

IES Report

RaceRail® | 107 | Diffuse, round | 80 CRI | HO

107-RR-XX-4-48-XX-XX-XX-XX-X-X-Z-HO-35-2-X-XX-X

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	115	118	121	123
Total Lumens, 4' rail length (1219mm)	5613	5790	5908	6026
Lumens per foot (305mm)	1403	1448	1477	1507
Input Power (W), 4' rail length (1219mm)	49.2	49.2	49.2	49.2
Watts per foot (305mm)	12.4	12.4	12.4	12.4
CRI	85	85	85	85

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\_RR\_HO\_35\_2.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L071704216 (SOURCE REPORT FOR REFERENCE)  
 [TESTLAB] REPORT BASED ON DATA PRODUCED BY NVLAP ACCREDITED LAB  
 [ISSUEDATE] 11/1/2017  
 [MANUFAC] Vode Lighting  
 [LUMCAT] 107-RR-48-Z-HO-35-2  
 [LUMINAIRE] RaceRail LED, 48", 3500K, 80 CRI, zipper board,  
 [MORE] round diffuse lens, high output  
 [TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5913
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	49.22
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.08 ft
Luminous Width (90-270)	3.83 ft
Luminous Height	0.02 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	54321	55723	59327
55	44640	47508	50427
65	34789	38799	41392
75	27149	31723	33220
85	23958	28992	26506

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>	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50
<b>5</b>	2139.75	2142.00	2139.75	2139.75	2139.75	2139.75	2139.75	2139.75	2139.75	2139.75
<b>10</b>	2115.00	2115.00	2115.00	2115.00	2115.00	2112.75	2112.75	2112.75	2110.50	2110.50
<b>15</b>	2072.25	2072.25	2072.25	2070.00	2070.00	2067.75	2065.50	2063.25	2061.00	2058.75
<b>20</b>	2007.00	2007.00	2007.00	2004.75	2002.50	2000.25	1998.00	1993.50	1991.25	1986.75
<b>25</b>	1923.75	1921.50	1921.50	1919.25	1917.00	1912.50	1908.00	1903.50	1899.00	1892.25
<b>30</b>	1815.75	1815.75	1813.50	1811.25	1809.00	1804.50	1800.00	1793.25	1784.25	1777.50
<b>35</b>	1687.50	1687.50	1685.25	1683.00	1678.50	1674.00	1669.50	1660.50	1651.50	1642.50
<b>40</b>	1539.00	1539.00	1536.75	1534.50	1532.25	1527.75	1521.00	1512.00	1503.00	1491.75
<b>45</b>	1368.00	1368.00	1368.00	1365.75	1365.75	1361.25	1356.75	1350.00	1338.75	1325.25
<b>50</b>	1181.25	1181.25	1181.25	1183.50	1183.50	1181.25	1179.00	1174.50	1165.50	1152.00
<b>55</b>	990.00	990.00	992.25	994.50	996.75	999.00	999.00	994.50	987.75	976.50
<b>60</b>	807.75	807.75	810.00	814.50	819.00	821.25	823.50	821.25	816.75	805.50
<b>65</b>	643.50	643.50	645.75	650.25	654.75	659.25	663.75	663.75	657.00	648.00
<b>70</b>	501.75	504.00	506.25	510.75	515.25	519.75	522.00	522.00	519.75	510.75
<b>75</b>	387.00	389.25	391.50	393.75	398.25	402.75	405.00	405.00	400.50	391.50
<b>80</b>	301.50	301.50	303.75	306.00	308.25	310.50	312.75	310.50	306.00	297.00
<b>85</b>	229.50	231.75	231.75	234.00	234.00	236.25	236.25	234.00	229.50	220.50
<b>90</b>	177.75	177.75	177.75	177.75	180.00	177.75	177.75	173.25	168.75	159.75
<b>95</b>	137.25	135.00	137.25	137.25	135.00	135.00	132.75	128.25	121.50	112.50
<b>100</b>	105.75	105.75	105.75	103.50	103.50	101.25	99.00	94.50	87.75	78.75
<b>105</b>	81.00	81.00	81.00	78.75	78.75	76.50	72.00	67.50	63.00	54.00
<b>110</b>	63.00	60.75	60.75	60.75	58.50	56.25	51.75	49.50	42.75	38.25
<b>115</b>	47.25	47.25	45.00	45.00	42.75	40.50	38.25	33.75	29.25	24.75
<b>120</b>	33.75	33.75	33.75	33.75	31.50	29.25	27.00	22.50	20.25	15.75
<b>125</b>	24.75	24.75	24.75	22.50	22.50	20.25	18.00	15.75	11.25	9.00
<b>130</b>	18.00	18.00	15.75	15.75	13.50	13.50	11.25	9.00	6.75	4.50
<b>135</b>	11.25	11.25	9.00	9.00	9.00	6.75	6.75	4.50	4.50	4.50
<b>140</b>	6.75	6.75	6.75	6.75	6.75	0.00	0.00	0.00	0.00	0.00
<b>145</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>150</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>155</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>160</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>165</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>170</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>175</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>180</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles  
 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>
<b>0</b>	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50	2146.50
<b>5</b>	2139.75	2139.75	2139.75	2139.75	2139.75	2137.50	2137.50	2137.50	2137.50
<b>10</b>	2108.25	2108.25	2108.25	2106.00	2106.00	2106.00	2106.00	2103.75	2103.75
<b>15</b>	2056.50	2054.25	2052.00	2049.75	2049.75	2047.50	2047.50	2045.25	2045.25
<b>20</b>	1982.25	1977.75	1973.25	1971.00	1966.50	1964.25	1962.00	1959.75	1959.75
<b>25</b>	1887.75	1881.00	1874.25	1867.50	1863.00	1856.25	1854.00	1851.75	1851.75
<b>30</b>	1768.50	1759.50	1750.50	1741.50	1732.50	1725.75	1721.25	1716.75	1716.75
<b>35</b>	1631.25	1617.75	1606.50	1593.00	1581.75	1572.75	1566.00	1561.50	1559.25
<b>40</b>	1476.00	1462.50	1446.75	1431.00	1417.50	1404.00	1395.00	1388.25	1386.00
<b>45</b>	1309.50	1291.50	1273.50	1253.25	1237.50	1221.75	1210.50	1203.75	1201.50
<b>50</b>	1134.00	1116.00	1093.50	1073.25	1055.25	1037.25	1023.75	1017.00	1014.75
<b>55</b>	960.75	940.50	918.00	893.25	873.00	855.00	841.50	834.75	830.25
<b>60</b>	789.75	771.75	749.25	726.75	704.25	686.25	670.50	663.75	659.25

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	634.50	616.50	594.00	571.50	549.00	528.75	515.25	506.25	504.00
<b>70</b>	497.25	479.25	459.00	434.25	414.00	393.75	378.00	369.00	366.75
<b>75</b>	380.25	362.25	342.00	319.50	297.00	276.75	261.00	252.00	249.75
<b>80</b>	285.75	267.75	247.50	225.00	202.50	182.25	164.25	155.25	150.75
<b>85</b>	207.00	191.25	171.00	150.75	128.25	105.75	87.75	74.25	69.75
<b>90</b>	146.25	132.75	114.75	94.50	74.25	54.00	36.00	20.25	6.75
<b>95</b>	101.25	87.75	74.25	56.25	40.50	24.75	11.25	2.25	0.00
<b>100</b>	69.75	58.50	45.00	33.75	20.25	11.25	2.25	0.00	0.00
<b>105</b>	47.25	38.25	27.00	18.00	9.00	4.50	0.00	0.00	0.00
<b>110</b>	31.50	22.50	15.75	9.00	4.50	2.25	0.00	0.00	0.00
<b>115</b>	20.25	13.50	9.00	4.50	2.25	0.00	0.00	0.00	0.00
<b>120</b>	11.25	6.75	4.50	2.25	0.00	0.00	0.00	0.00	0.00
<b>125</b>	6.75	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>130</b>	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>135</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>140</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>145</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>150</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>155</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>160</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>165</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>170</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>175</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>180</b>	0.00	0.00	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	783.85	N.A.	13.30
0-30	1653.64	N.A.	28.00
0-40	2673.71	N.A.	45.20
0-60	4524.09	N.A.	76.50
0-80	5514.00	N.A.	93.20
0-90	5722.31	N.A.	96.80
10-90	5519.05	N.A.	93.30
20-40	1889.87	N.A.	32.00
20-50	2895.62	N.A.	49.00
40-70	2459.28	N.A.	41.60
60-80	989.91	N.A.	16.70
70-80	381.01	N.A.	6.40
80-90	208.31	N.A.	3.50
90-110	153.68	N.A.	2.60
90-120	177.54	N.A.	3.00
90-130	187.52	N.A.	3.20
90-150	191.00	N.A.	3.20
90-180	191.00	N.A.	3.20
110-180	37.32	N.A.	0.60
0-180	5913.31	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	203.26
10-20	580.59
20-30	869.79
30-40	1020.07
40-50	1005.76
50-60	844.62
60-70	608.90
70-80	381.01
80-90	208.31
90-100	102.99
100-110	50.70
110-120	23.86
120-130	9.97
130-140	3.20
140-150	0.28
150-160	0.00
160-170	0.00
170-180	0.00

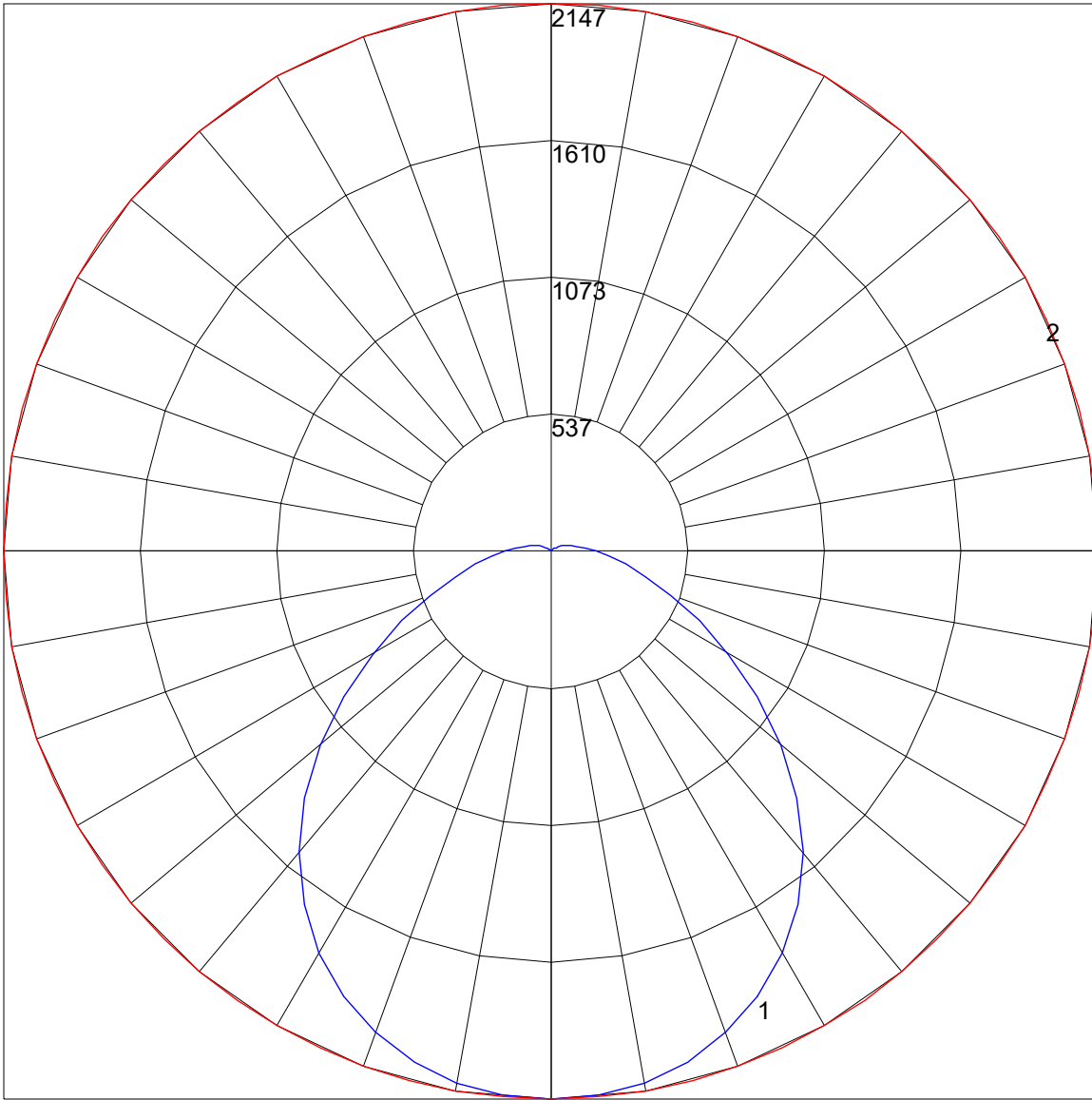
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97	97
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	80	80
2	98	90	83	77	95	88	81	76	83	78	74	80	75	72	76	73	69	67	67
3	90	79	71	64	87	77	70	64	74	67	62	71	65	61	68	63	59	57	57
4	82	70	62	55	80	69	61	54	66	59	53	63	57	52	61	55	51	49	49
5	76	63	54	47	73	62	53	47	59	52	46	57	50	45	55	49	45	43	43
6	70	57	48	42	68	56	47	41	54	46	41	52	45	40	50	44	39	37	37
7	65	52	43	37	63	51	42	37	49	41	36	47	41	36	45	40	35	33	33
8	61	47	39	33	59	46	38	33	45	38	32	43	37	32	42	36	32	30	30
9	57	43	35	30	55	43	35	30	41	34	29	40	34	29	39	33	29	27	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26	24	24

POLAR GRAPH



Maximum Candela = 2146.5 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.)