

IES INDOOR REPORT
PHOTOMETRIC FILENAME : BEERAIL-T21588.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995
[TEST] 21588
[MANUFAC]VODE LIGHTING - RAIL MOUNT LUMINAIRE - BEE RAIL
[LUMCAT]100-BHS-48-AL
[LUMINAIRE]WITH DIFFUSE SUPPORT AND NO LENS
[LAMP]ONE PHILIPS 54 WATT T5 LAMP
[LAMPCAT]F54T5/841HO. LUMEN RATING = 4500 LMS.
[OTHER]ONE ADVANCE ICN-2S54 BALLAST OPERATING AT 120 VAC AND 63 WATTS

CHARACTERISTICS

Total Rated Lamp Lumens	4500
Total Luminaire Efficiency	93.1 %
CIE Type	General Diffuse
Spacing Criteria (0-180)	N.A.
Spacing Criteria (90-270)	N.A.
Spacing Criteria (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.77 ft
Luminous Width (90-270)	0.07 ft
Luminous Height	0.05 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	32054	16153	10737
55	39868	14817	8324
65	53253	13483	5709
75	82240	12294	2891
85	211406	15460	551

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CANDELA TABULATION

	<u>0</u>	<u>22.5</u>	<u>45</u>	<u>67.5</u>	<u>90</u>	<u>112.5</u>	<u>135</u>	<u>157.5</u>	<u>180</u>	<u>202.5</u>
0	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5	511.8	511.4	514.1	512.4	513.6	512.4	514.1	511.4	507.9	511.4
5	513.2	511.3	513.3	511.2	511.8	511.2	513.3	511.3	505.3	511.3
7.5	515.5	511	512.2	508.8	508.8	508.8	512.2	511	505.2	511
10	518.6	511.3	510.4	505	504.3	505	510.4	511.3	504.6	511.3
12.5	520.5	511.5	508.3	500.2	498.4	500.2	508.3	511.5	504.3	511.5
15	524	511.9	505.5	494.1	491.4	494.1	505.5	511.9	504.5	511.9
17.5	526.4	511.4	502	487.3	483.2	487.3	502	511.4	503.6	511.4
20	529.2	511.1	497.5	479.4	473.6	479.4	497.5	511.1	503.4	511.1
22.5	531.7	510.3	493.9	470.5	462.8	470.5	493.9	510.3	503.9	510.3
25	536.1	511.2	489.2	460.8	450.8	460.8	489.2	511.2	503.6	511.2
27.5	540.1	510.6	483.8	449.9	437.8	449.9	483.8	510.6	502.6	510.6
30	543.4	509.6	478	438.5	423.6	438.5	478	509.6	498.8	509.6
32.5	546.8	506.6	471.8	426.1	408.4	426.1	471.8	506.6	489	506.6
35	550.3	501.1	465.4	413.2	392.1	413.2	465.4	501.1	475.1	501.1
37.5	553.8	493.8	457.7	399.7	375	399.7	457.7	493.8	457.8	493.8
40	557.5	484.9	448.8	385.6	357.2	385.6	448.8	484.9	438.1	484.9
42.5	560.6	474.7	437.3	370.6	338.7	370.6	437.3	474.7	415.8	474.7
45	563.6	463.3	424.5	355.2	319.4	355.2	424.5	463.3	392.1	463.3
47.5	566.3	451	410.9	340.1	299.5	340.1	410.9	451	366.9	451
50	568.5	438	396.2	324.5	279	324.5	396.2	438	341.2	438
52.5	570.5	424.3	379.1	307.9	258	307.9	379.1	424.3	314.5	424.3
55	571.8	408.5	361.8	291.2	236.7	291.2	361.8	408.5	287.4	408.5
57.5	566.1	393.1	346.4	273.4	215.1	273.4	346.4	393.1	260	393.1
60	569.1	381.1	329.2	254.7	193.4	254.7	329.2	381.1	232.3	381.1
62.5	570.1	366.2	311.6	235.2	171.5	235.2	311.6	366.2	205.1	366.2
65	568	351.3	294.1	215.1	149.9	215.1	294.1	351.3	178.3	351.3
67.5	564.9	336	276.6	194.7	128.4	194.7	276.6	336	152.6	336
70	560.6	321.7	259.4	174.5	107.1	174.5	259.4	321.7	133	321.7
72.5	555	311.4	242.7	154.6	86.7	154.6	242.7	311.4	124.6	311.4
75	548.2	305.9	228	136	67.3	136	228	305.9	126.3	305.9
77.5	541	305.9	218.6	118.2	49.8	118.2	218.6	305.9	138.5	305.9
80	534.2	311.7	215.2	101.9	34.2	101.9	215.2	311.7	161.2	311.7
82.5	527.6	322	218.6	90.3	21.3	90.3	218.6	322	191.9	322
85	520.7	335.2	227.5	86.8	10.8	86.8	227.5	335.2	227.1	335.2
87.5	514.3	349	239.4	91.1	3	91.1	239.4	349	263.2	349
90	503.2	330	228	87.9	0	87.9	228	330	232	330
92.5	498	307.6	212.3	82.5	2.8	82.5	212.3	307.6	187.2	307.6
95	497.8	305	211.1	88.8	9.6	88.8	211.1	305	180.5	305
97.5	497.7	305.2	217.3	101.7	19.1	101.7	217.3	305.2	178.2	305.2
100	497.6	313.6	229.8	117.9	31.2	117.9	229.8	313.6	192.4	313.6
102.5	497.8	326.4	243.9	135.4	45.8	135.4	243.9	326.4	216	326.4
105	497.8	339.7	259.6	153.4	62.6	153.4	259.6	339.7	240.1	339.7
107.5	498.4	353.5	276.9	171.4	81.3	171.4	276.9	353.5	265.1	353.5
110	501	368.2	294.7	188.9	101.2	188.9	294.7	368.2	290.2	368.2
112.5	505.4	384.1	312.7	205.1	121.9	205.1	312.7	384.1	314.4	384.1
115	511.7	399.8	330.1	220.4	143	220.4	330.1	399.8	339	399.8
117.5	518.3	415.4	347.5	235.6	164.4	235.6	347.5	415.4	362.5	415.4
120	525.1	431.1	363.4	251.1	185.9	251.1	363.4	431.1	384.5	431.1
122.5	531.7	445.5	377.8	266.8	207.2	266.8	377.8	445.5	406.3	445.5
125	538.1	459.3	390.3	282.7	228.4	282.7	390.3	459.3	426.1	459.3
127.5	542.7	471.3	400.2	298.5	249.2	298.5	400.2	471.3	444.8	471.3
130	545.9	480.8	408.1	314	269.7	314	408.1	480.8	462	480.8
132.5	547.8	488	415	329.7	289.7	329.7	415	488	475.6	488

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135	548.5	492.2	422.1	344.5	309.2	344.5	422.1	492.2	484.9	492.2
137.5	547.8	494.2	428.8	359.4	328.1	359.4	428.8	494.2	489.5	494.2
140	545.3	494.2	435.6	373.7	346.2	373.7	435.6	494.2	490.6	494.2
142.5	542.4	495.4	441.9	387.3	363.6	387.3	441.9	495.4	490.2	495.4
145	539.2	495.6	447.9	400.4	380.2	400.4	447.9	495.6	490	495.6
147.5	536	495.9	454	412.9	395.9	412.9	454	495.9	489.3	495.9
150	532.5	495.9	459.6	424.5	410.5	424.5	459.6	495.9	488.9	495.9
152.5	528.8	495.5	464.5	435.6	424.6	435.6	464.5	495.5	488.8	495.5
155	525.1	495.8	469.4	445.6	437.5	445.6	469.4	495.8	488.2	495.8
157.5	521.1	495.8	473.9	454.7	449.4	454.7	473.9	495.8	488.1	495.8
160	517.6	495.5	477.9	463.2	460.3	463.2	477.9	495.5	488	495.5
162.5	513.9	495.1	481.7	470.8	469.8	470.8	481.7	495.1	488.2	495.1
165	510.6	495.3	484.7	477.3	478.1	477.3	484.7	495.3	488.7	495.3
167.5	507.8	494.8	487.3	482.7	485.2	482.7	487.3	494.8	488.6	494.8
170	505	494.8	489.8	487.4	490.8	487.4	489.8	494.8	489.5	494.8
172.5	501.9	494.7	491.5	491.1	495.3	491.1	491.5	494.7	490.6	494.7
175	498.9	494.3	492.9	493.7	498.5	493.7	492.9	494.3	491.3	494.3
177.5	497	494.2	493.7	495.2	500.8	495.2	493.7	494.2	492.8	494.2
180	496	496	496	496	496	496	496	496	496	496

Vert. Horizontal Angles

	225	247.5	270	292.5	315	337.5	360
0	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5	514.1	512.4	513.6	512.4	514.1	511.4	511.8
5	513.3	511.2	511.8	511.2	513.3	511.3	513.2
7.5	512.2	508.8	508.8	508.8	512.2	511	515.5
10	510.4	505	504.3	505	510.4	511.3	518.6
12.5	508.3	500.2	498.4	500.2	508.3	511.5	520.5
15	505.5	494.1	491.4	494.1	505.5	511.9	524
17.5	502	487.3	483.2	487.3	502	511.4	526.4
20	497.5	479.4	473.6	479.4	497.5	511.1	529.2
22.5	493.9	470.5	462.8	470.5	493.9	510.3	531.7
25	489.2	460.8	450.8	460.8	489.2	511.2	536.1
27.5	483.8	449.9	437.8	449.9	483.8	510.6	540.1
30	478	438.5	423.6	438.5	478	509.6	543.4
32.5	471.8	426.1	408.4	426.1	471.8	506.6	546.8
35	465.4	413.2	392.1	413.2	465.4	501.1	550.3
37.5	457.7	399.7	375	399.7	457.7	493.8	553.8
40	448.8	385.6	357.2	385.6	448.8	484.9	557.5
42.5	437.3	370.6	338.7	370.6	437.3	474.7	560.6
45	424.5	355.2	319.4	355.2	424.5	463.3	563.6
47.5	410.9	340.1	299.5	340.1	410.9	451	566.3
50	396.2	324.5	279	324.5	396.2	438	568.5
52.5	379.1	307.9	258	307.9	379.1	424.3	570.5
55	361.8	291.2	236.7	291.2	361.8	408.5	571.8
57.5	346.4	273.4	215.1	273.4	346.4	393.1	566.1
60	329.2	254.7	193.4	254.7	329.2	381.1	569.1
62.5	311.6	235.2	171.5	235.2	311.6	366.2	570.1
65	294.1	215.1	149.9	215.1	294.1	351.3	568
67.5	276.6	194.7	128.4	194.7	276.6	336	564.9
70	259.4	174.5	107.1	174.5	259.4	321.7	560.6
72.5	242.7	154.6	86.7	154.6	242.7	311.4	555
75	228	136	67.3	136	228	305.9	548.2
77.5	218.6	118.2	49.8	118.2	218.6	305.9	541
80	215.2	101.9	34.2	101.9	215.2	311.7	534.2

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82.5	218.6	90.3	21.3	90.3	218.6	322	527.6
85	227.5	86.8	10.8	86.8	227.5	335.2	520.7
87.5	239.4	91.1	3	91.1	239.4	349	514.3
90	228	87.9	0	87.9	228	330	503.2
92.5	212.3	82.5	2.8	82.5	212.3	307.6	498
95	211.1	88.8	9.6	88.8	211.1	305	497.8
97.5	217.3	101.7	19.1	101.7	217.3	305.2	497.7
100	229.8	117.9	31.2	117.9	229.8	313.6	497.6
102.5	243.9	135.4	45.8	135.4	243.9	326.4	497.8
105	259.6	153.4	62.6	153.4	259.6	339.7	497.8
107.5	276.9	171.4	81.3	171.4	276.9	353.5	498.4
110	294.7	188.9	101.2	188.9	294.7	368.2	501
112.5	312.7	205.1	121.9	205.1	312.7	384.1	505.4
115	330.1	220.4	143	220.4	330.1	399.8	511.7
117.5	347.5	235.6	164.4	235.6	347.5	415.4	518.3
120	363.4	251.1	185.9	251.1	363.4	431.1	525.1
122.5	377.8	266.8	207.2	266.8	377.8	445.5	531.7
125	390.3	282.7	228.4	282.7	390.3	459.3	538.1
127.5	400.2	298.5	249.2	298.5	400.2	471.3	542.7
130	408.1	314	269.7	314	408.1	480.8	545.9
132.5	415	329.7	289.7	329.7	415	488	547.8
135	422.1	344.5	309.2	344.5	422.1	492.2	548.5
137.5	428.8	359.4	328.1	359.4	428.8	494.2	547.8
140	435.6	373.7	346.2	373.7	435.6	494.2	545.3
142.5	441.9	387.3	363.6	387.3	441.9	495.4	542.4
145	447.9	400.4	380.2	400.4	447.9	495.6	539.2
147.5	454	412.9	395.9	412.9	454	495.9	536
150	459.6	424.5	410.5	424.5	459.6	495.9	532.5
152.5	464.5	435.6	424.6	435.6	464.5	495.5	528.8
155	469.4	445.6	437.5	445.6	469.4	495.8	525.1
157.5	473.9	454.7	449.4	454.7	473.9	495.8	521.1
160	477.9	463.2	460.3	463.2	477.9	495.5	517.6
162.5	481.7	470.8	469.8	470.8	481.7	495.1	513.9
165	484.7	477.3	478.1	477.3	484.7	495.3	510.6
167.5	487.3	482.7	485.2	482.7	487.3	494.8	507.8
170	489.8	487.4	490.8	487.4	489.8	494.8	505
172.5	491.5	491.1	495.3	491.1	491.5	494.7	501.9
175	492.9	493.7	498.5	493.7	492.9	494.3	498.9
177.5	493.7	495.2	500.8	495.2	493.7	494.2	497
180	496	496	496	496	496	496	496

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	415.82	9.2	9.9
0-40	702.52	15.6	16.8
0-60	1331.55	29.6	31.8
0-90	2072.32	46.1	49.5
90-120	780.33	17.3	18.6
90-130	1112.64	24.7	26.6
90-150	1716.12	38.1	26.6
90-180	2118.3	47.1	50.5
0-180	4190.62	93.1	100

Total Luminaire Efficiency = 93.1%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	48.74
10-20	142.4
20-30	224.67
30-40	286.7
40-50	316.89
50-60	312.15
60-70	277.97
70-80	233.42
80-90	229.37
90-100	217.97
100-110	256.54
110-120	305.82
120-130	332.31
130-140	322.64
140-150	280.84
150-160	217.46
160-170	137.63
170-180	47.11

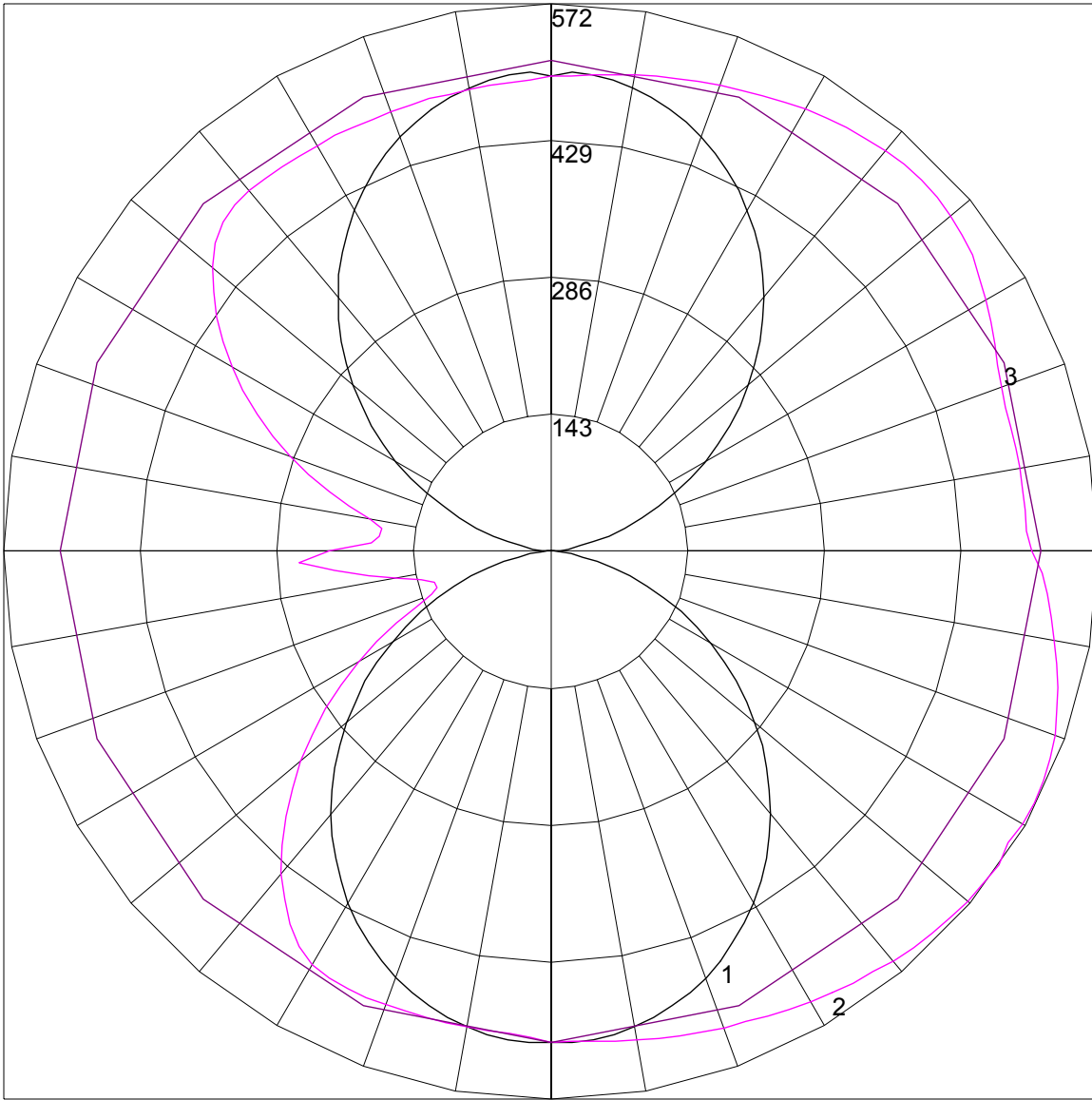
IES INDOOR REPORT
PHOTOMETRIC FILENAME : BEERAIL-T21588.IES

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	100	100	100	100	92	92	92	92	77	77	77	64	64	64	52	52	52	46	0
1	89	84	79	75	81	77	73	70	65	62	59	53	51	49	42	41	39	34	0
2	80	72	66	60	73	66	61	56	55	51	47	45	42	39	36	34	32	27	0
3	73	63	55	49	66	58	51	46	48	43	39	40	36	32	31	29	26	22	0
4	66	55	47	41	60	51	44	38	43	37	33	35	31	27	28	25	22	19	0
5	61	49	41	35	55	45	38	32	38	32	28	31	27	23	25	22	19	16	0
6	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	16	14	0
7	51	39	31	26	47	36	29	24	31	25	21	25	21	18	20	17	14	12	0
8	48	36	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11	0
9	44	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9	0
10	41	30	23	18	38	27	21	17	23	18	15	20	15	12	16	13	10	8	0

POLAR GRAPH



Maximum Candela = 571.8 Located At Horizontal Angle = 0, Vertical Angle = 55
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Horizontal Cone Through Vertical Angle (0)