	54.948	47.139	41.249	36.632	32.813	29.944	27.550
<b>70</b>	59.090	51.452	44.764	39.026	34.409	30.571	27.398	25.004	22.933	21.337
<b>75</b>	38.057	33.611	29.621	26.448	23.579	21.337	19.437	17.993	16.720	15.618
<b>80</b>	21.033	18.962	17.043	15.618	14.174	13.224	12.103	11.305	10.678	10.203
<b>85</b>	8.284	7.638	7.163	6.840	6.365	6.061	5.738	4.940	4.617	4.142
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Horizontal Angles**

	<u><b>150</b></u>	<u><b>155</b></u>	<u><b>160</b></u>	<u><b>165</b></u>	<u><b>170</b></u>	<u><b>175</b></u>	<u><b>180</b></u>
<b>0</b>	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628	1493.628
<b>5</b>	1338.797	1327.967	1321.108	1318.410	1314.572	1459.998	1462.373
<b>10</b>	1073.614	1052.106	1034.588	1024.556	1016.747	1156.112	1158.183
<b>15</b>	808.279	778.962	755.402	741.703	729.125	845.538	847.286
<b>20</b>	569.696	538.479	513.627	497.553	484.652	569.696	570.494
<b>25</b>	382.394	354.692	332.861	318.687	307.857	361.532	362.178
<b>30</b>	250.686	228.874	211.660	200.830	192.394	225.036	224.884
<b>35</b>	160.379	144.134	132.183	125.495	119.605	138.396	138.567
<b>40</b>	105.431	95.399	87.286	82.498	79.002	89.984	90.136
<b>45</b>	71.991	65.455	60.363	57.171	55.100	61.636	61.484
<b>50</b>	52.725	48.412	44.916	42.845	41.401	45.391	45.239
<b>55</b>	39.976	37.107	34.884	33.440	32.490	35.036	35.036
<b>60</b>	32.015	29.944	28.519	27.398	26.600	28.196	28.348
<b>65</b>	25.802	24.206	23.085	22.306	21.660	22.781	22.610
<b>70</b>	20.064	18.962	18.164	17.518	17.043	17.841	17.841
<b>75</b>	14.820	14.022	13.547	13.053	12.749	13.224	13.053
<b>80</b>	9.709	9.234	8.759	8.759	8.436	8.607	8.607
<b>85</b>	3.667	3.496	3.344	3.192	3.021	3.192	3.192
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	512.62	N.A.	21.10
0-30	1010.38	N.A.	41.50
0-40	1513.82	N.A.	62.20
0-60	2208.84	N.A.	90.80
0-80	2425.04	N.A.	99.70
0-90	2432.87	N.A.	100.00
10-90	2293.27	N.A.	94.30
20-40	1001.2	N.A.	41.20
20-50	1414.67	N.A.	58.10
40-70	851.93	N.A.	35.00
60-80	216.20	N.A.	8.90
70-80	59.29	N.A.	2.40
80-90	7.83	N.A.	0.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2432.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	139.60
10-20	373.02
20-30	497.76
30-40	503.44
40-50	413.47
50-60	281.55
60-70	156.90
70-80	59.29
80-90	7.83
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

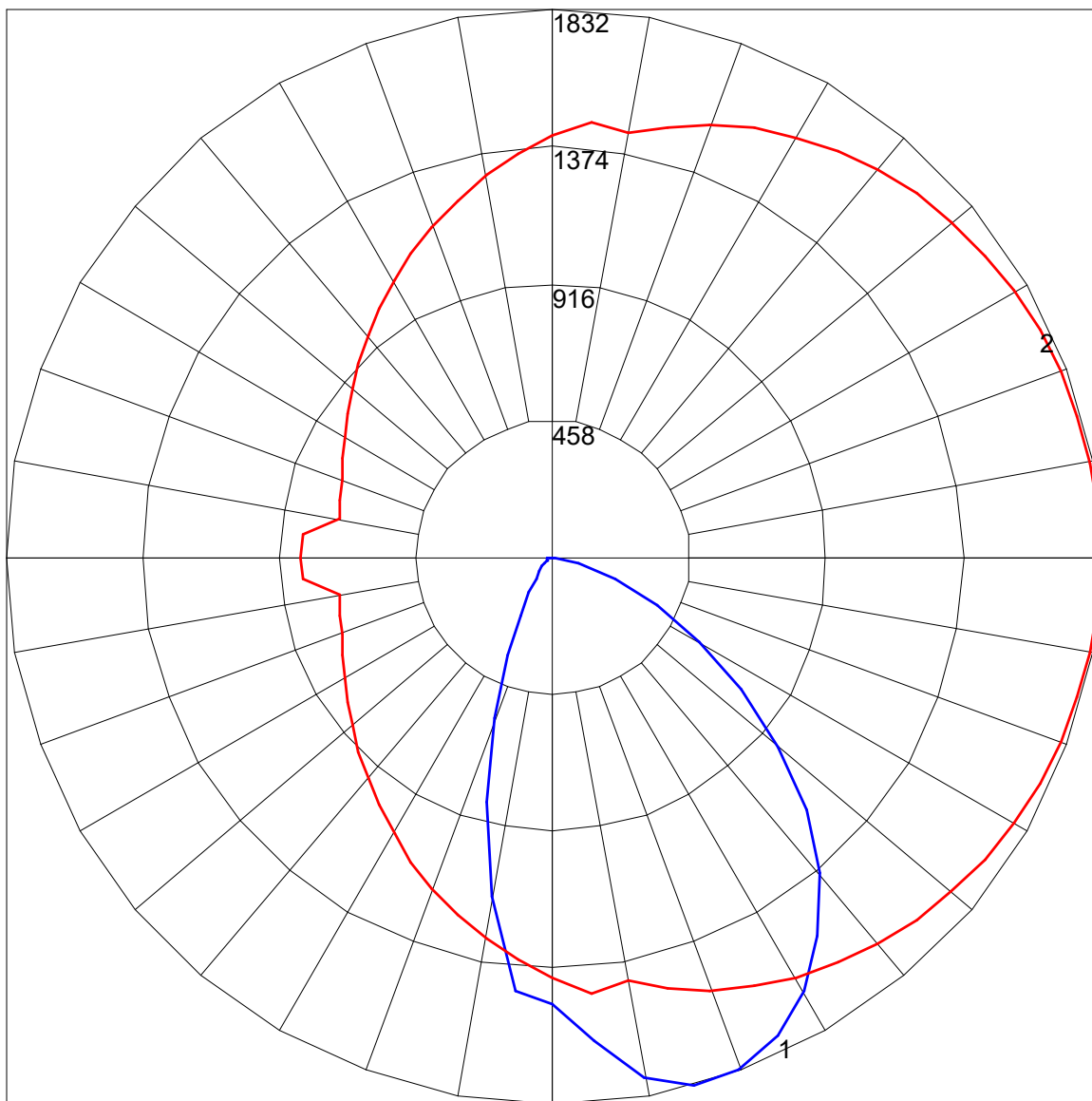
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78
3	96	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68
4	89	78	71	65	87	77	70	65	75	69	64	73	67	63	71	66	62	61
5	82	71	64	58	81	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	49
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

POLAR GRAPH



Maximum Candela = 1831.562 Located At Horizontal Angle = 0, Vertical Angle = 15  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180)  
# 2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)