



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HES-24-L76-835-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-L76-835-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	7629
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	60.1
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	3564	3664	3689
55	3029	3241	3177
65	2461	2715	2178
75	1898	1845	1253
85	1204	462	220

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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	3187.426	3187.426	3187.426	3187.426	3187.426
2.5	3187.916	3188.503	3183.316	3184.295	3170.106
5.0	3175.977	3175.781	3170.204	3171.574	3156.699
7.5	3155.623	3155.133	3148.773	3148.283	3135.953
10.0	3128.516	3126.852	3121.275	3118.437	3103.562
12.5	3090.939	3090.743	3083.208	3079.391	3066.572
15.0	3044.456	3045.239	3035.845	3032.909	3018.915
17.5	2987.601	2988.775	2978.500	2974.390	2962.745
20.0	2921.840	2922.134	2912.739	2908.238	2898.648
22.5	2847.566	2848.055	2838.074	2833.768	2819.970
25.0	2764.191	2764.974	2757.635	2748.730	2736.889
27.5	2669.758	2671.520	2667.018	2659.973	2647.349
30.0	2565.931	2568.965	2568.084	2562.702	2553.503
32.5	2453.688	2458.679	2462.789	2461.028	2454.569
35.0	2335.084	2341.152	2352.014	2354.362	2347.512
37.5	2210.609	2219.710	2233.899	2240.162	2232.236
40.0	2079.284	2090.831	2110.794	2121.559	2114.219
42.5	1942.283	1956.570	1982.894	1997.768	1989.940
45.0	1800.389	1818.786	1851.177	1870.651	1863.899
47.5	1658.495	1678.556	1718.873	1741.576	1736.488
50.0	1517.091	1540.479	1586.472	1613.089	1604.184
52.5	1378.035	1403.478	1456.223	1479.611	1459.159
55.0	1241.327	1269.314	1328.029	1336.934	1302.097
57.5	1108.436	1138.185	1203.848	1187.799	1136.815
60.0	980.927	1011.655	1077.904	1031.911	969.380
62.5	858.605	891.289	949.515	875.436	806.740
65.0	743.231	779.144	819.853	725.616	657.507
67.5	635.293	673.262	691.170	586.462	522.561
70.0	533.423	573.154	565.912	460.519	406.306
72.5	438.599	477.742	448.483	352.386	311.090
75.0	351.016	383.603	341.133	261.574	231.727
77.5	271.262	292.106	243.764	184.951	164.597
80.0	197.869	207.067	157.551	117.625	102.849
82.5	132.695	128.390	83.179	58.617	47.657
85.0	74.959	58.128	28.770	18.691	13.700
87.5	24.954	11.547	4.012	3.131	0.881
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	1156.68	N.A.	15.20
0-30	2424.52	N.A.	31.80
0-40	3890.46	N.A.	51.00
0-60	6473.84	N.A.	84.90
0-80	7570.49	N.A.	99.20
0-90	7628.79	N.A.	100.00
10-90	7327.72	N.A.	96.10
20-40	2733.78	N.A.	35.80
20-50	4154.74	N.A.	54.50
40-70	3336.22	N.A.	43.70
60-80	1096.65	N.A.	14.40
70-80	343.81	N.A.	4.50
80-90	58.30	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	7628.79	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	301.07
10-20	855.60
20-30	1267.84
30-40	1465.94
40-50	1420.96
50-60	1162.42
60-70	752.84
70-80	343.81
80-90	58.30
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

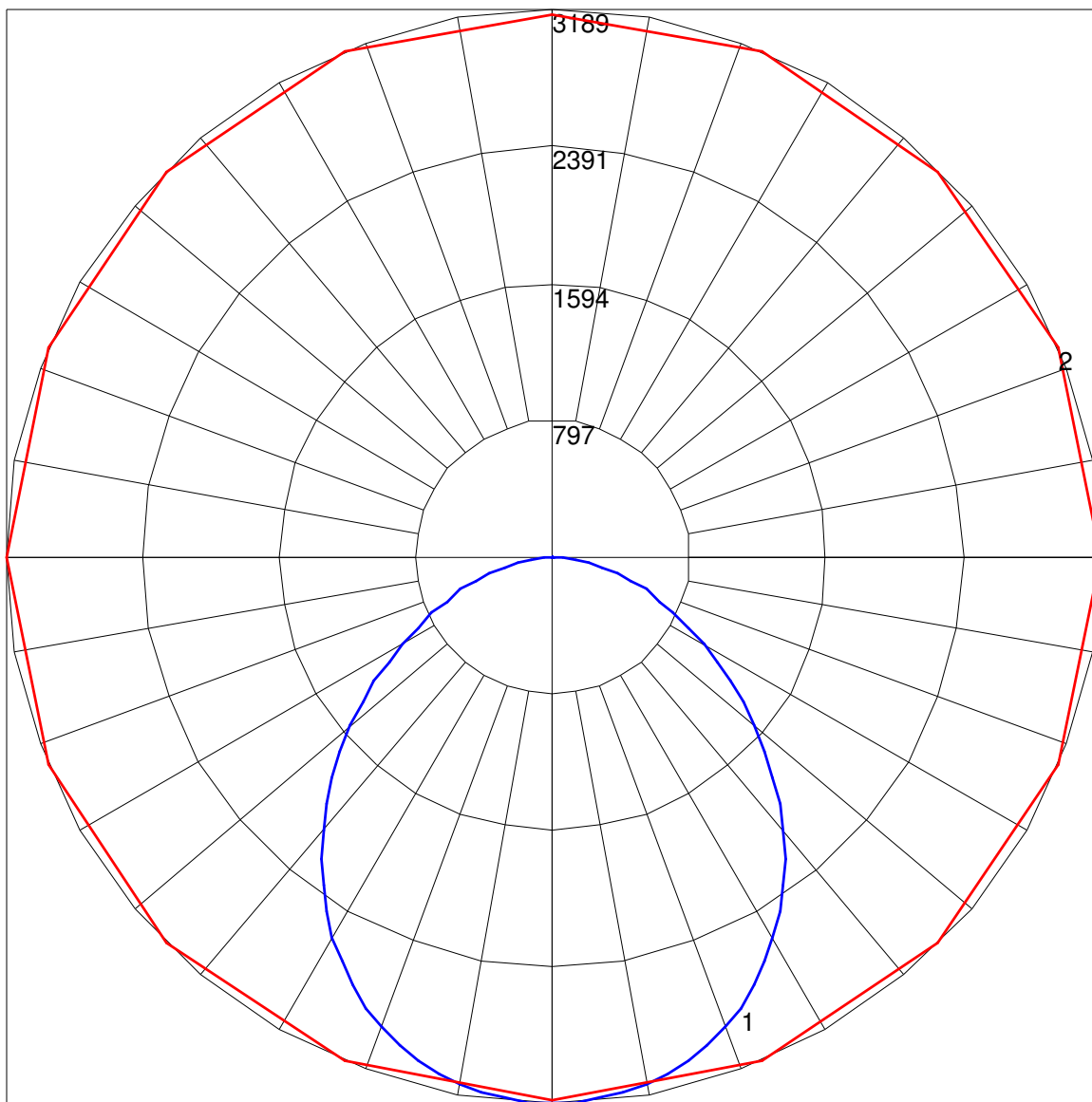
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 3188.503 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.)