



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MR16LED\_6-24V\_5W.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995

[ISSUE DATE] 9/19/2019

[MANUFAC] BeLuce Canada Inc.

[LAMP] MR16LED Lamp 6-24V 5W

[MORE] BeLuce REMOTE HEAD CAT

[MORE] LUMEN RATING = 466.18 LMS

[OTHER] EVERFINE GO-2000A\_V1 SYSTEM

[OTHER]	Gamma(deg)	Fz(lm)	Ft(lm)	%Lum	%Lamp
[OTHER]	0- 10	67.22	67.22	14.42	14.42
[OTHER]	10- 20	130.03	197.26	42.31	42.31
[OTHER]	20- 30	105.34	302.60	64.91	64.91
[OTHER]	30- 40	68.38	370.98	79.58	79.58
[OTHER]	40- 50	40.10	411.07	88.18	88.18
[OTHER]	50- 60	23.72	434.80	93.27	93.27
[OTHER]	60- 70	16.01	450.80	96.70	96.70
[OTHER]	70- 80	9.63	460.43	98.77	98.77
[OTHER]	80- 90	2.85	463.28	99.38	99.38
[OTHER]	90-100	0.13	463.41	99.41	99.41
[OTHER]	100-110	0.00	463.41	99.41	99.41
[OTHER]	110-120	0.01	463.42	99.41	99.41
[OTHER]	120-130	0.14	463.56	99.44	99.44
[OTHER]	130-140	0.42	463.99	99.53	99.53
[OTHER]	140-150	0.69	464.67	99.68	99.68
[OTHER]	150-160	0.75	465.42	99.84	99.84
[OTHER]	160-170	0.56	465.98	99.96	99.96
[OTHER]	170-180	0.20	466.18	100.00	100.00
[OTHER]					

### CHARACTERISTICS

Lumens Per Lamp	466.18 (1 lamp)
Total Lamp Lumens	466.18
Luminaire Lumens	465
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	4.72303
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.68
Spacing Criterion (Diagonal)	0.62
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.16 m
Luminous Width (90-270)	0.21 m
Luminous Height	0.00 m

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2475	2811	2904
55	1502	1619	1705
65	1180	1263	1382
75	1111	1410	1577
85	933	1496	1738

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**CANDELA TABULATION**

	<u>0</u>	<u>30</u>	<u>60</u>	<u>90</u>	<u>120</u>	<u>150</u>	<u>180</u>	<u>210</u>	<u>240</u>	<u>270</u>
<b>0</b>	776.504	776.504	776.504	776.504	776.504	776.504	776.504	776.504	776.504	776.504
<b>5</b>	768.676	769.682	752.321	808.501	774.420	722.938	688.373	662.721	648.913	723.392
<b>10</b>	680.171	698.569	683.043	722.139	660.708	592.832	542.248	511.325	499.402	565.936
<b>15</b>	536.967	557.754	545.505	570.032	507.575	436.975	392.737	361.331	356.258	402.005
<b>20</b>	379.847	404.413	390.250	405.262	357.807	303.759	270.497	245.901	240.966	269.185
<b>25</b>	264.013	280.624	271.425	281.315	250.432	210.251	184.095	167.820	164.197	179.604
<b>30</b>	183.306	195.238	193.057	200.045	175.903	144.793	123.395	114.818	109.577	120.907
<b>35</b>	124.727	137.015	137.005	140.657	122.516	99.065	82.790	76.631	72.910	82.257
<b>40</b>	84.981	95.245	96.124	98.137	84.418	67.254	55.203	51.798	47.899	54.591
<b>45</b>	58.825	66.583	67.047	69.031	58.638	45.550	37.210	35.779	33.074	37.881
<b>50</b>	40.911	45.984	46.981	48.620	41.207	32.561	26.965	25.445	23.935	27.873
<b>55</b>	28.968	30.933	31.515	32.877	29.215	24.547	20.658	19.582	18.931	21.260
<b>60</b>	21.675	22.188	22.681	24.112	22.050	19.967	16.779	15.575	15.822	17.411
<b>65</b>	16.769	17.796	18.092	19.631	17.549	16.582	13.818	12.288	12.831	14.065
<b>70</b>	13.344	14.993	15.318	16.513	14.025	12.999	10.186	8.952	9.327	10.393
<b>75</b>	9.663	11.874	12.663	13.719	10.018	8.834	6.524	5.804	5.971	6.751
<b>80</b>	5.902	7.857	8.686	9.436	6.149	4.698	3.435	2.912	2.862	3.553
<b>85</b>	2.734	4.076	4.688	5.093	3.227	2.221	0.918	0.642	0.622	0.888
<b>90</b>	0.721	1.816	1.846	1.885	1.036	0.000	0.000	0.000	0.000	0.000
<b>95</b>	0.000	0.000	0.118	0.227	0.000	0.000	0.000	0.000	0.000	0.000
<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>105</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>110</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>115</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000
<b>120</b>	0.020	0.000	0.000	0.000	0.000	0.049	0.010	0.118	0.049	0.109
<b>125</b>	0.148	0.020	0.089	0.079	0.049	0.158	0.148	0.257	0.178	0.296
<b>130</b>	0.286	0.168	0.237	0.207	0.188	0.345	0.326	0.454	0.355	0.513
<b>135</b>	0.493	0.355	0.424	0.405	0.405	0.553	0.543	0.681	0.602	0.770
<b>140</b>	0.760	0.602	0.661	0.642	0.642	0.819	0.819	0.957	0.859	1.086
<b>145</b>	1.046	0.888	0.948	0.928	0.908	1.096	1.086	1.224	1.135	1.392
<b>150</b>	1.342	1.175	1.244	1.214	1.184	1.372	1.362	1.480	1.382	1.668
<b>155</b>	1.619	1.441	1.510	1.480	1.451	1.619	1.569	1.688	1.569	1.895
<b>160</b>	1.836	1.668	1.727	1.737	1.668	1.826	1.767	1.865	1.737	2.053
<b>165</b>	1.994	1.846	1.895	1.925	1.856	1.974	1.895	1.974	1.865	2.152
<b>170</b>	2.112	1.954	1.994	2.092	1.994	2.083	1.974	2.033	1.895	2.191
<b>175</b>	2.122	2.023	2.053	2.181	2.073	2.162	2.023	2.092	1.944	2.231
<b>180</b>	2.132	2.132	2.132	2.132	2.132	2.132	2.132	2.132	2.132	2.132

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

	<u>300</u>	<u>330</u>	<u>360</u>
<b>0</b>	776.504	776.504	776.504
<b>5</b>	749.784	757.384	768.676
<b>10</b>	610.598	647.620	680.171
<b>15</b>	445.561	490.134	536.967
<b>20</b>	302.022	343.219	379.847
<b>25</b>	204.062	235.172	264.013
<b>30</b>	140.233	158.779	183.306
<b>35</b>	94.930	108.718	124.727
<b>40</b>	64.086	74.617	84.981
<b>45</b>	43.448	50.278	58.825
<b>50</b>	30.765	34.831	40.911
<b>55</b>	22.760	25.020	28.968
<b>60</b>	18.210	19.602	21.675

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	15.131	16.207	16.769
<b>70</b>	11.508	13.019	13.344
<b>75</b>	7.551	8.883	9.663
<b>80</b>	4.116	5.241	5.902
<b>85</b>	1.263	2.122	2.734
<b>90</b>	0.000	0.316	0.721
<b>95</b>	0.000	0.000	0.000
<b>100</b>	0.000	0.000	0.000
<b>105</b>	0.000	0.000	0.000
<b>110</b>	0.000	0.000	0.000
<b>115</b>	0.020	0.000	0.000
<b>120</b>	0.148	0.000	0.020
<b>125</b>	0.276	0.109	0.148
<b>130</b>	0.484	0.296	0.286
<b>135</b>	0.730	0.503	0.493
<b>140</b>	1.026	0.790	0.760
<b>145</b>	1.342	1.086	1.046
<b>150</b>	1.638	1.382	1.342
<b>155</b>	1.885	1.629	1.619
<b>160</b>	2.063	1.826	1.836
<b>165</b>	2.191	1.984	1.994
<b>170</b>	2.240	2.063	2.112
<b>175</b>	2.250	2.112	2.122
<b>180</b>	2.132	2.132	2.132

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	196.20	42.10	42.10
0-30	301.95	64.80	64.90
0-40	370.42	79.50	79.60
0-60	434.27	93.20	93.30
0-80	459.62	98.60	98.70
0-90	462.55	99.20	99.40
10-90	396.06	85.00	85.10
20-40	174.22	37.40	37.40
20-50	214.36	46.00	46.10
40-70	79.70	17.10	17.10
60-80	25.35	5.40	5.40
70-80	9.50	2.00	2.00
80-90	2.94	0.60	0.60
90-110	0.19	0.00	0.00
90-120	0.20	0.00	0.00
90-130	0.35	0.10	0.10
90-150	1.45	0.30	0.30
90-180	2.94	0.60	0.60
110-180	2.75	0.60	0.60
0-180	465.49	99.90	100.00

Total Luminaire Efficiency = 99.90%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	66.49
10-20	129.70
20-30	105.75
30-40	68.47
40-50	40.13
50-60	23.72
60-70	15.85
70-80	9.50
80-90	2.94
90-100	0.19
100-110	0.00
110-120	0.01
120-130	0.15
130-140	0.42
140-150	0.68
150-160	0.74
160-170	0.55
170-180	0.20

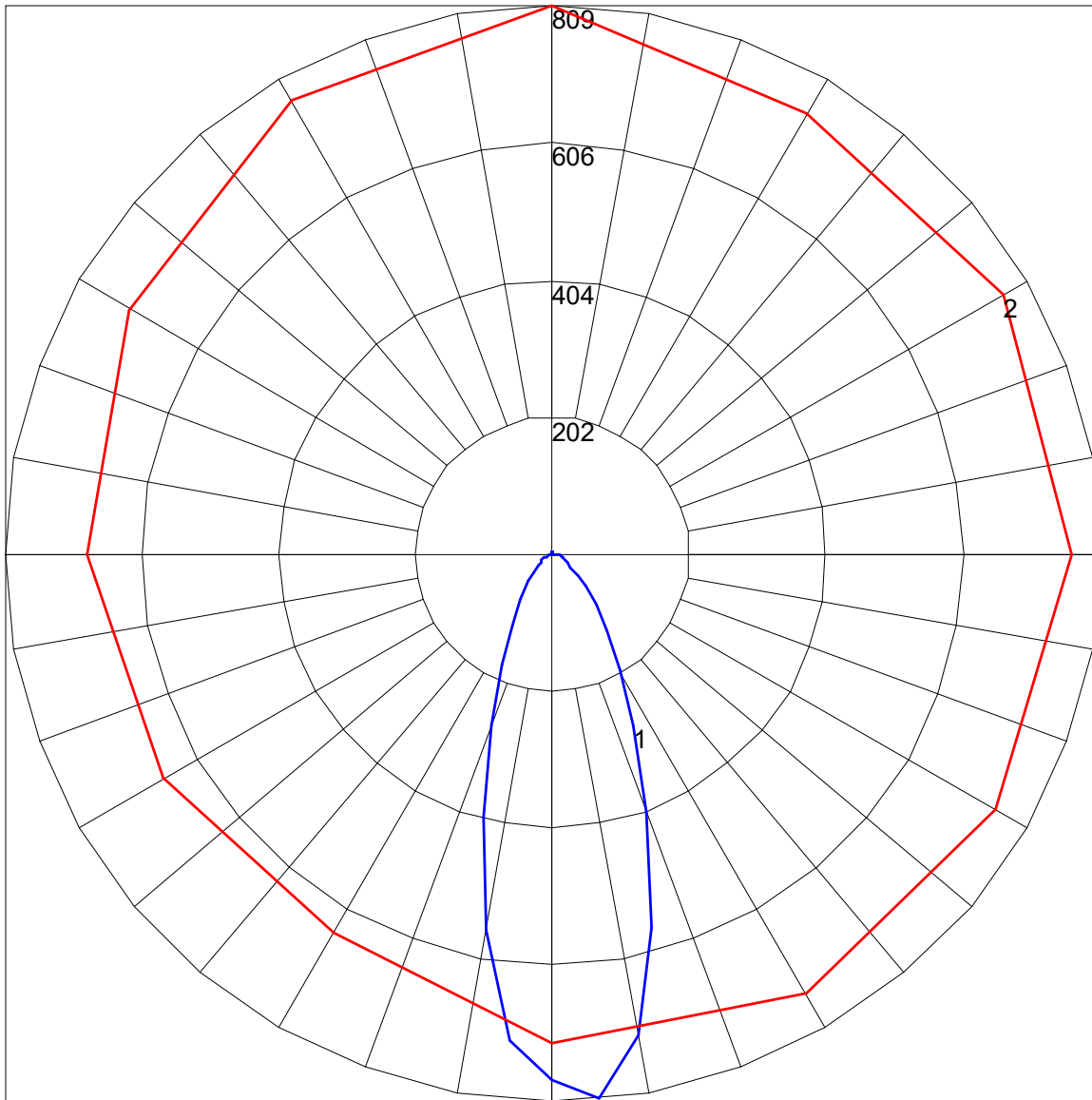
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	101	101	101	99
1	112	109	106	104	110	107	104	102	103	100	99	99	97	96	95	94	93	91
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78	76
4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	75	72	71
5	90	81	74	70	88	80	74	69	78	73	69	76	71	68	74	70	67	66
6	85	76	69	65	84	75	69	64	73	68	64	72	67	63	70	66	63	61
7	81	71	65	60	80	71	65	60	69	64	60	68	63	60	67	62	59	58
8	77	67	61	57	76	67	61	57	65	60	56	64	60	56	63	59	56	54
9	74	64	58	54	73	63	57	53	62	57	53	61	56	53	60	56	53	51
10	70	61	55	51	69	60	54	51	59	54	50	58	54	50	58	53	50	49

POLAR GRAPH



Maximum Candela = 808.501 Located At Horizontal Angle = 90, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)