



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-835-A-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20211.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 04-19-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] DUAL APERTURE RECESSED LED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES  
 [LUMCAT] HETG-S22-L38-835-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Direct  
 [ \_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3825
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	31
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.91 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3624	3997	4227
55	3011	3516	3868
65	2368	2888	2741
75	1718	1878	1199
85	831	504	208

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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>
<b>0</b>	1548.693	1548.693	1548.693	1548.693	1548.693
<b>5</b>	1542.578	1545.199	1544.325	1539.084	1540.831
<b>10</b>	1518.121	1522.488	1518.994	1516.374	1522.488
<b>15</b>	1475.320	1484.928	1482.308	1484.055	1491.043
<b>20</b>	1407.188	1428.151	1427.278	1438.633	1442.127
<b>25</b>	1327.700	1348.664	1366.134	1378.363	1380.983
<b>30</b>	1231.617	1252.581	1284.026	1298.002	1311.104
<b>35</b>	1122.431	1146.889	1185.322	1205.412	1225.502
<b>40</b>	1001.890	1028.968	1077.010	1100.594	1125.051
<b>45</b>	865.626	890.957	954.721	983.546	1009.751
<b>50</b>	722.374	748.578	821.078	858.638	883.969
<b>55</b>	583.489	610.567	681.320	727.615	749.452
<b>60</b>	455.087	479.544	550.297	569.514	581.742
<b>65</b>	338.040	355.509	412.286	400.931	391.322
<b>70</b>	237.588	259.426	282.136	247.197	219.245
<b>75</b>	150.240	170.330	164.216	128.403	104.818
<b>80</b>	77.740	84.728	69.005	54.156	39.307
<b>85</b>	24.458	24.458	14.849	13.102	6.114
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	564.74	N.A.	14.80
0-30	1191.41	N.A.	31.10
0-40	1927.46	N.A.	50.40
0-60	3252.28	N.A.	85.00
0-80	3798.01	N.A.	99.30
0-90	3825.34	N.A.	100.00
10-90	3678.84	N.A.	96.20
20-40	1362.73	N.A.	35.60
20-50	2088.28	N.A.	54.60
40-70	1708.17	N.A.	44.70
60-80	545.73	N.A.	14.30
70-80	162.37	N.A.	4.20
80-90	27.33	N.A.	0.70
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	3825.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	146.50
10-20	418.24
20-30	626.67
30-40	736.06
40-50	725.56
50-60	599.25
60-70	383.36
70-80	162.37
80-90	27.33
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	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	54	48	43	42
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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**UGR TABLE - CORRECTED**

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size      UGR Viewed Crosswise

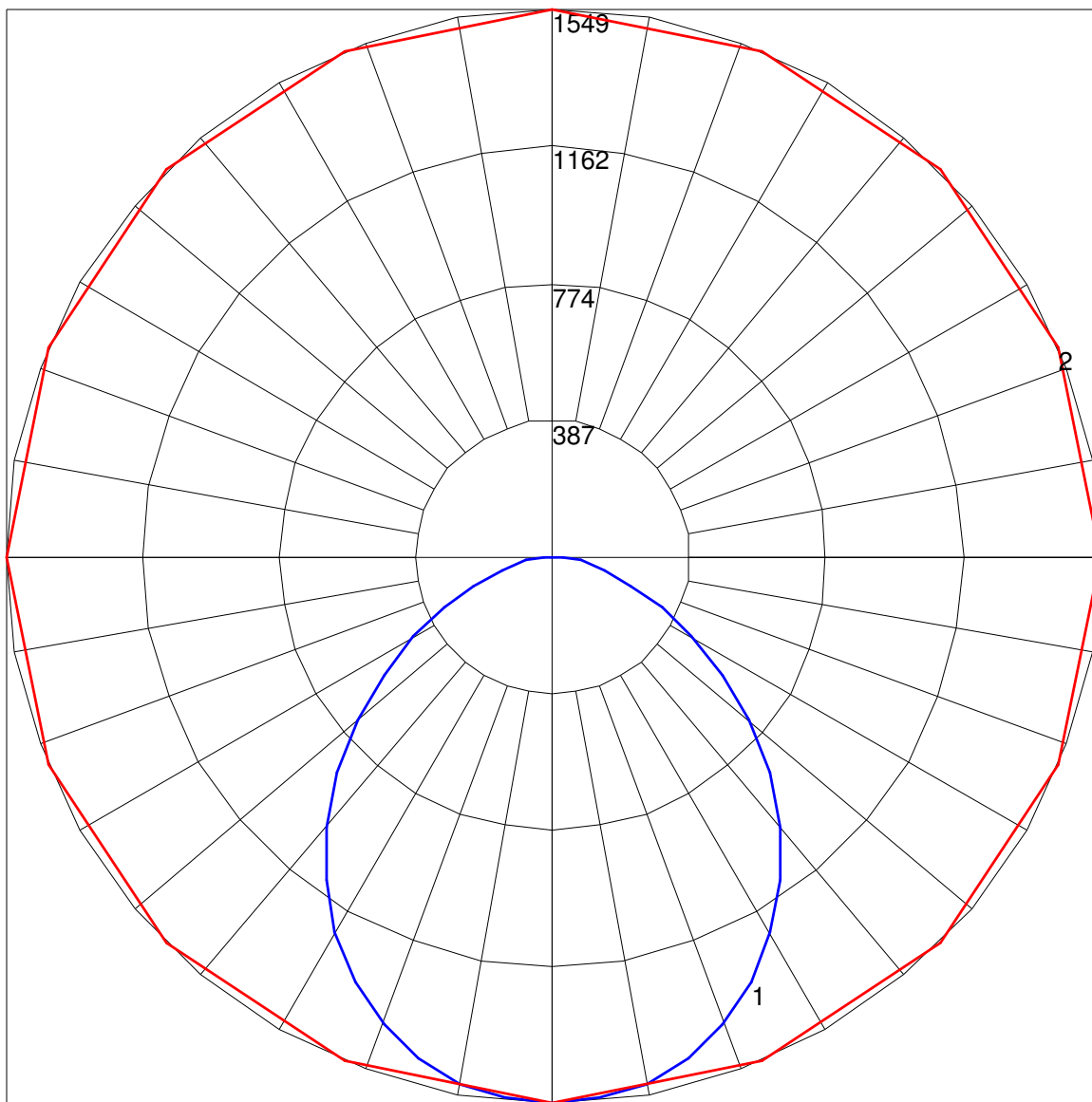
X=2H	Y=2H	15.5	17.1	15.9	17.4	17.7	16.8	18.4	17.2	18.7	19.0
	3H	16.8	18.2	17.2	18.6	18.9	17.8	19.2	18.2	19.5	19.9
	4H	17.3	18.6	17.7	18.9	19.3	17.9	19.3	18.3	19.6	20.0
	6H	17.5	18.7	17.9	19.1	19.5	18.0	19.2	18.4	19.6	20.0
	8H	17.6	18.7	18.0	19.1	19.5	18.0	19.1	18.4	19.5	19.9
	12H	17.6	18.7	18.0	19.1	19.5	17.9	19.1	18.4	19.4	19.9

UGR Viewed Endwise

4H	2H	16.2	17.5	16.6	17.9	18.3	17.3	18.6	17.7	18.9	19.3
	3H	17.7	18.8	18.1	19.2	19.6	18.4	19.5	18.8	19.9	20.3
	4H	18.3	19.2	18.7	19.6	20.1	18.6	19.6	19.1	20.0	20.5
	6H	18.6	19.4	19.1	19.9	20.3	18.7	19.6	19.2	20.0	20.5
	8H	18.7	19.5	19.1	19.9	20.4	18.7	19.5	19.2	20.0	20.4
	12H	18.7	19.4	19.2	19.9	20.4	18.7	19.4	19.2	19.9	20.4
8H	4H	18.4	19.2	18.9	19.7	20.1	18.8	19.6	19.2	20.0	20.5
	6H	18.8	19.5	19.3	20.0	20.5	18.9	19.6	19.4	20.1	20.5
	8H	19.0	19.5	19.5	20.1	20.5	18.9	19.5	19.4	20.0	20.5
	12H	19.0	19.5	19.5	20.0	20.6	18.9	19.4	19.4	19.9	20.5
12H	4H	18.4	19.1	18.9	19.6	20.1	18.8	19.5	19.3	20.0	20.4
	6H	18.8	19.4	19.4	19.9	20.4	18.9	19.5	19.5	20.0	20.5
	8H	19.0	19.5	19.5	20.0	20.5	18.9	19.5	19.4	19.9	20.5

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 1548.693 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)