



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-840-A-(L21)-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] 05-13-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] LED DUAL APERTURE 2x2'RECESSED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [LUMCAT] HETG-S22-L38-840-A-(L21)-DIM-UNV
 [LAMPCAT] HLM2256_5630 REV A 10560223
 [_SEARCH_SOURCE] 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	2266
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	17.1
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	2147	2368	2504
55	1784	2083	2291
65	1403	1711	1624
75	1018	1113	710
85	492	299	123

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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	917.474	917.474	917.474	917.474	917.474
5	913.852	915.404	914.887	911.782	912.817
10	899.363	901.950	899.880	898.328	901.950
15	874.007	879.699	878.146	879.181	883.321
20	833.644	846.063	845.546	852.273	854.343
25	786.554	798.973	809.323	816.567	818.120
30	729.632	742.052	760.681	768.960	776.722
35	664.949	679.438	702.207	714.108	726.010
40	593.538	609.579	638.040	652.012	666.501
45	512.813	527.819	565.595	582.671	598.195
50	427.948	443.472	486.422	508.673	523.679
55	345.670	361.711	403.626	431.052	443.989
60	269.602	284.091	326.006	337.390	344.635
65	200.261	210.610	244.246	237.519	231.826
70	140.752	153.689	167.143	146.444	129.885
75	89.005	100.907	97.284	76.068	62.096
80	46.055	50.195	40.880	32.083	23.286
85	14.489	14.489	8.797	7.762	3.622
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	334.56	N.A.	14.80
0-30	705.81	N.A.	31.10
0-40	1141.87	N.A.	50.40
0-60	1926.71	N.A.	85.00
0-80	2250.01	N.A.	99.30
0-90	2266.2	N.A.	100.00
10-90	2179.41	N.A.	96.20
20-40	807.30	N.A.	35.60
20-50	1237.14	N.A.	54.60
40-70	1011.95	N.A.	44.70
60-80	323.30	N.A.	14.30
70-80	96.19	N.A.	4.20
80-90	16.19	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	2266.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	86.79
10-20	247.77
20-30	371.25
30-40	436.05
40-50	429.83
50-60	355.01
60-70	227.11
70-80	96.19
80-90	16.19
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

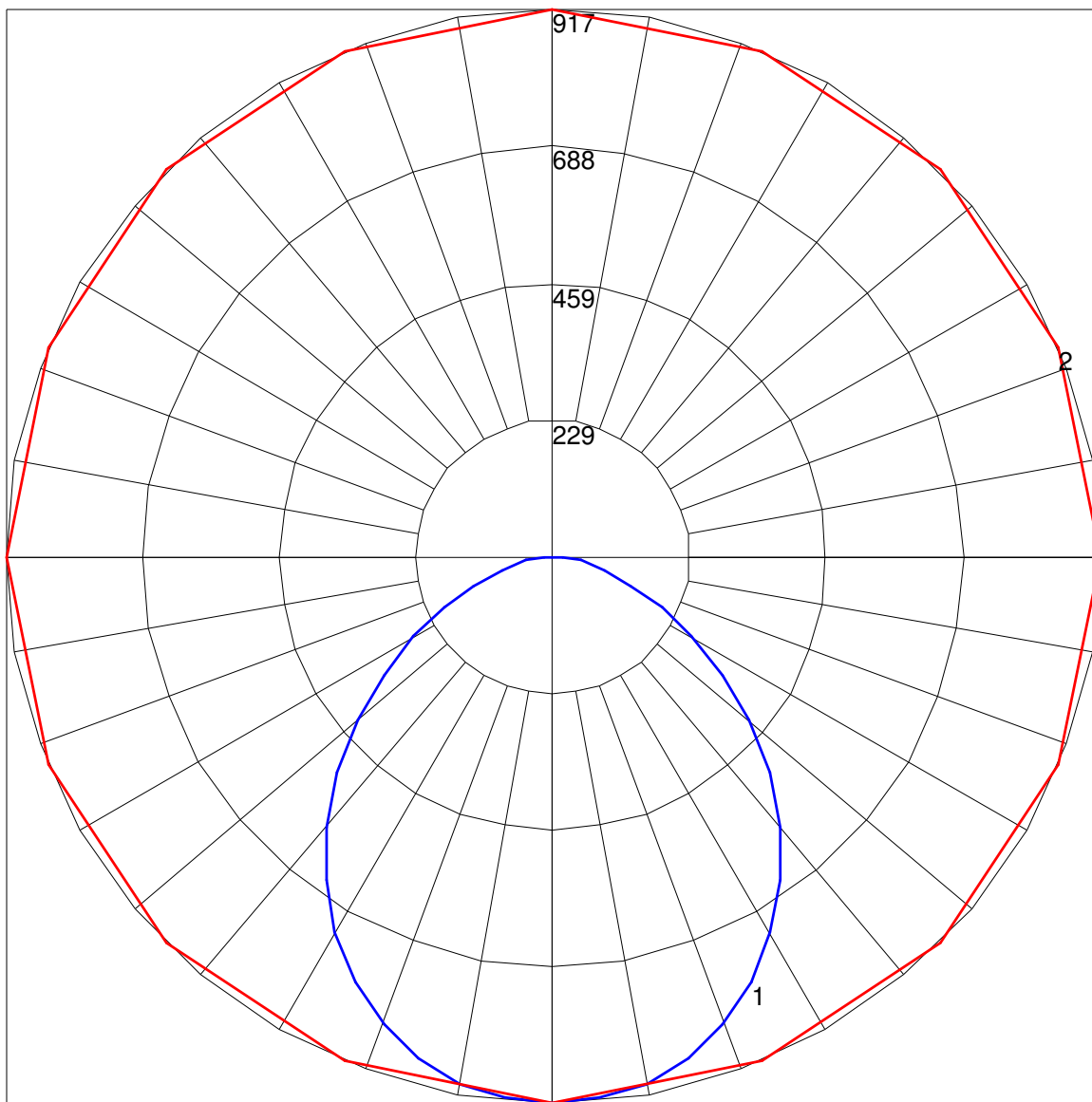
X=2H	Y=2H	13.6	15.2	14.0	15.5	15.8	14.9	16.5	15.3	16.8	17.1
	3H	14.9	16.3	15.3	16.7	17.0	15.9	17.3	16.3	17.6	18.0
	4H	15.4	16.7	15.8	17.0	17.4	16.0	17.4	16.4	17.7	18.1
	6H	15.6	16.8	16.0	17.2	17.6	16.1	17.3	16.5	17.7	18.1
	8H	15.7	16.8	16.1	17.2	17.6	16.1	17.2	16.5	17.6	18.0
	12H	15.7	16.8	16.1	17.2	17.6	16.0	17.1	16.5	17.5	18.0

UGR Viewed Endwise

4H	2H	14.3	15.6	14.7	16.0	16.4	15.4	16.7	15.8	17.0	17.4
	3H	15.8	16.9	16.2	17.3	17.7	16.5	17.6	16.9	18.0	18.4
	4H	16.4	17.3	16.8	17.7	18.2	16.7	17.7	17.2	18.1	18.6
	6H	16.7	17.5	17.2	18.0	18.4	16.8	17.7	17.3	18.1	18.6
	8H	16.8	17.6	17.2	18.0	18.5	16.8	17.6	17.3	18.1	18.5
	12H	16.8	17.5	17.3	18.0	18.5	16.8	17.5	17.3	18.0	18.5
8H	4H	16.5	17.3	17.0	17.8	18.2	16.9	17.7	17.3	18.1	18.6
	6H	16.9	17.6	17.4	18.1	18.6	17.0	17.7	17.5	18.2	18.6
	8H	17.1	17.6	17.6	18.1	18.6	17.0	17.6	17.5	18.1	18.6
	12H	17.1	17.6	17.6	18.1	18.7	17.0	17.5	17.5	18.0	18.6
12H	4H	16.5	17.2	17.0	17.7	18.2	16.9	17.6	17.4	18.1	18.5
	6H	16.9	17.5	17.5	18.0	18.5	17.0	17.6	17.6	18.1	18.6
	8H	17.1	17.6	17.6	18.1	18.6	17.0	17.6	17.5	18.0	18.6

Maximum UGR = 18.7

POLAR GRAPH



Maximum Candela = 917.474 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.)