



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-840-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
 [ISSUE DATE] 08-24-2021
 [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-L38-840-A-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 4000K 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	3940
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	30.7
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	3733	4117	4354
55	3102	3622	3984
65	2439	2975	2823
75	1770	1935	1235
85	856	520	214

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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	1595.255	1595.255	1595.255	1595.255	1595.255
5	1588.956	1591.656	1590.756	1585.357	1587.157
10	1563.763	1568.262	1564.663	1561.964	1568.262
15	1519.676	1529.573	1526.874	1528.673	1535.871
20	1449.495	1471.089	1470.190	1481.886	1485.485
25	1367.618	1389.212	1407.207	1419.804	1422.503
30	1268.646	1290.240	1322.631	1337.027	1350.523
35	1156.177	1181.370	1220.959	1241.653	1262.348
40	1032.012	1059.904	1109.390	1133.683	1158.876
45	891.651	917.744	983.425	1013.117	1040.110
50	744.092	771.085	845.764	884.453	910.546
55	601.032	628.924	701.804	749.491	771.984
60	468.769	493.962	566.842	586.636	599.233
65	348.203	366.198	424.681	412.985	403.087
70	244.732	267.225	290.619	254.629	225.837
75	154.757	175.451	169.153	132.263	107.970
80	80.078	87.276	71.080	55.784	40.489
85	25.193	25.193	15.296	13.496	6.298
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	581.72	N.A.	14.80
0-30	1227.23	N.A.	31.10
0-40	1985.41	N.A.	50.40
0-60	3350.06	N.A.	85.00
0-80	3912.2	N.A.	99.30
0-90	3940.35	N.A.	100.00
10-90	3789.45	N.A.	96.20
20-40	1403.7	N.A.	35.60
20-50	2151.07	N.A.	54.60
40-70	1759.53	N.A.	44.70
60-80	562.14	N.A.	14.30
70-80	167.26	N.A.	4.20
80-90	28.15	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	3940.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	150.90
10-20	430.82
20-30	645.51
30-40	758.19
40-50	747.37
50-60	617.27
60-70	394.88
70-80	167.26
80-90	28.15
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

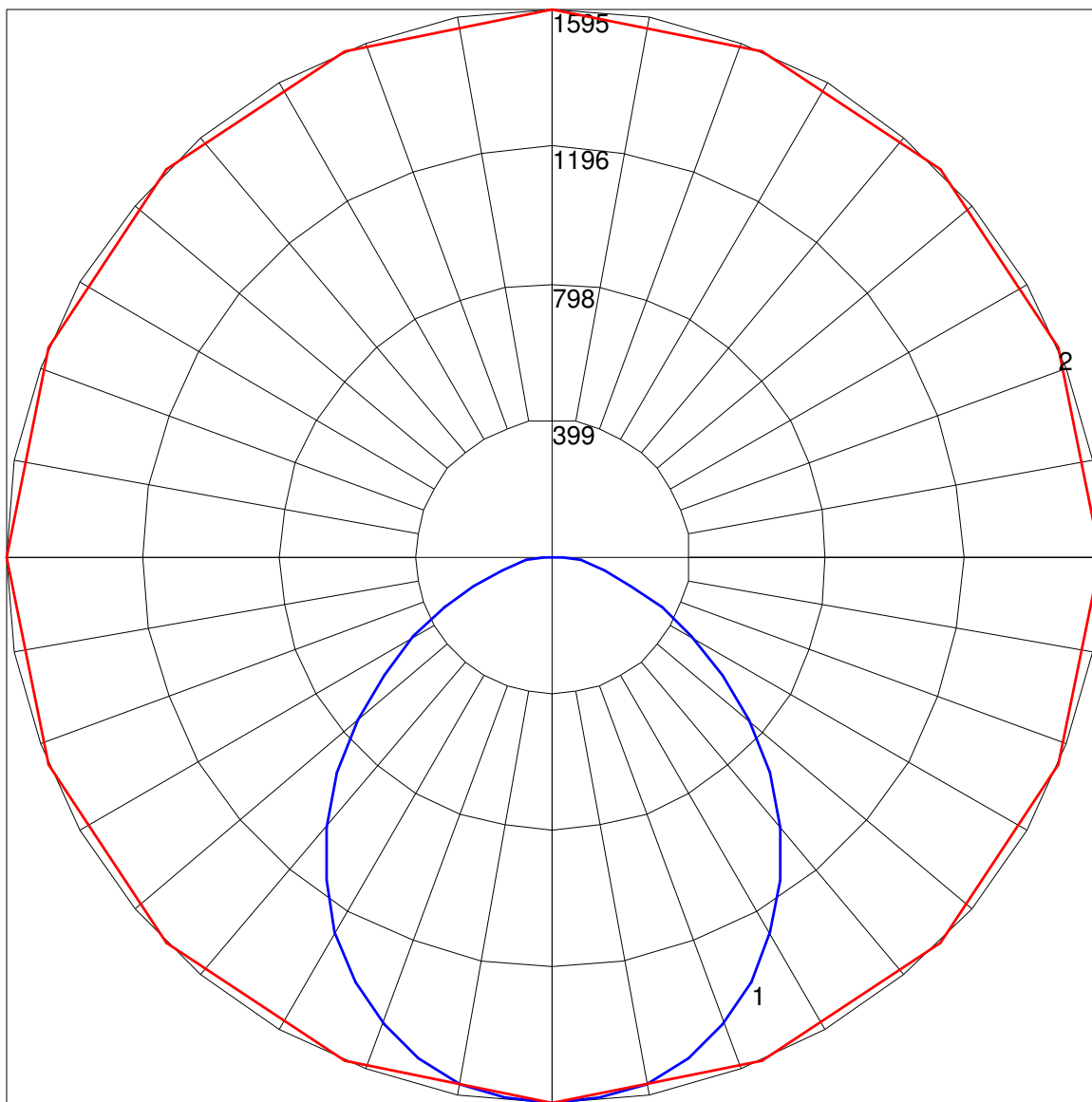
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.6	17.2	16.0	17.5	17.8	16.9	18.5	17.3	18.8	19.1
	3H	16.9	18.3	17.3	18.7	19.0	17.9	19.3	18.3	19.6	20.0
	4H	17.4	18.7	17.8	19.0	19.4	18.0	19.4	18.4	19.7	20.1
	6H	17.6	18.8	18.0	19.2	19.6	18.1	19.3	18.5	19.7	20.1
	8H	17.7	18.8	18.1	19.2	19.6	18.1	19.2	18.5	19.6	20.0
	12H	17.7	18.8	18.1	19.2	19.6	18.0	19.2	18.5	19.5	20.0
4H	2H	16.3	17.6	16.7	18.0	18.4	17.4	18.7	17.8	19.0	19.4
	3H	17.8	18.9	18.2	19.3	19.7	18.5	19.6	18.9	20.0	20.4
	4H	18.4	19.3	18.8	19.7	20.2	18.7	19.7	19.2	20.1	20.6
	6H	18.7	19.5	19.2	20.0	20.4	18.8	19.7	19.3	20.1	20.6
	8H	18.8	19.6	19.2	20.0	20.5	18.8	19.6	19.3	20.1	20.5
	12H	18.8	19.5	19.3	20.0	20.5	18.8	19.5	19.3	20.0	20.5
8H	4H	18.5	19.3	19.0	19.8	20.2	18.9	19.7	19.3	20.1	20.6
	6H	18.9	19.6	19.4	20.1	20.6	19.0	19.7	19.5	20.2	20.6
	8H	19.1	19.6	19.6	20.2	20.6	19.0	19.6	19.5	20.1	20.6
	12H	19.1	19.6	19.6	20.1	20.7	19.0	19.5	19.5	20.0	20.6
12H	4H	18.5	19.2	19.0	19.7	20.2	18.9	19.6	19.4	20.1	20.5
	6H	18.9	19.5	19.5	20.0	20.5	19.0	19.6	19.6	20.1	20.6
	8H	19.1	19.6	19.6	20.1	20.6	19.0	19.6	19.5	20.0	20.6

Maximum UGR = 20.7

POLAR GRAPH



Maximum Candela = 1595.255 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.)