



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : W448-LED-HO-CW.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] LED-4265  
[TESTLAB] LSI INDUSTRIES, INC.  
[TESTDATE] 07/17/13  
[ISSUE DATE] 05/02/23  
[MANUFAC] LSI INDUSTRIES, INC.  
[LUMCAT] W448-LED-HO-CW  
[TEST PROCEDURE] IESNA LM-79-19  
[ ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[ FACTORED] SCALED FROM ORIGINAL TEST DATA  
[ SEARCH\_SOURCETYPE] LED  
[ SEARCH\_APPLICATION] Indoor  
[ SEARCH\_COLORTEMP] 5000

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12191
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	86
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	0.00 ft



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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	27603	27968	28447
55	22386	26295	28222
65	16699	25153	27577
75	12278	26114	28638
85	11197	47473	51915

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**CANDELA TABULATION**

	<u><b>0.0</b></u>	<u><b>22.5</b></u>	<u><b>45.0</b></u>	<u><b>67.5</b></u>	<u><b>90.0</b></u>
<b>0.0</b>	3879	3879	3879	3879	3879
<b>2.5</b>	3997	3918	3879	3833	3800
<b>5.0</b>	3988	3912	3877	3835	3805
<b>7.5</b>	3972	3900	3872	3833	3805
<b>10.0</b>	3944	3879	3856	3821	3791
<b>12.5</b>	3912	3851	3830	3796	3765
<b>15.0</b>	3865	3812	3793	3758	3728
<b>17.5</b>	3814	3765	3744	3705	3673
<b>20.0</b>	3749	3707	3682	3640	3605
<b>22.5</b>	3677	3638	3608	3557	3519
<b>25.0</b>	3591	3557	3517	3459	3422
<b>27.5</b>	3494	3461	3415	3352	3313
<b>30.0</b>	3383	3355	3299	3234	3197
<b>32.5</b>	3257	3234	3174	3111	3079
<b>35.0</b>	3120	3100	3039	2986	2958
<b>37.5</b>	2965	2951	2895	2858	2840
<b>40.0</b>	2796	2791	2749	2733	2724
<b>42.5</b>	2612	2619	2601	2610	2608
<b>45.0</b>	2420	2441	2452	2487	2494
<b>47.5</b>	2213	2255	2304	2364	2378
<b>50.0</b>	2004	2069	2158	2241	2260
<b>52.5</b>	1796	1884	2011	2116	2137
<b>55.0</b>	1592	1703	1870	1986	2007
<b>57.5</b>	1394	1527	1728	1854	1872
<b>60.0</b>	1209	1360	1589	1717	1733
<b>62.5</b>	1032	1202	1452	1578	1589
<b>65.0</b>	875	1053	1318	1438	1445
<b>67.5</b>	745	919	1188	1299	1306
<b>70.0</b>	615	798	1063	1167	1169
<b>72.5</b>	499	691	947	1039	1039
<b>75.0</b>	394	589	838	921	919
<b>77.5</b>	304	499	749	814	812
<b>80.0</b>	237	420	664	728	724
<b>82.5</b>	181	353	585	640	638
<b>85.0</b>	121	292	513	564	561
<b>87.5</b>	72	248	448	496	494
<b>90.0</b>	28	206	390	441	438
<b>92.5</b>	16	193	360	408	406
<b>95.0</b>	16	183	343	390	387
<b>97.5</b>	16	176	327	374	371
<b>100.0</b>	14	169	313	360	357
<b>102.5</b>	14	162	302	348	348
<b>105.0</b>	14	158	290	339	339
<b>107.5</b>	14	151	278	329	332
<b>110.0</b>	14	146	269	320	322
<b>112.5</b>	12	142	258	309	316
<b>115.0</b>	14	137	251	299	306
<b>117.5</b>	14	128	241	288	297
<b>120.0</b>	12	123	237	276	285
<b>122.5</b>	14	121	234	264	274
<b>125.0</b>	12	114	223	253	264
<b>127.5</b>	12	109	211	246	253
<b>130.0</b>	12	102	200	237	239
<b>132.5</b>	12	97	188	234	237

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	14	90	176	220	234
<b>137.5</b>	14	86	165	209	220
<b>140.0</b>	12	81	153	195	206
<b>142.5</b>	14	74	142	181	193
<b>145.0</b>	14	67	130	169	181
<b>147.5</b>	14	63	118	155	167
<b>150.0</b>	14	58	111	144	153
<b>152.5</b>	14	51	100	130	139
<b>155.0</b>	14	46	90	118	125
<b>157.5</b>	14	42	79	104	114
<b>160.0</b>	16	37	67	93	100
<b>162.5</b>	14	35	58	79	86
<b>165.0</b>	16	30	49	67	74
<b>167.5</b>	16	26	42	56	60
<b>170.0</b>	16	21	35	46	49
<b>172.5</b>	14	19	28	35	37
<b>175.0</b>	14	16	19	26	26
<b>177.5</b>	14	14	16	16	16
<b>180.0</b>	14	14	14	14	14

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1438.88	N.A.	11.80
0-30	3054.12	N.A.	25.10
0-40	4954.24	N.A.	40.60
0-60	8496.48	N.A.	69.70
0-80	10535.51	N.A.	86.40
0-90	11009.35	N.A.	90.30
10-90	10639.7	N.A.	87.30
20-40	3515.37	N.A.	28.80
20-50	5411.74	N.A.	44.40
40-70	4777.73	N.A.	39.20
60-80	2039.03	N.A.	16.70
70-80	803.53	N.A.	6.60
80-90	473.85	N.A.	3.90
90-110	562.39	N.A.	4.60
90-120	772.04	N.A.	6.30
90-130	935.70	N.A.	7.70
90-150	1127.12	N.A.	9.20
90-180	1181.52	N.A.	9.70
110-180	619.13	N.A.	5.10
0-180	12190.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	369.65
10-20	1069.22
20-30	1615.25
30-40	1900.12
40-50	1896.38
50-60	1645.86
60-70	1235.5
70-80	803.53
80-90	473.85
90-100	307.53
100-110	254.86
110-120	209.65
120-130	163.66
130-140	118.05
140-150	73.38
150-160	37.96
160-170	14.07
170-180	2.37

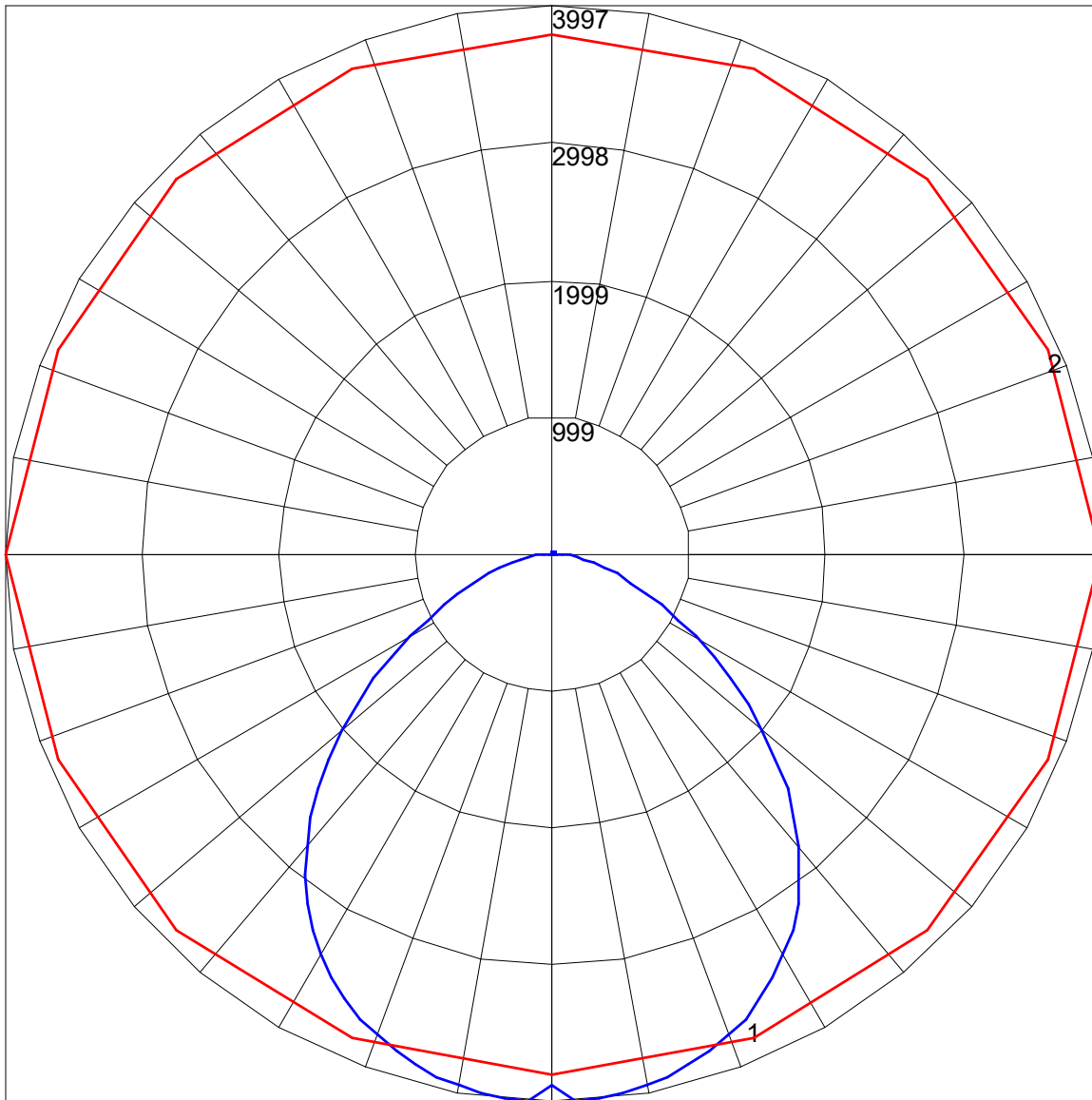
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	106	101	96	92	102	98	93	90	91	88	85	86	83	81	81	79	77	74
2	96	88	81	75	93	85	79	73	80	75	70	75	71	67	71	67	64	62
3	88	77	69	62	84	75	67	61	70	64	59	66	61	57	63	58	55	52
4	80	68	60	53	77	66	58	52	63	56	50	59	53	49	56	51	47	44
5	74	61	52	46	71	59	51	45	56	49	44	53	47	42	50	45	41	39
6	68	55	46	40	66	54	45	39	51	44	38	48	42	37	46	40	36	34
7	63	50	41	35	61	49	41	35	46	39	34	44	38	33	42	36	32	30
8	59	46	37	31	57	44	37	31	42	35	30	40	34	29	39	33	29	27
9	55	42	34	28	53	41	33	28	39	32	27	37	31	27	36	30	26	24
10	52	39	31	26	50	38	30	25	36	29	25	35	28	24	33	28	24	22

POLAR GRAPH



Maximum Candela = 3997 Located At Horizontal Angle = 0, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)