



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L69-840-A-(L44)-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] 10-19-2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] DUAL APERTURE 2x2 'RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [LUMCAT] HETG-S22-L69-840-A-(L44)-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	4566
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	32.9
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	4326	4771	5046
55	3595	4197	4617
65	2826	3447	3272
75	2051	2242	1431
85	992	602	248

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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	1848.714	1848.714	1848.714	1848.714	1848.714
5	1841.415	1844.543	1843.501	1837.244	1839.330
10	1812.220	1817.433	1813.262	1810.134	1817.433
15	1761.127	1772.597	1769.469	1771.554	1779.896
20	1679.796	1704.821	1703.778	1717.333	1721.504
25	1584.910	1609.935	1630.789	1645.387	1648.515
30	1470.213	1495.238	1532.775	1549.458	1565.099
35	1339.875	1369.070	1414.949	1438.932	1462.914
40	1195.981	1228.305	1285.654	1313.807	1343.003
45	1033.320	1063.558	1139.675	1174.085	1205.366
50	862.316	893.597	980.142	1024.978	1055.216
55	696.526	728.850	813.309	868.572	894.640
60	543.249	572.444	656.904	679.843	694.441
65	403.526	424.381	492.156	478.601	467.131
70	283.615	309.683	336.793	295.085	261.719
75	179.345	203.327	196.028	153.277	125.124
80	92.801	101.142	82.374	64.648	46.922
85	29.196	29.196	17.726	15.641	7.299
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	674.14	N.A.	14.80
0-30	1422.22	N.A.	31.10
0-40	2300.86	N.A.	50.40
0-60	3882.33	N.A.	85.00
0-80	4533.78	N.A.	99.30
0-90	4566.41	N.A.	100.00
10-90	4391.53	N.A.	96.20
20-40	1626.72	N.A.	35.60
20-50	2492.84	N.A.	54.60
40-70	2039.09	N.A.	44.70
60-80	651.45	N.A.	14.30
70-80	193.83	N.A.	4.20
80-90	32.62	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	4566.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	174.88
10-20	499.27
20-30	748.07
30-40	878.65
40-50	866.12
50-60	715.35
60-70	457.62
70-80	193.83
80-90	32.62
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

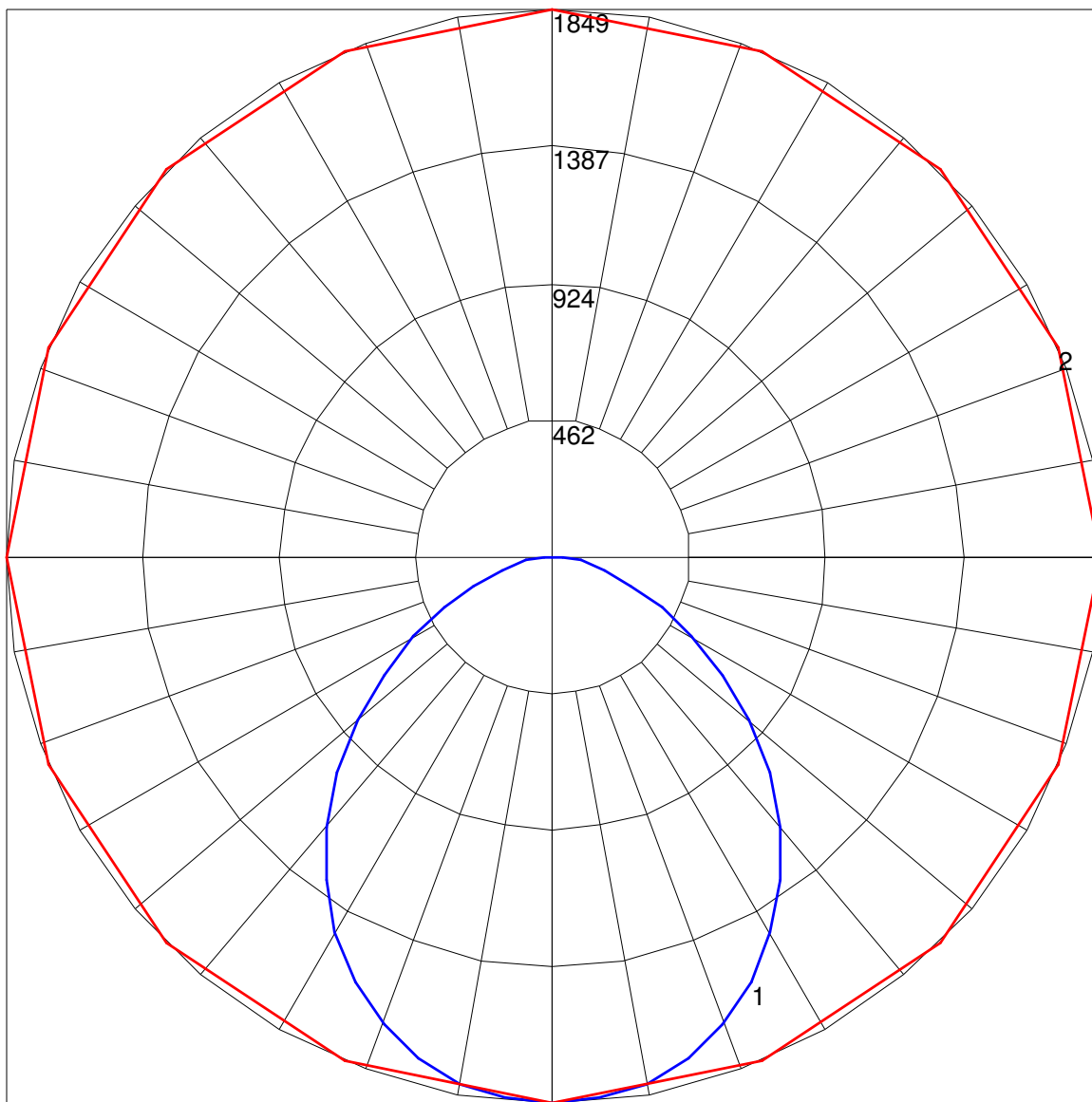
Reflectances

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	16.1	17.7	16.5	18.0	18.3	17.4	19.0	17.8	19.3	19.6
	3H	17.4	18.8	17.8	19.2	19.5	18.4	19.8	18.8	20.1	20.5
	4H	17.9	19.2	18.3	19.5	19.9	18.5	19.9	18.9	20.2	20.6
	6H	18.1	19.3	18.5	19.7	20.1	18.6	19.8	19.0	20.2	20.6
	8H	18.2	19.3	18.6	19.7	20.1	18.6	19.7	19.0	20.1	20.5
	12H	18.2	19.3	18.6	19.7	20.1	18.5	19.7	19.0	20.0	20.5
4H	2H	16.8	18.1	17.2	18.5	18.9	17.9	19.2	18.3	19.5	19.9
	3H	18.3	19.4	18.7	19.8	20.2	19.0	20.1	19.4	20.5	20.9
	4H	18.9	19.8	19.3	20.3	20.7	19.2	20.2	19.7	20.6	21.1
	6H	19.2	20.0	19.7	20.5	20.9	19.3	20.2	19.8	20.6	21.1
	8H	19.3	20.1	19.7	20.5	21.0	19.3	20.1	19.8	20.6	21.0
	12H	19.3	20.0	19.8	20.5	21.0	19.3	20.0	19.8	20.5	21.0
8H	4H	19.0	19.8	19.5	20.3	20.7	19.4	20.2	19.9	20.6	21.1
	6H	19.4	20.1	19.9	20.6	21.1	19.5	20.2	20.0	20.7	21.1
	8H	19.6	20.1	20.1	20.7	21.1	19.5	20.1	20.0	20.6	21.1
	12H	19.6	20.1	20.1	20.6	21.2	19.5	20.0	20.0	20.5	21.1
12H	4H	19.0	19.7	19.5	20.2	20.7	19.4	20.1	19.9	20.6	21.0
	6H	19.4	20.0	20.0	20.5	21.0	19.5	20.1	20.1	20.6	21.1
	8H	19.6	20.1	20.1	20.6	21.1	19.5	20.1	20.0	20.5	21.1

Maximum UGR = 21.2

POLAR GRAPH



Maximum Candela = 1848.714 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.)