



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HES-22-L54-835-A-DIM-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM G100669206
[TESTLAB]Intertek
[ISSUE DATE] 03/18/2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] HES-22-L54-835-A-DIM-UNV
[LUMINAIRE] 2X2 SURFACE MOUNT LED LUMINAIRE
[MORE] WITH CENTER FROSTED LENS
[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	5404
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	44.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.83 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	5320	5516	5705
55	4393	4807	4899
65	3440	4015	3290
75	2604	2771	1858
85	1619	888	442

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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	2319.909	2319.909	2319.909	2319.909	2319.909
2.5	2325.982	2325.292	2320.323	2310.939	2304.729
5.0	2315.631	2315.493	2312.871	2299.208	2295.758
7.5	2299.484	2300.312	2294.516	2282.509	2279.335
10.0	2274.505	2276.299	2273.539	2264.016	2259.048
12.5	2245.385	2248.283	2247.869	2237.657	2234.345
15.0	2205.501	2213.506	2212.401	2204.673	2201.913
17.5	2159.268	2167.273	2169.067	2166.169	2161.753
20.0	2106.688	2113.726	2118.418	2113.726	2115.658
22.5	2043.066	2051.070	2058.799	2061.007	2056.867
25.0	1973.510	1981.791	1990.071	1992.279	1992.279
27.5	1899.400	1909.475	1918.445	1924.241	1923.137
30.0	1818.665	1831.086	1842.679	1851.649	1853.719
32.5	1736.551	1749.524	1762.082	1774.227	1781.817
35.0	1650.986	1663.821	1678.726	1694.597	1702.463
37.5	1558.107	1571.632	1588.331	1606.686	1617.588
40.0	1459.707	1476.544	1494.899	1519.189	1529.815
42.5	1358.548	1376.765	1398.984	1423.963	1438.316
45.0	1254.766	1275.605	1300.999	1330.394	1345.437
47.5	1149.190	1170.167	1201.633	1232.961	1251.178
50.0	1035.334	1066.247	1104.614	1136.631	1153.606
52.5	939.142	964.536	1010.492	1042.510	1051.343
55.0	840.467	867.516	919.545	940.522	937.210
57.5	745.104	773.947	832.462	837.017	817.420
60.0	652.776	684.104	746.484	722.470	694.455
62.5	565.556	597.987	656.641	611.512	572.180
65.0	484.959	518.633	565.970	503.452	463.706
67.5	410.711	444.799	476.265	405.467	365.720
70.0	342.949	378.003	390.838	318.522	281.674
72.5	281.398	314.796	312.311	244.412	214.740
75.0	224.815	252.968	239.167	180.238	160.365
77.5	172.648	191.969	171.958	128.761	116.478
80.0	125.725	136.628	113.442	86.393	77.698
82.5	84.047	85.979	63.622	48.027	40.022
85.0	47.061	41.402	25.807	19.045	12.835
87.5	15.457	9.799	5.244	3.450	1.518
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	0.138	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	0.138	0.000
172.5	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.276
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	841.19	N.A.	15.60
0-30	1755.68	N.A.	32.50
0-40	2803.18	N.A.	51.90
0-60	4613.86	N.A.	85.40
0-80	5361.26	N.A.	99.20
0-90	5403.52	N.A.	100.00
10-90	5184.42	N.A.	95.90
20-40	1961.99	N.A.	36.30
20-50	2964.78	N.A.	54.90
40-70	2324.9	N.A.	43.00
60-80	747.40	N.A.	13.80
70-80	233.18	N.A.	4.30
80-90	42.26	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	0.01	N.A.	0.00
110-180	0.01	N.A.	0.00
0-180	5403.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	219.10
10-20	622.09
20-30	914.49
30-40	1047.5
40-50	1002.78
50-60	807.89
60-70	514.23
70-80	233.18
80-90	42.26
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

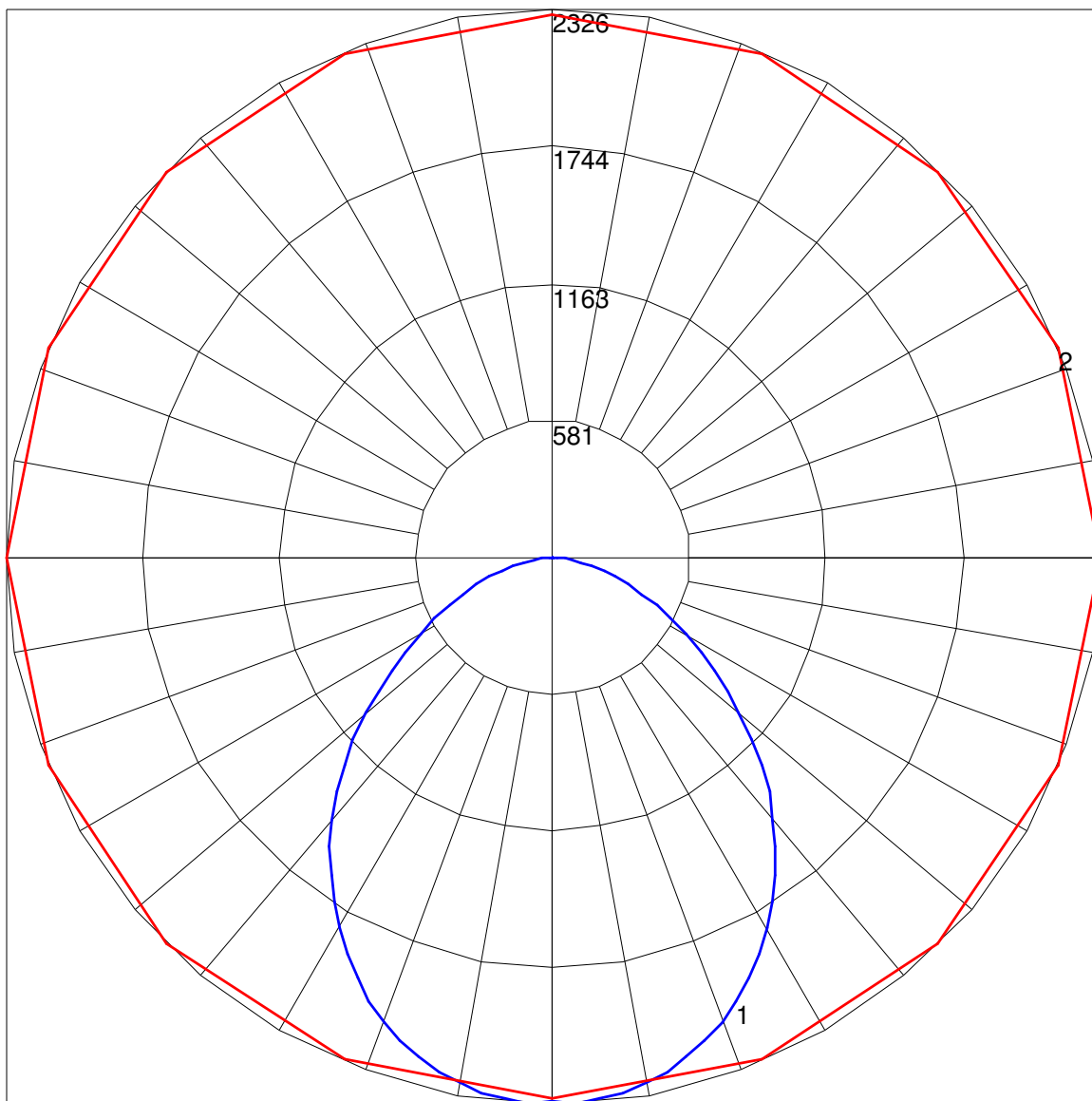
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	75	69	90	81	74	69	78	72	67	76	71	66	73	69	65	63
4	85	74	66	60	83	73	65	59	70	64	58	68	62	58	66	61	57	55
5	79	67	58	52	77	65	57	52	63	56	51	61	55	50	60	54	50	48
6	73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44	42
7	68	55	46	41	66	54	46	40	53	45	40	51	45	40	50	44	40	38
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31
10	56	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28

POLAR GRAPH



Maximum Candela = 2325.982 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.)