



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BL716LEDHTHOASYWT40120-277_S.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] Photopia 2019.0.0 see: www.ltioptics.com/ies

[ISSUEDATE]

[TESTDATE] Mon Aug 05 11:16:25 2019

[TEST] 1

[MANUFAC] BEGHELLI

[LUMCAT]

[LUMINAIRE] BL716LEDHTHOASYWT40120-277

[LAMP] LED 0.3W White 2323 package (65mA)

[LAMPCAT] SPMWHT221MD5WAT0S0

[OTHER]

IESNA:LM-63-2002

[OTHER] Luminous shape: Rectangle

[OTHER] Luminous dimensions (feet)

[OTHER] 0 - 180 Axis: 4.2

[OTHER] 90 - 270 Axis: 0.6

[OTHER] Height: 0.1

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3952
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	40
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.40
Spacing Criterion (90-270)	1.40
Spacing Criterion (Diagonal)	1.52
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.53 ft
Luminous Width (90-270)	0.61 ft
Luminous Height	0.24 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10173	9503	34615
55	8427	8234	21537
65	4607	4609	9074
75	1915	1783	3120
85	522	387	507

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CANDELA TABULATION

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
0	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09
5	1104.19	1112.86	1113.88	1130.62	1155.66	1201.57	1233.39	1274.23	1349.24	1382.87
10	824.84	839.01	862.92	912.49	963.06	1034.09	1111.88	1195.02	1304.69	1408.64
15	589.27	602.77	637.64	688.06	767.50	864.42	986.07	1119.08	1269.62	1435.36
20	409.28	417.35	449.59	495.30	579.99	690.79	853.45	1031.92	1225.04	1459.32
25	300.72	310.64	327.01	364.23	436.00	538.60	700.53	905.34	1160.05	1433.85
30	280.91	286.81	291.95	304.37	346.04	422.57	560.22	774.23	1053.86	1376.68
35	296.66	297.58	299.20	300.77	313.85	356.13	456.90	653.50	947.90	1308.41
40	310.83	315.93	315.63	315.51	317.48	328.88	382.95	536.22	813.49	1198.01
45	312.76	315.86	318.40	326.90	323.04	319.45	336.10	440.11	673.69	1018.61
50	294.49	295.85	301.59	303.59	308.84	304.68	298.92	356.16	525.24	808.14
55	238.37	244.01	251.63	255.62	262.81	261.42	252.14	269.93	375.85	576.32
60	171.99	177.68	182.12	191.43	197.72	196.66	189.51	192.84	250.54	362.59
65	115.05	116.43	121.39	126.72	132.95	133.40	128.42	127.71	155.70	211.24
70	68.38	70.30	74.28	76.52	79.16	80.31	78.88	79.91	92.64	117.10
75	40.02	40.10	41.65	41.70	44.15	45.27	44.35	45.90	50.28	59.57
80	22.50	23.32	23.10	22.96	23.38	23.02	23.18	23.74	25.13	28.29
85	8.44	7.84	7.86	8.39	8.19	7.67	7.56	6.79	7.09	7.26
90	0.05	0.05	0.05	0.04	0.05	0.03	0.03	0.03	0.02	0.03
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.01
140	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
165	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles **Horizontal Angles**

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>
0	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09	1450.09
5	1431.89	1504.70	1534.54	1591.78	1620.04	1658.15	1668.26	1688.50	1699.42
10	1533.66	1619.20	1730.35	1813.06	1893.78	1968.61	2009.21	2029.19	2027.01
15	1608.04	1769.89	1926.94	2090.57	2204.89	2291.59	2362.14	2398.41	2413.64
20	1693.86	1923.51	2148.16	2355.50	2522.53	2635.19	2712.06	2723.70	2728.19
25	1721.26	2031.46	2321.72	2555.14	2738.07	2837.98	2888.11	2908.54	2890.15
30	1728.41	2087.05	2423.80	2667.81	2848.69	2918.42	2939.79	2943.05	2904.99
35	1706.54	2098.60	2444.41	2663.38	2810.21	2856.38	2845.87	2806.74	2777.89
40	1602.57	2001.64	2316.83	2503.83	2585.97	2595.83	2536.94	2479.17	2455.49
45	1406.56	1768.71	2028.73	2143.43	2166.82	2125.91	2052.74	1973.53	1951.49
50	1135.77	1426.10	1601.90	1666.10	1634.21	1576.01	1485.68	1425.44	1395.79
55	806.93	1005.45	1123.76	1140.48	1094.63	1023.25	960.80	904.25	882.53
60	504.23	623.27	688.53	685.02	643.16	590.69	542.80	503.52	489.01

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CANDELA TABULATION - (Cont.)

65	282.44	343.55	375.78	374.79	345.05	309.44	276.77	252.25	245.83
70	147.01	173.25	187.55	183.79	165.58	147.69	131.40	120.91	116.97
75	70.63	81.78	85.60	80.88	74.14	66.84	60.24	56.11	53.52
80	31.46	33.96	34.92	31.96	28.38	24.98	21.86	20.85	19.58
85	7.81	7.51	6.37	5.19	3.97	2.43	1.85	1.77	1.58
90	0.02	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.01
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	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	554.00	N.A.	14.00
0-30	1265.07	N.A.	32.00
0-40	2183.93	N.A.	55.30
0-60	3639.02	N.A.	92.10
0-80	3941.78	N.A.	99.70
0-90	3952.17	N.A.	100.00
10-90	3817.41	N.A.	96.60
20-40	1629.93	N.A.	41.20
20-50	2514.22	N.A.	63.60
40-70	1690.00	N.A.	42.80
60-80	302.76	N.A.	7.70
70-80	67.84	N.A.	1.70
80-90	10.39	N.A.	0.30
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3952.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	134.75
10-20	419.25
20-30	711.06
30-40	918.87
40-50	884.28
50-60	570.81
60-70	234.92
70-80	67.84
80-90	10.39
90-100	0.01
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

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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	102	102	102	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66
4	87	76	68	62	85	75	68	62	73	66	61	70	65	60	68	63	60	58
5	80	69	60	54	78	67	60	54	65	59	53	64	58	53	62	57	52	50
6	74	62	54	48	72	61	53	48	59	52	47	58	51	47	56	51	46	44
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	40	34	30	29

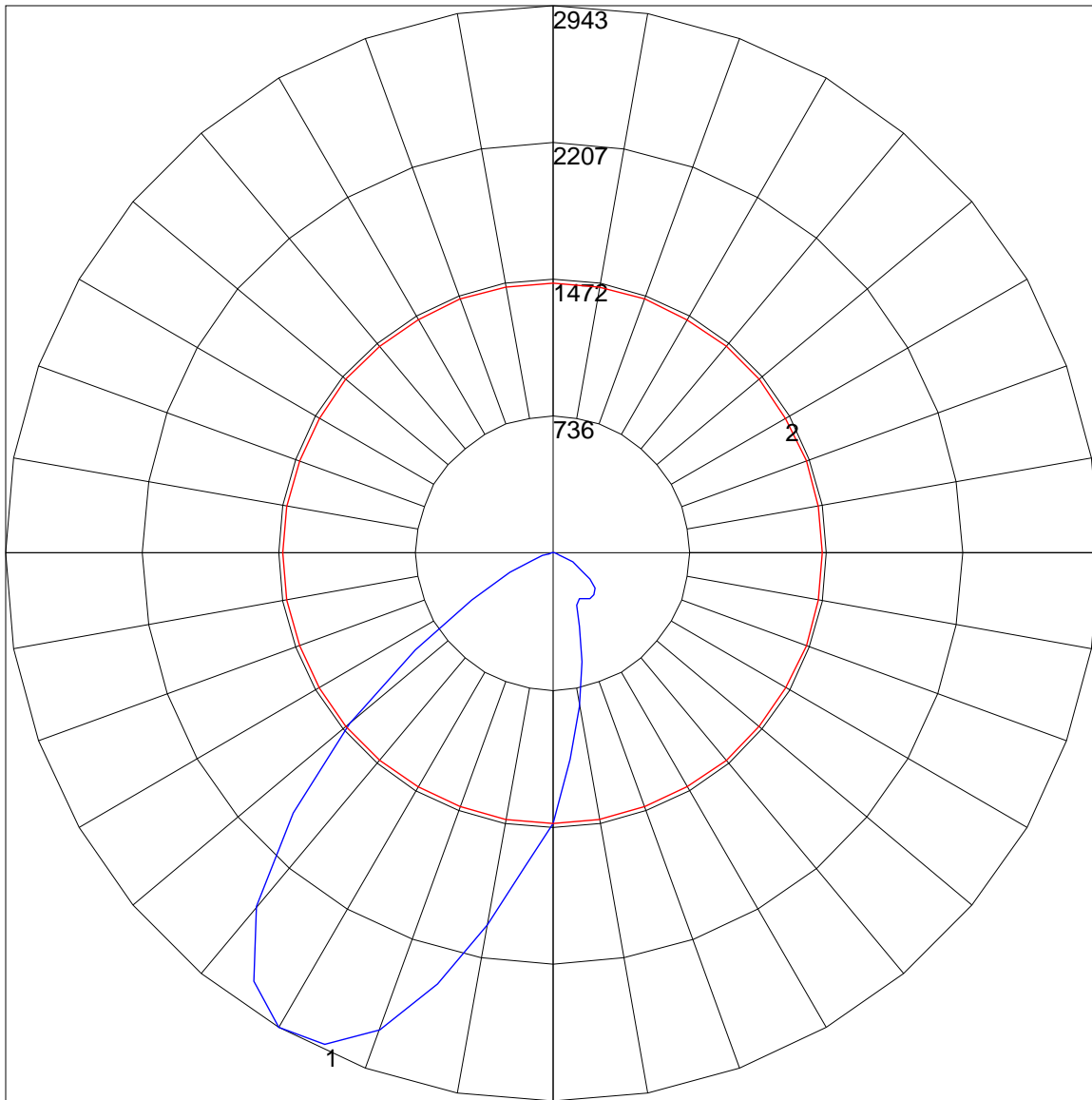
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UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.1	21.6	20.5	21.9	22.2	26.9	28.4	27.3	28.7	29.0
	3H	20.8	22.1	21.1	22.4	22.8	27.2	28.5	27.6	28.8	29.2
	4H	20.9	22.1	21.3	22.5	22.8	27.2	28.4	27.6	28.8	29.1
	6H	20.9	22.1	21.3	22.4	22.8	27.2	28.3	27.6	28.7	29.0
	8H	20.9	22.0	21.4	22.4	22.8	27.1	28.2	27.6	28.6	29.0
	12H	20.9	21.9	21.3	22.3	22.7	27.1	28.1	27.5	28.5	28.9
4H	2H	20.5	21.7	20.9	22.0	22.4	27.1	28.3	27.5	28.6	29.0
	3H	21.2	22.2	21.6	22.6	23.0	27.4	28.4	27.8	28.8	29.2
	4H	21.4	22.3	21.8	22.7	23.1	27.4	28.3	27.9	28.7	29.2
	6H	21.5	22.2	21.9	22.7	23.1	27.4	28.2	27.9	28.6	29.1
	8H	21.4	22.2	21.9	22.6	23.1	27.4	28.1	27.8	28.5	29.0
	12H	21.4	22.1	21.9	22.5	23.0	27.3	28.0	27.8	28.5	28.9
8H	4H	21.4	22.1	21.9	22.5	23.0	27.4	28.1	27.8	28.5	29.0
	6H	21.5	22.1	22.0	22.6	23.0	27.3	27.9	27.8	28.4	28.9
	8H	21.5	22.0	22.0	22.5	23.0	27.3	27.8	27.8	28.3	28.8
	12H	21.5	22.0	22.0	22.4	23.0	27.3	27.7	27.8	28.2	28.8
12H	4H	21.4	22.0	21.8	22.5	22.9	27.3	28.0	27.8	28.4	28.9
	6H	21.5	22.0	22.0	22.5	23.0	27.3	27.8	27.8	28.3	28.8
	8H	21.5	21.9	22.0	22.4	23.0	27.3	27.7	27.8	28.2	28.8

Maximum UGR = 29.2

POLAR GRAPH



Maximum Candela = 2943.05 Located At Horizontal Angle = 170, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (170 - 350) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0)