



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : BS400LEDHTHOWT30120-277V\_S.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TESTLAB] Photopia 2017.2.1 see: [www.ltioptics.com/ies](http://www.ltioptics.com/ies)  
 [ISSUE DATE]  
 [TEST DATE] Mon Feb 05 10:57:10 2018  
 [TEST] 1  
 [MANUFAC] BEGHELLI  
 [LUMCAT]  
 [LUMINAIRE] BS400LEDHTHOWT30120-277V  
 [LAMP] LED 0.195W White 5630 package (65mA)  
 [LAMPCAT] SPMWHT541MP5WAT0S5  
 [OTHER]  
 IESNA:LM-63-2002  
 [TEST] 6,552  
 [TESTLAB] CSA Group  
 [ISSUE DATE] 7/24/2013 1:09:24 PM  
 [MANUFAC] Beghelli  
 [LUMINAIRE] BS100LEDDLC4HT50WWT41120-277V  
 [OTHER] Luminous shape: Rectangle  
 [OTHER] Luminous dimensions (feet)  
     0 - 180 Axis: 4.2  
     90 - 270 Axis: 0.6  
 [OTHER] Height: 0.1

### CHARACTERISTICS

Lumens Per Lamp	47.94 (192 lamps)
Total Lamp Lumens	9204.479
Luminaire Lumens	6880
Total Luminaire Efficiency	75 %
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	60
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.80
Spacing Criterion (90-270)	1.82
Spacing Criterion (Diagonal)	1.98
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	1.45 ft
Luminous Width (90-270)	1.45 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6599	6500	6637
55	7786	7128	7715
65	9400	8067	9391
75	10893	9111	10682
85	12068	9638	11888

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**CANDELA TABULATION**

	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>
<b>0.0</b>	890.29	890.29	890.29	890.29	890.29	890.29	890.29	890.29	890.29	890.29
<b>2.5</b>	896.54	889.37	887.62	891.49	891.23	889.82	856.10	907.90	900.38	898.65
<b>5.0</b>	877.30	908.72	901.99	910.04	897.12	893.86	900.42	892.67	890.89	892.69
<b>7.5</b>	911.11	907.93	914.94	920.48	908.97	909.98	910.12	922.56	921.08	903.20
<b>10.0</b>	936.76	930.48	935.20	918.36	934.74	920.84	918.65	939.64	927.26	930.36
<b>12.5</b>	948.84	937.68	948.78	959.15	936.89	946.70	959.40	950.28	945.45	958.17
<b>15.0</b>	966.97	967.89	978.87	978.73	978.21	975.60	974.86	977.95	973.72	978.80
<b>17.5</b>	1002.92	988.32	996.97	993.05	1007.92	997.00	996.18	1003.63	1010.89	1002.39
<b>20.0</b>	1022.05	1002.28	1016.82	1018.25	1018.72	1021.33	1020.32	1035.39	1036.75	1035.43
<b>22.5</b>	1024.62	1028.17	1025.01	1041.55	1037.47	1049.38	1048.71	1054.52	1063.55	1059.48
<b>25.0</b>	1033.73	1048.20	1051.06	1047.73	1053.68	1061.91	1076.66	1082.30	1094.73	1086.11
<b>27.5</b>	1042.88	1044.09	1055.13	1068.70	1066.83	1073.00	1093.34	1098.26	1100.65	1102.64
<b>30.0</b>	1049.86	1056.61	1065.35	1066.84	1077.68	1091.27	1107.03	1111.33	1111.33	1119.17
<b>32.5</b>	1059.94	1064.01	1074.55	1073.44	1086.53	1109.18	1122.11	1126.43	1123.40	1132.92
<b>35.0</b>	1064.99	1067.81	1076.21	1077.89	1095.44	1109.08	1124.43	1127.40	1129.60	1137.41
<b>37.5</b>	1062.53	1073.26	1084.23	1089.84	1097.02	1117.57	1124.34	1137.39	1140.76	1144.09
<b>40.0</b>	1079.96	1077.48	1082.60	1094.49	1106.14	1113.02	1128.82	1137.19	1141.83	1142.87
<b>42.5</b>	1082.88	1084.07	1096.23	1098.92	1109.50	1121.35	1127.69	1137.65	1138.21	1141.22
<b>45.0</b>	1088.35	1086.25	1096.77	1102.31	1108.94	1119.86	1123.96	1133.15	1140.36	1141.97
<b>47.5</b>	1089.37	1094.60	1094.08	1111.76	1118.48	1127.21	1124.72	1126.76	1126.23	1132.15
<b>50.0</b>	1104.48	1101.44	1101.06	1105.32	1114.39	1116.92	1128.81	1124.36	1121.16	1124.66
<b>52.5</b>	1106.35	1098.25	1101.73	1110.08	1113.61	1112.89	1116.25	1117.22	1110.16	1119.89
<b>55.0</b>	1111.95	1104.47	1106.01	1118.06	1118.90	1115.35	1109.93	1110.76	1105.08	1106.90
<b>57.5</b>	1107.93	1112.24	1112.07	1115.38	1121.42	1107.47	1107.30	1102.94	1100.61	1096.88
<b>60.0</b>	1103.86	1108.09	1111.46	1109.29	1110.30	1110.54	1094.92	1096.85	1090.82	1087.43
<b>62.5</b>	1108.08	1104.13	1103.04	1101.84	1100.05	1093.10	1086.00	1083.95	1074.44	1072.27
<b>65.0</b>	1093.68	1090.77	1092.56	1091.38	1086.73	1081.54	1071.17	1062.97	1061.99	1049.90
<b>67.5</b>	1061.92	1067.79	1069.01	1067.20	1061.98	1053.78	1048.86	1044.35	1035.54	1030.75
<b>70.0</b>	1040.25	1035.44	1033.47	1033.26	1029.84	1020.92	1013.54	1007.51	1010.66	1006.22
<b>72.5</b>	993.36	988.26	992.83	998.07	993.18	989.37	978.16	968.13	966.96	968.86
<b>75.0</b>	940.66	940.67	946.92	934.19	948.53	936.12	930.58	927.37	925.20	920.65
<b>77.5</b>	878.68	875.64	878.41	880.57	884.88	879.18	872.80	874.01	868.03	868.21
<b>80.0</b>	800.78	804.06	802.88	807.82	809.23	812.47	811.84	810.61	803.36	802.84
<b>82.5</b>	725.52	726.00	731.27	732.03	740.56	741.25	741.05	742.85	736.27	741.25
<b>85.0</b>	648.40	650.69	654.72	662.80	659.49	664.42	673.04	665.33	664.11	663.94
<b>87.5</b>	572.33	571.33	575.57	576.48	583.84	588.49	588.80	592.30	595.55	593.10
<b>90.0</b>	497.20	499.49	504.14	503.69	513.79	513.20	520.39	519.68	518.24	520.88
<b>92.5</b>	429.72	432.84	435.23	436.58	439.43	445.11	446.30	452.77	451.89	451.25
<b>95.0</b>	376.89	372.67	372.78	373.16	375.08	378.41	378.09	384.63	385.53	386.50
<b>97.5</b>	323.56	321.64	318.91	317.74	316.35	319.02	323.85	322.99	325.70	325.25
<b>100.0</b>	275.19	274.13	271.89	265.73	267.97	264.78	268.20	270.42	269.29	272.47
<b>102.5</b>	234.55	231.17	228.72	220.26	219.76	218.87	220.67	218.29	220.85	221.07
<b>105.0</b>	197.17	195.67	189.28	184.23	183.22	177.84	176.76	175.09	177.69	175.16
<b>107.5</b>	162.19	161.20	158.39	152.26	146.98	143.41	139.79	139.25	138.29	139.14
<b>110.0</b>	131.72	133.63	130.28	122.48	118.57	112.59	110.15	108.32	107.74	106.90
<b>112.5</b>	107.01	106.23	105.26	99.84	95.50	88.86	84.44	81.64	81.77	80.08
<b>115.0</b>	87.01	85.00	83.15	78.63	74.13	67.25	63.45	60.24	58.51	57.76
<b>117.5</b>	67.66	65.95	63.58	61.05	56.38	52.72	45.39	43.19	41.01	40.95
<b>120.0</b>	52.69	51.52	50.37	47.22	42.91	38.70	33.41	28.72	27.92	26.63
<b>122.5</b>	38.11	37.95	37.56	34.48	31.50	27.90	23.72	19.73	16.44	16.61
<b>125.0</b>	27.82	27.82	26.75	24.50	22.84	18.99	15.60	12.41	8.90	7.80
<b>127.5</b>	20.58	18.96	18.86	16.75	15.62	13.20	9.54	7.45	4.63	3.53
<b>130.0</b>	13.79	12.39	11.53	10.91	9.16	7.41	5.73	3.53	2.33	2.46
<b>132.5</b>	8.46	7.74	7.11	6.30	5.31	4.06	3.19	1.98	2.19	2.41

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**CANDELA TABULATION - (Cont.)**

135.0	4.26	4.34	3.59	2.91	2.32	2.14	1.96	1.81	1.96	1.96
137.5	1.95	2.01	2.02	1.68	2.12	2.00	2.03	1.99	2.05	1.73
140.0	1.71	1.56	1.64	1.70	1.67	1.62	1.75	1.85	1.79	1.67
142.5	1.48	1.31	1.55	1.55	1.86	1.76	1.66	1.39	1.33	1.43
145.0	1.44	1.36	1.49	1.33	1.39	1.47	1.19	1.40	1.36	1.71
147.5	1.22	1.21	0.99	1.22	1.26	1.25	1.40	1.38	1.27	1.24
150.0	1.04	1.00	1.01	1.10	0.98	1.09	1.06	1.04	0.88	0.95
152.5	1.06	0.99	0.72	1.04	0.83	0.94	0.90	0.92	1.02	0.82
155.0	0.64	0.55	0.58	0.64	0.91	0.61	0.88	0.68	0.79	0.95
157.5	0.78	0.65	0.41	0.91	0.70	0.79	0.63	0.69	0.64	0.52
160.0	0.42	0.43	0.53	0.39	0.50	0.51	0.45	0.48	0.53	0.47
162.5	0.54	0.28	0.38	0.42	0.22	0.34	0.34	0.48	0.33	0.26
165.0	0.29	0.20	0.19	0.19	0.37	0.33	0.28	0.39	0.28	0.20
167.5	0.11	0.21	0.16	0.09	0.23	0.17	0.22	0.15	0.17	0.28
170.0	0.06	0.07	0.09	0.10	0.15	0.10	0.09	0.16	0.18	0.08
172.5	0.10	0.00	0.17	0.07	0.06	0.08	0.00	0.12	0.04	0.02
175.0	0.13	0.03	0.07	0.00	0.05	0.22	0.07	0.05	0.10	0.00
177.5	0.27	0.00	0.00	0.14	0.00	0.15	0.08	0.00	0.00	0.00
180.0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

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

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	890.29	890.29	890.29	890.29	890.29	890.29	890.29	890.29	890.29
2.5	905.92	874.66	881.02	893.69	877.59	896.22	876.43	891.92	889.39
5.0	907.47	909.13	876.76	886.46	886.22	899.52	877.69	891.99	886.54
7.5	899.85	906.51	926.30	898.77	893.54	918.77	922.47	911.43	893.26
10.0	931.29	934.68	917.74	922.97	923.25	933.14	922.61	930.25	944.38
12.5	956.13	948.43	956.49	948.39	955.64	942.63	952.20	944.79	949.43
15.0	977.94	986.98	971.74	976.84	970.89	965.12	968.13	970.74	983.06
17.5	1004.90	990.61	1002.98	996.24	994.48	997.67	983.57	988.78	1000.33
20.0	1030.93	1034.73	1030.17	1019.97	1023.23	1021.68	1016.76	1007.74	1017.91
22.5	1066.15	1062.61	1049.95	1042.04	1038.30	1035.69	1024.14	1030.45	1027.05
25.0	1086.12	1091.71	1069.87	1071.30	1051.01	1045.54	1043.77	1039.37	1033.29
27.5	1102.63	1099.92	1083.78	1079.13	1070.41	1056.01	1050.21	1053.74	1040.39
30.0	1115.06	1118.03	1104.66	1092.43	1071.01	1069.65	1058.25	1063.32	1049.96
32.5	1128.26	1123.12	1121.76	1098.27	1091.59	1072.41	1063.59	1067.77	1065.88
35.0	1143.12	1133.84	1126.95	1107.78	1102.79	1084.34	1075.02	1068.73	1067.91
37.5	1139.05	1130.06	1122.71	1125.03	1104.23	1088.63	1075.63	1074.42	1076.29
40.0	1139.41	1139.96	1128.99	1116.62	1110.72	1095.04	1089.35	1081.50	1071.59
42.5	1140.28	1132.57	1127.07	1124.13	1112.28	1096.50	1090.97	1088.16	1091.40
45.0	1136.21	1135.04	1135.33	1123.93	1115.29	1108.72	1097.35	1088.91	1094.71
47.5	1130.06	1128.64	1123.54	1115.67	1117.82	1110.02	1099.69	1097.58	1102.81
50.0	1123.07	1128.42	1125.40	1124.11	1120.09	1114.77	1104.26	1097.72	1102.13
52.5	1119.39	1122.40	1111.68	1122.03	1116.53	1114.35	1114.69	1105.31	1111.69
55.0	1108.57	1113.17	1114.02	1118.29	1115.50	1111.38	1117.27	1111.89	1101.82
57.5	1102.25	1106.96	1108.50	1113.66	1116.38	1116.38	1113.76	1113.58	1113.13
60.0	1086.74	1095.40	1099.50	1102.51	1107.13	1113.53	1117.34	1111.75	1114.36
62.5	1075.19	1077.86	1087.19	1093.44	1097.20	1100.04	1103.79	1102.22	1100.00
65.0	1056.74	1059.47	1070.61	1081.18	1089.66	1086.31	1088.08	1091.98	1092.61
67.5	1033.33	1042.02	1046.63	1049.41	1057.25	1061.70	1063.67	1062.89	1063.44
70.0	1005.19	1011.25	1013.94	1020.41	1026.57	1031.50	1023.24	1025.99	1025.53
72.5	969.11	974.64	973.75	981.81	986.38	985.73	985.59	983.41	980.53
75.0	920.18	924.30	925.57	928.40	933.84	931.86	931.85	924.32	922.38
77.5	863.26	870.97	875.39	869.80	873.91	876.24	865.43	868.08	869.34
80.0	805.14	807.19	814.19	806.72	803.74	803.37	801.84	794.24	794.84

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**CANDELA TABULATION - (Cont.)**

82.5	739.56	735.70	736.53	735.60	733.29	734.52	726.28	721.04	713.69
85.0	663.71	664.23	663.31	655.99	656.60	653.54	643.25	641.02	638.72
87.5	592.06	594.80	587.11	586.59	580.70	572.63	572.81	572.09	570.11
90.0	525.13	521.02	518.41	514.06	511.07	504.83	499.21	503.21	498.75
92.5	450.42	449.73	447.33	442.24	440.87	436.85	431.91	433.16	431.99
95.0	388.37	385.81	381.43	375.41	373.13	374.52	370.95	374.01	377.91
97.5	325.38	324.23	319.75	319.89	316.25	317.14	317.49	322.06	321.63
100.0	271.88	268.98	267.05	266.68	265.54	269.33	270.85	272.63	271.41
102.5	219.82	222.27	220.35	219.97	221.94	223.33	226.81	230.62	235.50
105.0	174.90	175.13	176.77	181.06	180.99	183.78	191.64	193.62	195.18
107.5	140.57	140.04	140.09	143.47	147.85	151.52	158.26	160.28	163.81
110.0	105.25	106.66	109.36	113.67	116.90	124.20	127.94	130.94	132.62
112.5	81.55	81.73	84.80	89.12	95.36	100.79	104.05	106.12	106.59
115.0	58.94	59.64	63.23	68.70	73.48	79.94	80.42	85.42	85.98
117.5	40.49	43.37	46.96	51.59	57.00	59.76	64.20	67.21	69.87
120.0	27.40	29.10	32.75	38.56	42.61	47.27	48.64	49.93	52.42
122.5	16.68	19.95	23.58	28.31	32.05	34.51	36.94	38.06	38.47
125.0	9.13	12.81	15.63	19.38	22.24	25.55	26.58	27.75	27.90
127.5	4.98	7.55	9.81	12.35	15.35	17.06	18.58	20.52	19.76
130.0	2.66	3.93	5.74	7.20	10.03	9.96	12.22	12.84	12.94
132.5	2.15	2.34	2.91	4.03	5.47	6.56	7.54	7.39	8.29
135.0	1.93	2.08	2.13	2.21	2.55	3.06	3.61	4.03	4.14
137.5	1.96	1.90	1.98	1.94	1.88	2.01	1.91	2.06	2.00
140.0	1.58	1.79	1.78	1.77	1.60	1.86	1.89	1.86	1.47
142.5	1.41	1.44	1.68	1.72	1.62	1.65	1.53	1.75	1.76
145.0	1.44	1.48	1.52	1.40	1.36	1.54	1.32	1.59	1.85
147.5	1.18	1.32	1.35	1.34	1.34	1.21	1.28	1.15	1.08
150.0	1.13	1.14	0.97	1.17	0.81	1.03	1.09	1.09	1.13
152.5	1.01	1.02	0.99	0.87	1.04	0.89	1.05	0.93	1.10
155.0	0.74	0.71	0.71	0.86	0.74	0.89	0.73	0.75	0.58
157.5	0.68	0.84	0.80	0.73	0.83	0.51	0.69	0.46	0.74
160.0	0.54	0.61	0.50	0.68	0.61	0.42	0.57	0.66	0.50
162.5	0.34	0.27	0.44	0.30	0.46	0.37	0.41	0.36	0.66
165.0	0.23	0.20	0.25	0.20	0.23	0.19	0.16	0.34	0.33
167.5	0.24	0.20	0.20	0.28	0.17	0.40	0.20	0.11	0.12
170.0	0.08	0.03	0.13	0.14	0.16	0.19	0.09	0.10	0.16
172.5	0.22	0.10	0.00	0.05	0.00	0.04	0.15	0.00	0.17
175.0	0.08	0.00	0.20	0.00	0.00	0.00	0.00	0.05	0.00
177.5	0.00	0.00	0.14	0.00	0.00	0.00	0.02	0.00	0.21
180.0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	364.22	4.00	5.30
0-30	855.17	9.30	12.40
0-40	1547.44	16.80	22.50
0-60	3407.45	37.00	49.50
0-80	5448.15	59.20	79.20
0-90	6166.16	67.00	89.60
10-90	6079.55	66.00	88.40
20-40	1183.22	12.90	17.20
20-50	2046.5	22.20	29.70
40-70	2923.08	31.80	42.50
60-80	2040.7	22.20	29.70
70-80	977.63	10.60	14.20
80-90	718.01	7.80	10.40
90-110	616.39	6.70	9.00
90-120	690.57	7.50	10.00
90-130	709.92	7.70	10.30
90-150	713.65	7.80	10.40
90-180	714.12	7.80	10.40
110-180	97.73	1.10	1.40
0-180	6880.28	74.70	100.00

Total Luminaire Efficiency = 74.70%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	86.61
10-20	277.60
20-30	490.96
30-40	692.27
40-50	863.28
50-60	996.73
60-70	1063.07
70-80	977.63
80-90	718.01
90-100	418.08
100-110	198.31
110-120	74.18
120-130	19.35
130-140	2.84
140-150	0.89
150-160	0.37
160-170	0.09
170-180	0.01

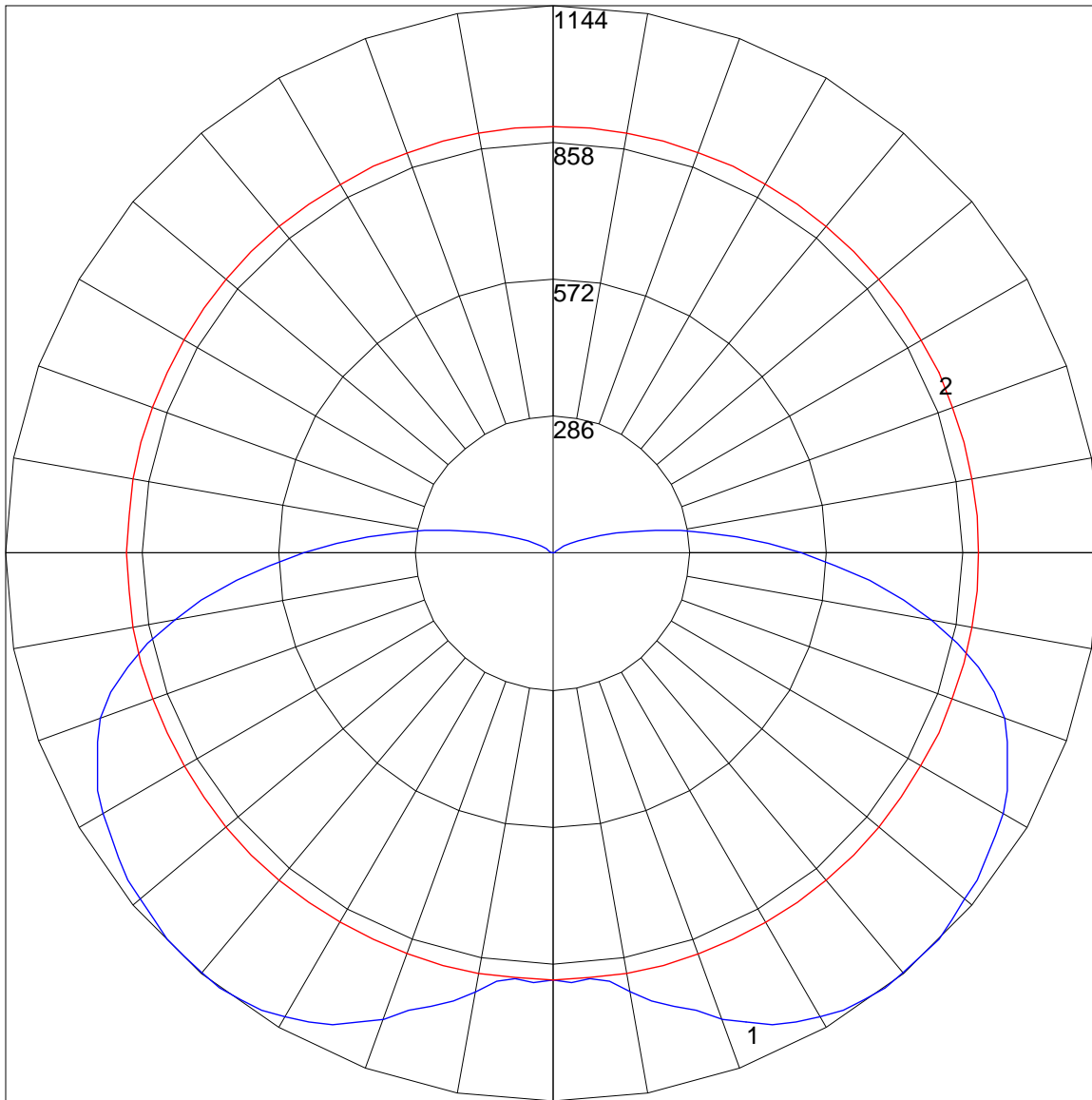
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BS400LEDHTHOWT30120-277V\_S.IES**

**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
0	87	87	87	87	84	84	84	84	79	79	79	74	74	74	69	69	69	67
1	75	70	66	61	72	68	63	60	63	59	56	59	56	53	55	52	50	48
2	67	59	52	46	64	57	50	45	52	47	43	49	44	41	45	42	39	36
3	60	50	42	36	57	48	41	35	45	39	34	41	36	32	38	34	31	28
4	54	43	35	29	52	42	34	29	39	32	27	36	31	26	33	29	25	23
5	49	38	30	24	47	37	29	24	34	28	23	32	26	22	29	25	21	19
6	45	34	26	21	43	33	25	20	30	24	19	28	23	19	26	22	18	16
7	42	30	23	18	40	29	22	17	27	21	17	25	20	16	24	19	15	14
8	38	27	20	15	37	26	20	15	25	19	15	23	18	14	22	17	13	12
9	36	25	18	14	34	24	18	13	23	17	13	21	16	12	20	15	12	10
10	33	23	16	12	32	22	16	12	21	15	11	20	15	11	18	14	11	9

POLAR GRAPH



Maximum Candela = 1144.09 Located At Horizontal Angle = 45, Vertical Angle = 37.5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0)