



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HES-24-L40-835-A-DIM-UNV.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]GEN FROM G100669206  
[TESTLAB]Intertek  
[ISSUE DATE] 03/19/2019  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] HES-24-L40-835-A-DIM-UNV  
[LUMINAIRE] 2X4 SURFACE MOUNT LED LUMINAIRE  
[MORE] WITH FROSTED LENSES  
[LAMP]LED  
[LAMPCAT] HLM 80 CRI 3500K CCT  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_MOUNTING] SURFACE

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4067
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	32.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.96 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1900	1953	1967
55	1615	1728	1694
65	1312	1447	1161
75	1012	983	668
85	642	246	117

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	1699.209	1699.209	1699.209	1699.209	1699.209
2.5	1699.470	1699.783	1697.018	1697.540	1689.975
5.0	1693.105	1693.001	1690.027	1690.758	1682.828
7.5	1682.254	1681.994	1678.603	1678.342	1671.769
10.0	1667.804	1666.917	1663.943	1662.431	1654.501
12.5	1647.771	1647.667	1643.650	1641.616	1634.782
15.0	1622.992	1623.409	1618.401	1616.836	1609.376
17.5	1592.682	1593.308	1587.831	1585.640	1579.432
20.0	1557.626	1557.782	1552.774	1550.374	1545.262
22.5	1518.030	1518.291	1512.970	1510.675	1503.319
25.0	1473.583	1474.001	1470.088	1465.341	1459.028
27.5	1423.241	1424.180	1421.781	1418.025	1411.295
30.0	1367.891	1369.509	1369.039	1366.170	1361.266
32.5	1308.055	1310.715	1312.906	1311.967	1308.524
35.0	1244.828	1248.062	1253.853	1255.105	1251.453
37.5	1178.470	1183.322	1190.886	1194.225	1189.999
40.0	1108.461	1114.617	1125.259	1130.997	1127.085
42.5	1035.426	1043.043	1057.076	1065.005	1060.832
45.0	959.783	969.590	986.858	997.239	993.640
47.5	884.140	894.834	916.327	928.430	925.717
50.0	808.757	821.225	845.744	859.934	855.186
52.5	734.627	748.190	776.309	788.777	777.874
55.0	661.748	676.668	707.969	712.716	694.144
57.5	590.904	606.763	641.768	633.213	606.033
60.0	522.930	539.311	574.628	550.109	516.774
62.5	457.720	475.144	506.184	466.693	430.071
65.0	396.214	415.360	437.062	386.824	350.515
67.5	338.673	358.914	368.461	312.642	278.576
70.0	284.367	305.547	301.686	245.502	216.601
72.5	233.816	254.683	239.085	187.856	165.841
75.0	187.126	204.498	181.857	139.444	123.533
77.5	144.609	155.721	129.950	98.597	87.746
80.0	105.483	110.387	83.990	62.706	54.828
82.5	70.740	68.444	44.343	31.248	25.406
85.0	39.961	30.988	15.337	9.964	7.303
87.5	13.303	6.156	2.139	1.669	0.470
90.0	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

135.0	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	616.62	N.A.	15.20
0-30	1292.51	N.A.	31.80
0-40	2073.99	N.A.	51.00
0-60	3451.19	N.A.	84.90
0-80	4035.81	N.A.	99.20
0-90	4066.89	N.A.	100.00
10-90	3906.39	N.A.	96.10
20-40	1457.37	N.A.	35.80
20-50	2214.88	N.A.	54.50
40-70	1778.53	N.A.	43.70
60-80	584.62	N.A.	14.40
70-80	183.29	N.A.	4.50
80-90	31.08	N.A.	0.80
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	4066.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	160.50
10-20	456.12
20-30	675.88
30-40	781.49
40-50	757.51
50-60	619.68
60-70	401.34
70-80	183.29
80-90	31.08
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

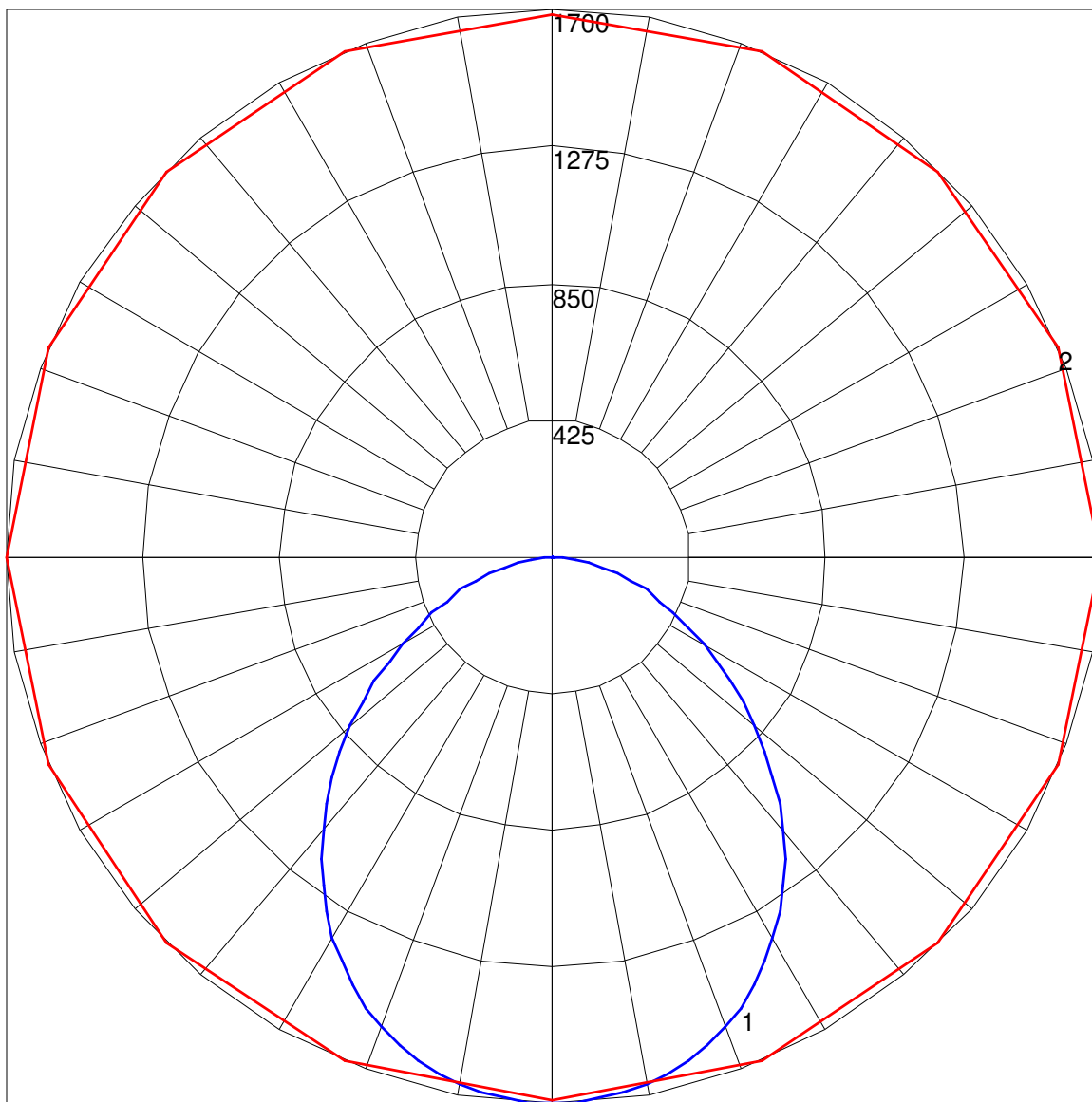
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	34	29	41	34	29	40	34	29	39	33	29	27

POLAR GRAPH



Maximum Candela = 1699.783 Located At Horizontal Angle = 22.5, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)