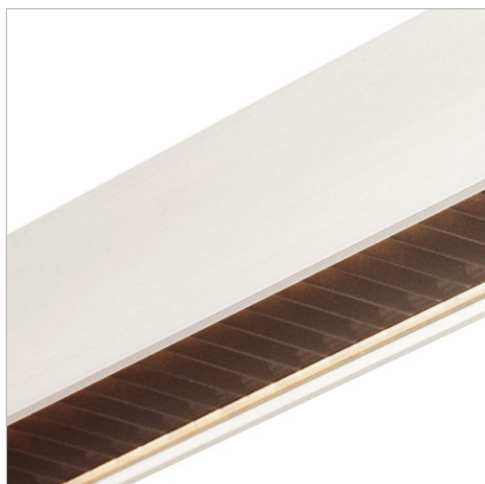


IES File

Performance Summary

The performance data in black text is confirmed through third party testing (see the following Light Laboratory report for details). The performance data in grey text is calculated by Vode. For reference only.



BoxRail LED - Zipper board™ with Black Baffle and Clear Lens, Low Output

BoxRail LED, 48", 3500K, Zipper board with black baffle and clear lens, low output
107-BX-X-4-48-X-X-X-X-X-Z-LO-35-BB-X-X-X

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	28	29	31	32
Total Lumens, 4' rail length (1219mm)	430	448	467	486
Lumens per foot (305mm)	107	112	117	121
Input Power (W), 4' rail length (1219mm)	15.5	15.5	15.5	15.5
Watts per foot (305mm)	3.9	3.9	3.9	3.9
CRI (>80min., 85 avg.)	-	-	-	-



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BOXRAIL_ZIPPER_LO_3500K_BLACKBAFFLE_032717.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] L031700405 (USED TO PREPARE REPORT FOR LOW OUTPUT RATING)

[TESTLAB] LIGHT LABORATORY, INC.

[ISSUEDATE] 3/23/2017 (ORIGINAL REPORT)

[MANUFAC] VODE LIGHTING

[LUMCAT] 107-BX-48-Z-LO-35-BB-AL

[LUMINAIRE] BOXRAIL LED, 48", 3500K, ZIPPER BOARD,

[MORE] BLACK BAFFLE WITH CLEAR LENS, LOW OUTPUT (350MA)

[LAMPPOSITION] 0,0

[LAMP CAT] N/A

[OTHER] DATA FROM ORIGINAL REPORT FACTORED FOR LOW OUTPUT RATING

[MORE] USING 0.50 LUMEN MULTIPLIER

[MORE] INPUT WATTAGE BASED ON 107 SERIES LUMINAIRE LO TEST (L031700402)

[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	467
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	30
Total Luminaire Watts	15.46
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.86
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.08 ft
Luminous Width (90-270)	3.85 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8024	1753	617
55	487	517	274
65	537	248	124
75	607	270	67
85	801	401	0

IES INDOOR REPORT

PHOTOMETRIC FILENAME : BOXRAIL_ZIPPER_LO_3500K_BLACKBAFFLE_032717.IES

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>
0.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0
1.0	515.0	515.0	515.0	515.0	515.0	515.0	515.0	514.5	514.5	514.5
3.0	514.5	514.5	514.5	514.5	514.0	514.0	513.5	513.5	513.0	512.5
5.0	513.5	513.5	513.0	512.0	510.5	508.5	506.5	504.0	501.5	499.0
7.0	512.5	512.0	510.0	507.5	503.5	499.0	493.5	487.5	481.5	475.5
9.0	511.0	510.0	506.5	501.0	493.5	485.0	475.5	466.5	457.5	450.0
11.0	508.5	507.0	501.5	492.5	481.5	468.5	456.5	444.5	434.5	426.0
13.0	505.5	503.0	495.0	482.5	467.0	451.5	437.0	425.0	415.0	407.5
15.0	501.5	498.0	486.5	470.0	451.0	433.5	419.5	408.0	399.0	391.5
17.0	496.0	491.5	476.5	456.0	435.0	417.0	403.5	393.5	384.5	376.0
19.5	489.0	482.5	463.0	438.5	416.0	398.5	386.5	375.0	364.5	352.0
22.5	479.5	470.5	445.5	417.0	394.5	378.5	365.5	351.0	332.5	310.0
25.5	469.0	457.5	427.0	396.0	375.5	359.0	342.5	318.0	288.0	261.5
29.0	454.0	439.0	402.5	373.0	353.0	333.5	304.5	269.0	239.0	219.0
33.0	435.0	415.0	374.0	347.0	325.5	293.5	252.5	220.5	198.5	177.0
37.5	409.0	385.5	342.5	316.5	285.5	238.0	204.0	173.0	144.5	105.0
42.5	316.5	302.0	287.0	272.5	225.0	185.5	156.5	110.5	70.0	47.0
47.5	8.5	9.0	9.0	10.0	11.5	22.5	52.0	46.5	31.0	24.0
55.0	8.0	7.5	7.0	6.5	6.0	5.5	5.5	5.5	7.0	8.5
65.0	6.5	6.5	6.0	5.5	4.5	4.0	3.5	3.0	3.0	3.0
75.0	4.5	4.0	4.0	3.5	3.5	3.0	2.5	2.5	2.0	2.0
85.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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>
0.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0	511.0
1.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0
3.0	512.0	511.5	511.5	511.0	510.5	510.5	510.5	510.5	510.5
5.0	496.5	494.0	491.5	489.5	487.5	486.5	485.5	485.0	484.5
7.0	470.0	465.5	461.0	457.5	454.5	452.0	450.5	449.5	449.0
9.0	442.5	436.5	431.5	427.5	424.5	422.0	420.5	419.5	419.5
11.0	419.5	414.0	409.5	405.5	403.0	401.0	399.5	398.5	398.0
13.0	401.0	396.0	391.0	387.0	384.0	381.5	379.5	378.5	378.0
15.0	385.0	378.5	373.0	367.0	362.5	358.0	354.5	352.5	351.5
17.0	367.5	358.5	349.0	339.5	331.0	323.5	318.0	314.5	313.5
19.5	337.0	321.5	306.0	292.0	280.5	272.5	266.5	263.5	262.5
22.5	287.0	267.5	252.5	241.5	233.5	227.5	223.0	221.0	220.0
25.5	240.5	226.5	215.0	205.5	197.0	189.5	183.5	180.0	178.5
29.0	202.5	187.0	170.5	152.0	135.5	121.5	112.0	106.5	104.5
33.0	149.5	119.0	94.0	76.5	65.0	56.5	50.5	47.5	46.5
37.5	74.5	55.0	41.5	32.0	27.0	24.5	23.5	22.5	22.5
42.5	32.5	25.5	22.5	20.0	18.5	17.0	16.0	15.5	15.0
47.5	20.5	18.0	15.5	14.0	12.5	11.5	10.5	10.0	10.0
55.0	9.0	9.0	8.0	7.0	6.0	5.5	5.0	4.5	4.5
65.0	2.5	2.5	2.5	2.5	2.5	2.0	2.0	1.5	1.5
75.0	1.5	1.5	1.5	1.0	1.0	1.0	0.5	0.5	0.5
85.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

IES INDOOR REPORT

PHOTOMETRIC FILENAME : BOXRAIL_ZIPPER_LO_3500K_BLACKBAFFLE_032717.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	152.16	N.A.	32.60
0-30	279.48	N.A.	59.80
0-40	378.20	N.A.	81.00
0-60	457.38	N.A.	97.90
0-80	464.95	N.A.	99.60
0-90	467.02	N.A.	100.00
10-90	429.37	N.A.	91.90
20-40	226.04	N.A.	48.40
20-50	297.09	N.A.	63.60
40-70	83.92	N.A.	18.00
60-80	7.58	N.A.	1.60
70-80	2.83	N.A.	0.60
80-90	2.06	N.A.	0.40
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	467.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	37.65
10-20	114.51
20-30	127.32
30-40	98.72
40-50	71.05
50-60	8.13
60-70	4.75
70-80	2.83
80-90	2.06
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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : BOXRAIL_ZIPPER_LO_3500K_BLACKBAFFLE_032717.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

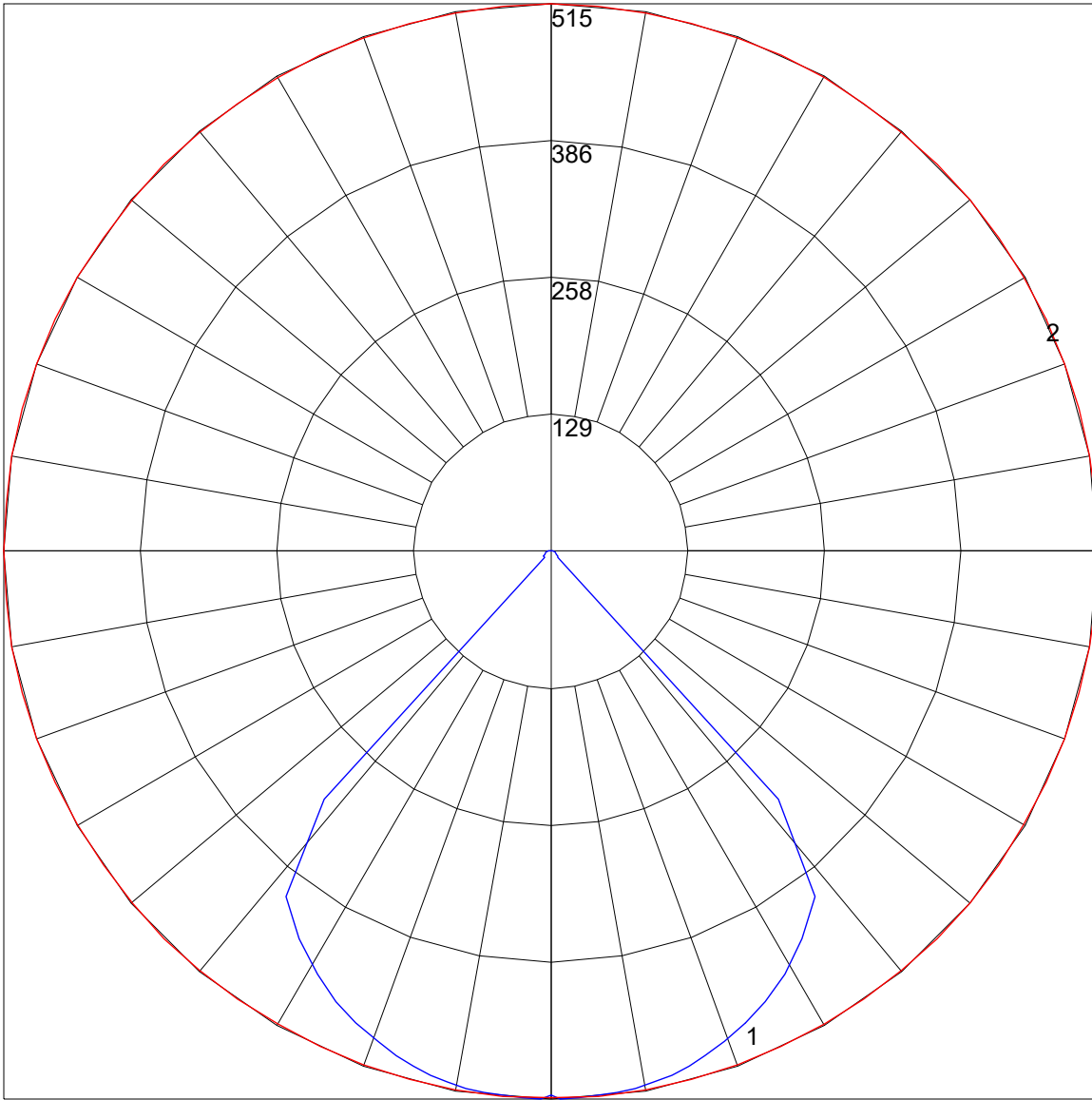
Effective Floor Cavity Reflectance 0.20

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	107	104	110	108	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77
4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	75	72	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	67	74	70	67	65
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60
7	80	70	63	58	78	69	63	58	67	62	58	66	61	58	65	61	57	56
8	75	65	58	54	74	64	58	54	63	58	54	62	57	53	61	57	53	52
9	71	61	55	50	70	60	54	50	59	54	50	58	53	50	58	53	50	48
10	68	57	51	47	67	57	51	47	56	50	47	55	50	46	54	50	46	45

IES INDOOR REPORT

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POLAR GRAPH



Maximum Candela = 515 Located At Horizontal Angle = 0, Vertical Angle = 1

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)