



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BL716LEDHTLOASYWT30120-277V_S.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

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

[ISSUEDATE]

[TESTDATE] Fri Aug 02 14:58:17 2019

[TEST] 1

[MANUFAC] BEGHELLI

[LUMCAT]

[LUMINAIRE] BL716LEDHTLOASYWT30120-277V

[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	1895
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.36
Spacing Criterion (90-270)	1.34
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	5106	4502	16260
55	4070	3957	9968
65	2111	2146	4296
75	938	826	1417
85	247	182	244

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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>
0.0	733.34	733.34	733.34	733.34	733.34	733.34	733.34	733.34	733.34	733.34
2.5	630.83	623.28	639.58	643.10	655.45	644.71	660.82	684.05	688.90	686.03
5.0	547.29	543.59	572.21	572.61	587.83	605.87	629.60	661.19	663.95	693.46
7.5	463.07	477.93	487.88	508.45	535.34	565.13	589.25	633.11	666.15	687.85
10.0	383.62	398.93	414.32	436.89	467.48	507.94	566.97	615.18	651.43	705.47
12.5	308.73	317.06	337.18	366.15	407.43	461.53	519.87	577.80	647.44	702.36
15.0	243.41	246.71	264.83	298.26	344.41	404.53	477.03	556.71	640.44	714.91
17.5	189.59	194.48	212.14	240.37	280.77	351.93	428.63	530.58	626.18	713.74
20.0	150.96	155.48	168.77	195.40	237.16	301.85	387.18	495.92	611.88	707.91
22.5	127.84	135.01	143.33	161.03	198.44	254.24	344.58	462.17	587.58	700.92
25.0	121.28	122.68	127.53	140.73	167.49	221.00	302.85	423.33	561.93	697.26
27.5	119.11	116.92	121.34	131.35	149.42	190.23	262.19	382.33	540.49	680.85
30.0	121.58	122.94	121.69	124.29	138.65	171.54	233.66	353.03	505.58	661.77
32.5	132.62	130.86	129.48	128.09	135.66	159.26	213.15	314.35	476.23	647.72
35.0	140.57	139.66	138.94	137.49	136.02	149.79	191.87	288.28	444.88	628.28
37.5	149.69	150.45	149.65	141.56	141.31	146.52	176.23	262.20	416.38	602.02
40.0	154.12	156.85	154.29	148.98	146.27	145.85	165.41	234.05	380.74	563.32
42.5	159.47	158.47	158.23	156.99	151.17	148.17	158.62	211.65	346.86	523.40
45.0	156.98	158.57	158.87	158.43	155.72	148.66	151.81	192.30	307.77	478.49
47.5	152.21	152.12	153.42	154.34	155.68	149.77	145.88	173.75	277.27	433.67
50.0	141.25	141.71	146.98	149.38	151.03	145.75	139.18	158.05	238.52	376.44
52.5	128.44	131.98	135.41	139.80	138.92	136.97	128.82	141.77	206.07	324.91
55.0	115.12	115.31	119.26	124.42	126.38	125.52	116.35	122.52	171.05	266.74
57.5	98.66	101.19	105.11	106.25	110.86	110.56	103.93	105.70	141.77	215.21
60.0	81.03	84.74	87.24	91.20	94.12	95.45	88.29	88.69	116.10	169.50
62.5	68.09	69.26	71.21	74.21	76.61	78.31	73.38	72.72	91.33	131.90
65.0	52.71	54.16	57.06	59.92	62.07	61.95	60.29	58.91	72.51	100.02
67.5	42.51	43.04	44.69	47.34	48.47	49.82	47.73	47.62	55.51	73.02
70.0	31.72	32.82	34.47	36.08	37.03	38.29	37.22	37.41	42.40	54.20
72.5	25.31	25.50	25.75	27.75	28.27	28.56	28.10	28.11	31.87	39.28
75.0	19.59	18.91	19.63	19.85	20.39	21.01	20.85	21.08	23.63	27.06
77.5	13.81	14.44	14.81	14.95	14.85	14.95	14.88	15.11	17.19	19.55
80.0	11.11	11.01	10.78	11.32	11.00	10.94	11.00	11.11	11.66	12.93
82.5	7.93	8.24	7.72	7.64	7.70	7.42	7.42	6.95	7.63	8.00
85.0	4.00	3.87	4.10	4.22	3.92	3.56	3.69	3.50	3.32	3.50
87.5	0.29	0.26	0.30	0.28	0.34	0.48	0.38	0.35	0.27	0.30
90.0	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
130.0	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
132.5	0.04	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00

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135.0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
145.0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
180.0	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>
0.0	733.34	733.34	733.34	733.34	733.34	733.34	733.34	733.34	733.34
2.5	700.32	710.98	732.34	744.69	751.13	739.88	739.72	728.39	758.79
5.0	700.53	725.64	732.97	765.52	763.00	771.04	775.88	791.38	783.68
7.5	708.54	749.67	775.25	786.93	808.00	828.62	835.15	835.99	843.10
10.0	731.31	771.83	801.43	835.28	865.78	887.53	897.16	910.41	896.49
12.5	754.83	792.35	846.47	881.06	919.65	948.67	967.94	984.47	998.18
15.0	776.58	826.29	879.08	930.76	975.12	1021.78	1053.25	1067.13	1079.95
17.5	781.71	854.34	929.85	998.37	1064.09	1117.70	1143.28	1176.08	1173.41
20.0	803.66	890.99	974.45	1055.03	1136.01	1201.72	1244.48	1259.81	1281.49
22.5	811.17	907.14	1014.68	1115.82	1207.96	1275.67	1319.06	1339.95	1331.78
25.0	812.95	930.41	1058.42	1173.90	1270.42	1343.31	1377.73	1385.82	1381.02
27.5	806.91	948.25	1078.06	1215.30	1319.59	1371.08	1395.22	1406.78	1400.85
30.0	808.38	952.14	1113.53	1257.78	1344.54	1399.40	1407.35	1402.17	1395.05
32.5	802.57	971.03	1125.59	1265.28	1348.51	1393.66	1392.82	1391.97	1379.30
35.0	792.48	974.37	1136.62	1271.51	1338.45	1369.03	1372.05	1358.53	1348.38
37.5	775.05	956.30	1125.62	1244.86	1307.09	1338.00	1329.82	1312.30	1308.44
40.0	747.67	928.80	1094.72	1199.50	1254.49	1271.33	1267.05	1248.66	1238.32
42.5	704.57	889.64	1041.95	1130.11	1177.22	1194.07	1188.26	1167.86	1159.55
45.0	652.42	829.51	968.95	1045.80	1086.84	1088.89	1075.70	1052.33	1054.03
47.5	593.22	761.62	882.87	942.65	973.81	973.13	956.88	927.69	914.38
50.0	529.36	672.88	781.01	835.59	848.92	838.89	815.78	790.67	780.77
52.5	455.87	578.50	670.80	708.51	709.67	693.73	667.94	639.88	625.68
55.0	377.76	477.46	555.75	576.49	574.53	555.72	520.80	491.62	480.14
57.5	300.65	388.50	439.81	458.03	448.47	423.70	389.50	366.37	353.26
60.0	237.52	298.24	338.46	351.50	339.98	309.49	280.89	260.99	255.65
62.5	178.65	227.16	257.81	260.89	248.81	223.36	197.96	183.61	178.90
65.0	132.94	165.56	188.81	189.71	174.71	153.38	137.19	126.24	120.50
67.5	97.02	119.85	132.78	132.21	119.66	107.65	95.83	88.15	85.74
70.0	68.86	84.16	92.92	90.69	82.68	72.90	66.66	60.75	58.87
72.5	49.22	56.43	63.09	60.52	55.15	49.68	45.30	41.64	40.81
75.0	33.46	38.36	42.25	39.68	37.32	33.78	30.71	29.77	29.08
77.5	23.33	25.98	27.01	25.07	23.68	22.01	19.98	19.15	17.60
80.0	14.64	16.26	16.71	16.09	14.30	12.63	11.34	11.13	10.58

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82.5	8.32	9.12	8.53	8.22	7.15	5.62	4.49	3.47	3.67
85.0	3.82	3.10	3.07	1.98	0.99	0.66	0.54	0.46	0.42
87.5	0.29	0.19	0.17	0.05	0.06	0.02	0.04	0.02	0.04
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	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	257.62	N.A.	13.60
0-30	586.79	N.A.	31.00
0-40	1022.69	N.A.	54.00
0-60	1745.44	N.A.	92.10
0-80	1890.27	N.A.	99.80
0-90	1894.75	N.A.	100.00
10-90	1829.92	N.A.	96.60
20-40	765.07	N.A.	40.40
20-50	1202.21	N.A.	63.40
40-70	835.68	N.A.	44.10
60-80	144.83	N.A.	7.60
70-80	31.90	N.A.	1.70
80-90	4.48	N.A.	0.20
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	1894.75	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	64.83
10-20	192.79
20-30	329.17
30-40	435.90
40-50	437.13
50-60	285.61
60-70	112.93
70-80	31.90
80-90	4.48
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

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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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	95	89	85	100	93	88	84	90	86	82	87	83	80	84	81	78	76
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	68	63	59	57
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	47	42	54	47	41	52	46	41	51	45	41	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	41	34	30	40	34	30	28

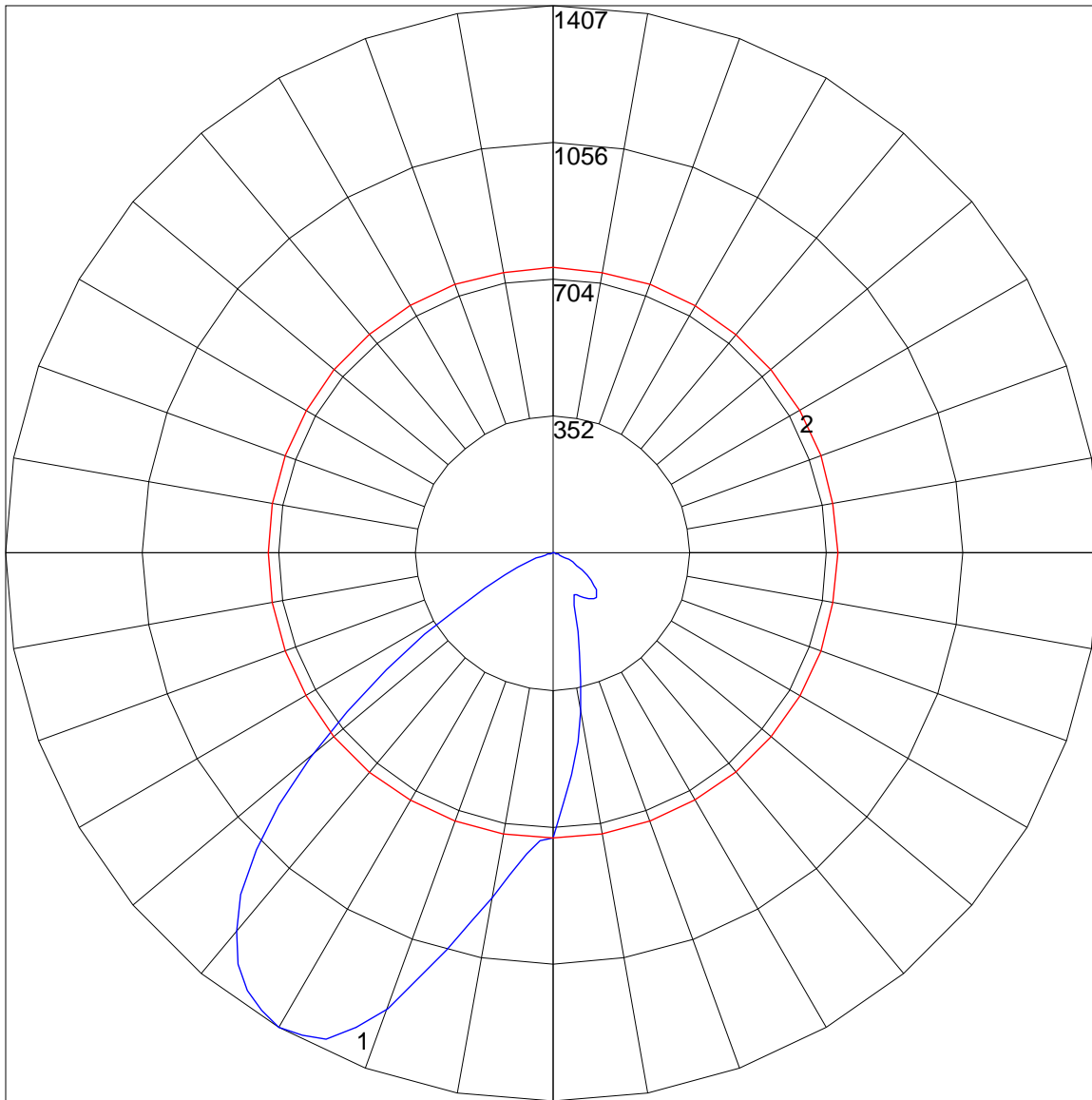
IES INDOOR REPORT
PHOTOMETRIC FILENAME : BL716LEDHTLOASYWT30120-277V_S.IES

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	14.9	16.4	15.3	16.7	17.0	21.7	23.2	22.1	23.5	23.8
	3H	15.5	16.8	15.9	17.2	17.5	22.0	23.3	22.3	23.6	24.0
	4H	15.6	16.9	16.0	17.2	17.6	22.0	23.2	22.4	23.6	23.9
	6H	15.7	16.8	16.1	17.2	17.6	21.9	23.1	22.3	23.4	23.8
	8H	15.7	16.8	16.1	17.2	17.6	21.9	23.0	22.3	23.4	23.8
	12H	15.7	16.7	16.1	17.1	17.5	21.9	22.9	22.3	23.3	23.7
4H	2H	15.2	16.5	15.6	16.8	17.2	21.9	23.1	22.3	23.5	23.8
	3H	15.9	17.0	16.4	17.4	17.8	22.2	23.2	22.6	23.6	24.0
	4H	16.1	17.0	16.5	17.4	17.9	22.2	23.1	22.7	23.6	24.0
	6H	16.2	17.0	16.7	17.4	17.9	22.2	23.0	22.7	23.4	23.9
	8H	16.2	16.9	16.7	17.4	17.8	22.2	22.9	22.7	23.4	23.8
	12H	16.2	16.8	16.7	17.3	17.8	22.1	22.8	22.6	23.3	23.7
8H	4H	16.1	16.8	16.6	17.3	17.8	22.2	22.9	22.6	23.3	23.8
	6H	16.2	16.8	16.7	17.3	17.8	22.1	22.7	22.6	23.2	23.7
	8H	16.2	16.8	16.7	17.3	17.8	22.1	22.6	22.6	23.2	23.6
	12H	16.2	16.7	16.7	17.2	17.8	22.1	22.6	22.6	23.0	23.6
12H	4H	16.1	16.7	16.6	17.2	17.7	22.1	22.8	22.6	23.3	23.7
	6H	16.2	16.7	16.7	17.2	17.7	22.1	22.6	22.6	23.1	23.6
	8H	16.2	16.7	16.7	17.2	17.8	22.1	22.6	22.6	23.0	23.6

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 1407.35 Located At Horizontal Angle = 160, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (160 - 340) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0)