



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MR16LED_12-24V_5W.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995

[ISSUE DATE] 3/29/2021

[MANUFAC] BeLuce Canada Inc.

[LAMP] MR16LED Lamp 12-24V 5W

[MORE] BeLuce REMOTE HEAD CAT

[MORE] LUMEN RATING = 570.75 LMS

[OTHER] EVERFINE GO-2000A_V1 SYSTEM

[OTHER] Gamma(deg)	Fz(lm)	Ft(lm)	%Lum	%Lamp
[OTHER] 0- 10	86.92	86.92	15.23	15.23
[OTHER] 10- 20	164.30	251.22	44.02	44.02
[OTHER] 20- 30	131.37	382.59	67.03	67.03
[OTHER] 30- 40	81.76	464.35	81.36	81.36
[OTHER] 40- 50	44.66	509.01	89.18	89.18
[OTHER] 50- 60	26.65	535.66	93.85	93.85
[OTHER] 60- 70	17.86	553.52	96.98	96.98
[OTHER] 70- 80	9.39	562.91	98.63	98.63
[OTHER] 80- 90	2.76	565.67	99.11	99.11
[OTHER] 90-100	0.13	565.80	99.13	99.13
[OTHER] 100-110	0.14	565.94	99.16	99.16
[OTHER] 110-120	0.26	566.19	99.20	99.20
[OTHER] 120-130	0.47	566.67	99.29	99.29
[OTHER] 130-140	0.79	567.46	99.42	99.42
[OTHER] 140-150	1.09	568.55	99.61	99.61
[OTHER] 150-160	1.11	569.66	99.81	99.81
[OTHER] 160-170	0.80	570.46	99.95	99.95
[OTHER] 170-180	0.29	570.75	100.00	100.00
[OTHER]				

CHARACTERISTICS

Lumens Per Lamp	570.75 (1 lamp)
Total Lamp Lumens	570.75
Luminaire Lumens	578
Total Luminaire Efficiency	101 %
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	4.70497
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.50
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	2356	2163	1902
55	1487	1386	1295
65	1161	1141	1109
75	909	878	754
85	768	691	454

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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>
0	1025.11	1025.11	1025.11	1025.11	1025.11	1025.11	1025.11	1025.11	1025.11	1025.11
5	975.84	940.03	932.38	913.38	916.04	935.37	963.16	1001.67	928.15	1041.88
10	826.29	764.64	774.48	709.78	708.06	738.06	781.33	844.16	758.94	926.16
15	610.99	544.76	574.05	502.10	501.96	537.33	577.59	639.24	563.98	709.70
20	418.87	368.81	393.83	338.20	344.13	369.89	402.23	452.69	396.87	506.89
25	285.28	248.44	269.22	228.77	235.39	251.62	279.75	312.46	275.91	347.20
30	189.95	167.49	183.17	156.73	158.88	171.80	193.25	220.39	192.28	240.28
35	125.23	111.53	123.26	103.47	106.95	114.96	130.11	148.54	128.44	160.63
40	83.66	72.79	81.03	67.34	69.81	75.99	86.37	97.08	84.35	105.57
45	56.01	49.18	53.63	45.22	47.47	51.94	57.75	64.99	56.67	69.42
50	38.98	34.56	36.74	32.59	33.76	37.63	40.50	44.46	39.36	47.54
55	28.67	25.92	27.52	24.96	26.40	28.65	30.11	32.02	29.56	34.46
60	21.89	20.04	21.54	20.35	21.80	22.62	24.16	25.12	23.77	26.49
65	16.49	15.23	17.18	15.76	16.81	17.44	20.12	20.81	19.78	20.99
70	11.92	10.81	12.66	10.93	11.72	12.33	14.95	17.04	14.64	15.96
75	7.91	7.00	8.28	6.56	7.22	7.78	9.77	11.08	9.96	11.07
80	4.72	4.00	4.76	3.46	3.71	4.11	6.12	7.04	5.72	6.77
85	2.25	1.76	2.29	1.33	1.52	1.73	2.46	3.31	2.48	3.63
90	0.08	0.08	0.06	0.07	0.06	0.05	0.09	0.90	0.08	1.50
95	0.10	0.08	0.08	0.09	0.06	0.07	0.08	0.08	0.06	0.06
100	0.13	0.08	0.12	0.12	0.08	0.11	0.08	0.10	0.10	0.12
105	0.18	0.11	0.18	0.18	0.09	0.15	0.08	0.12	0.11	0.11
110	0.24	0.20	0.22	0.24	0.14	0.20	0.11	0.16	0.11	0.11
115	0.31	0.31	0.31	0.31	0.23	0.28	0.20	0.23	0.21	0.20
120	0.44	0.43	0.44	0.44	0.34	0.40	0.29	0.32	0.31	0.31
125	0.61	0.60	0.61	0.62	0.52	0.57	0.44	0.45	0.46	0.44
130	0.84	0.84	0.84	0.86	0.76	0.80	0.64	0.64	0.61	0.61
135	1.14	1.18	1.13	1.14	1.06	1.08	0.91	0.90	0.89	0.88
140	1.50	1.55	1.50	1.52	1.43	1.43	1.26	1.21	1.22	1.23
145	1.89	1.94	1.89	1.87	1.81	1.79	1.60	1.56	1.56	1.61
150	2.27	2.31	2.26	2.22	2.14	2.14	1.96	1.94	1.95	2.04
155	2.58	2.59	2.58	2.51	2.42	2.43	2.29	2.27	2.24	2.37
160	2.81	2.80	2.79	2.75	2.66	2.68	2.52	2.54	2.51	2.66
165	2.97	2.93	2.94	2.90	2.80	2.84	2.70	2.74	2.67	2.85
170	3.06	3.03	3.03	3.00	2.91	2.95	2.83	2.87	2.80	2.99
175	3.07	3.03	3.03	3.07	2.97	3.02	2.91	2.98	2.88	3.06
180	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07

Vert. Angles **Horizontal Angles**

	<u>300</u>	<u>330</u>	<u>360</u>
0	1025.11	1025.11	1025.11
5	1037.42	1012.51	975.84
10	923.00	879.54	826.29
15	713.57	676.39	610.99
20	511.08	472.75	418.87
25	345.85	323.87	285.28
30	230.75	216.78	189.95
35	154.92	139.06	125.23
40	100.68	89.39	83.66
45	65.93	59.64	56.01
50	45.07	40.81	38.98
55	32.52	29.50	28.67
60	24.91	22.12	21.89

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CANDELA TABULATION - (Cont.)

65	19.03	16.71	16.49
70	14.18	12.40	11.92
75	9.69	8.60	7.91
80	6.15	5.39	4.72
85	3.38	2.82	2.25
90	1.30	0.90	0.08
95	0.09	0.08	0.10
100	0.11	0.09	0.13
105	0.14	0.11	0.18
110	0.18	0.13	0.24
115	0.26	0.21	0.31
120	0.37	0.34	0.44
125	0.51	0.47	0.61
130	0.71	0.69	0.84
135	0.99	0.96	1.14
140	1.33	1.31	1.50
145	1.71	1.69	1.89
150	2.11	2.09	2.27
155	2.47	2.44	2.58
160	2.74	2.69	2.81
165	2.94	2.87	2.97
170	3.06	3.00	3.06
175	3.10	3.04	3.07
180	3.07	3.07	3.07

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	253.38	44.40	43.80
0-30	387.00	67.80	67.00
0-40	470.08	82.40	81.40
0-60	542.49	95.00	93.90
0-80	569.85	99.80	98.60
0-90	572.69	100.30	99.10
10-90	485.59	85.10	84.00
20-40	216.71	38.00	37.50
20-50	262.18	45.90	45.40
40-70	90.29	15.80	15.60
60-80	27.36	4.80	4.70
70-80	9.48	1.70	1.60
80-90	2.84	0.50	0.50
90-110	0.33	0.10	0.10
90-120	0.59	0.10	0.10
90-130	1.07	0.20	0.20
90-150	2.96	0.50	0.50
90-180	5.16	0.90	0.90
110-180	4.83	0.80	0.80
0-180	577.85	101.20	100.00

Total Luminaire Efficiency = 101.20%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	87.10
10-20	166.27
20-30	133.62
30-40	83.09
40-50	45.47
50-60	26.94
60-70	17.88
70-80	9.48
80-90	2.84
90-100	0.19
100-110	0.14
110-120	0.26
120-130	0.48
130-140	0.80
140-150	1.09
150-160	1.11
160-170	0.80
170-180	0.29

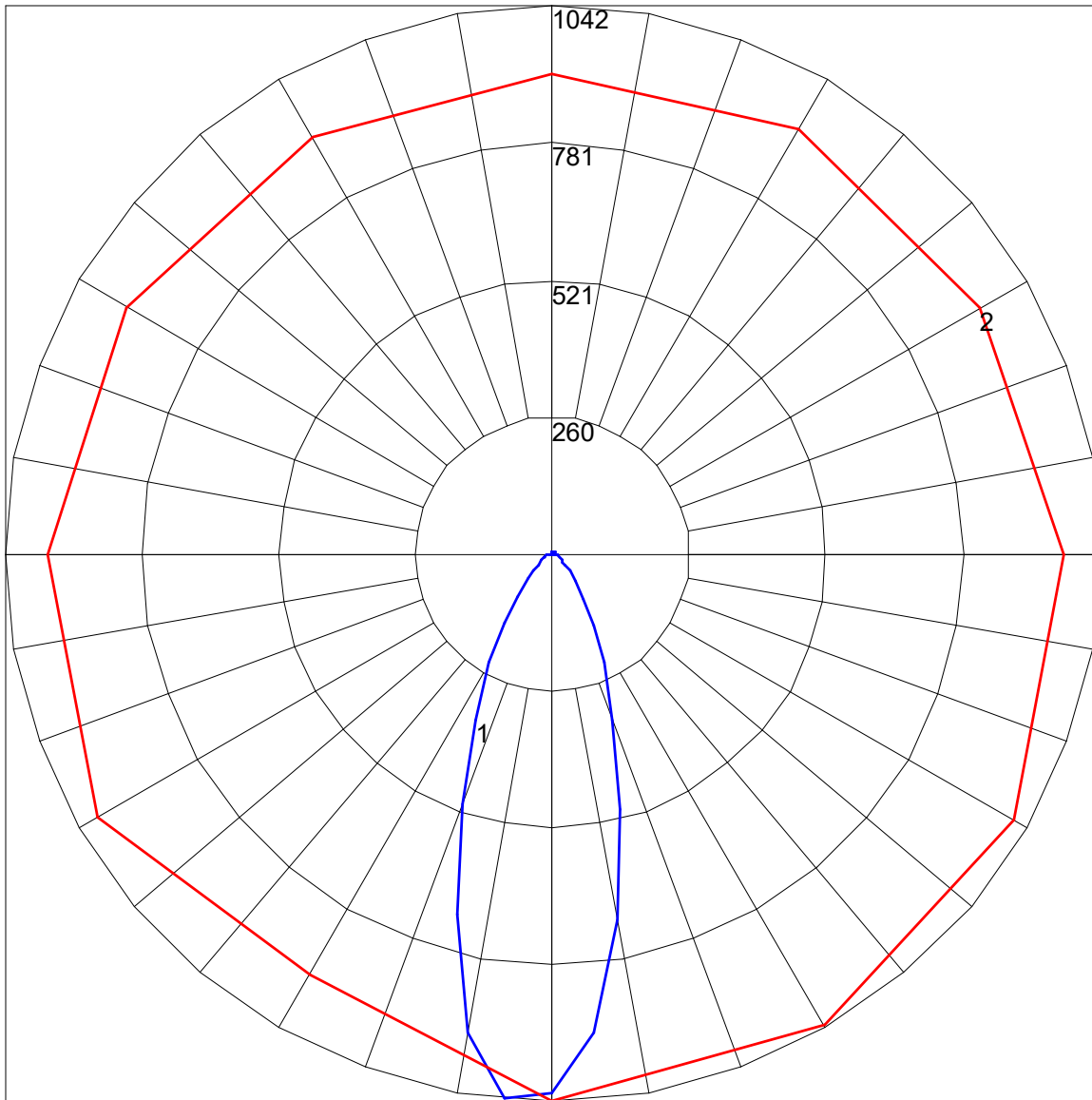
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	102	102	102	100
1	114	111	108	105	111	109	106	104	104	102	100	100	99	97	97	95	94	92
2	108	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85
3	102	95	89	85	100	93	88	84	91	86	83	88	84	81	86	83	80	78
4	97	88	82	78	95	87	82	77	85	80	76	83	79	75	81	77	74	73
5	92	83	77	72	90	82	76	72	80	75	71	78	74	70	76	72	69	68
6	87	78	71	67	86	77	71	67	75	70	66	74	69	66	72	68	65	64
7	83	73	67	63	82	73	67	62	71	66	62	70	65	62	69	64	61	60
8	79	69	63	59	78	69	63	59	68	62	59	66	62	58	65	61	58	56
9	76	66	60	56	75	65	60	56	64	59	55	63	59	55	62	58	55	53
10	72	63	57	53	71	62	57	53	61	56	53	60	56	52	60	55	52	51

POLAR GRAPH



Maximum Candela = 1041.88 Located At Horizontal Angle = 270, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)