



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L50-835-A-(L35)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20210.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 12-23-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] DUAL APERTURE 2x4' RECESSED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES

[LUMCAT] HETG-S24-L50-835-A-(L35)-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

[_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	3548
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	24.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 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	1663	1780	1852
55	1397	1621	1700
65	1087	1386	1177
75	773	900	579
85	386	235	176

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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	1413.418	1413.418	1413.418	1413.418	1413.418
5	1405.811	1405.811	1399.725	1398.204	1400.233
10	1382.990	1382.482	1379.947	1378.425	1379.947
15	1347.489	1347.489	1352.054	1347.489	1350.025
20	1296.775	1297.789	1310.468	1303.875	1306.918
25	1228.817	1233.381	1249.610	1246.567	1253.667
30	1150.209	1162.888	1171.002	1184.188	1186.724
35	1059.430	1075.151	1081.237	1105.073	1106.595
40	948.365	967.129	983.358	1003.644	1014.294
45	816.507	838.821	873.814	890.043	909.314
50	683.634	706.963	759.706	782.021	801.292
55	556.340	580.176	645.598	677.041	677.041
60	435.132	457.446	535.040	559.383	519.826
65	318.995	344.860	406.732	403.182	345.367
70	221.116	244.445	279.438	250.023	200.323
75	138.958	154.680	161.780	128.308	103.965
80	71.508	77.593	70.493	53.758	43.615
85	23.329	19.272	14.200	12.679	10.650
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HETG-S24-L50-835-A-(L35)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	513.70	N.A.	14.50
0-30	1086.28	N.A.	30.60
0-40	1764.11	N.A.	49.70
0-60	2995.29	N.A.	84.40
0-80	3522.02	N.A.	99.30
0-90	3548.25	N.A.	100.00
10-90	3415.07	N.A.	96.20
20-40	1250.42	N.A.	35.20
20-50	1919.18	N.A.	54.10
40-70	1601.33	N.A.	45.10
60-80	526.73	N.A.	14.80
70-80	156.57	N.A.	4.40
80-90	26.23	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	3548.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.18
10-20	380.51
20-30	572.59
30-40	677.83
40-50	668.76
50-60	562.41
60-70	370.16
70-80	156.57
80-90	26.23
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	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62
4	85	73	65	58	82	72	64	58	69	63	57	67	61	56	65	60	56	54
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	44	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	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	12.9	14.5	13.3	14.8	15.1	14.2	15.7	14.5	16.0	16.4
	3H	14.2	15.6	14.6	15.9	16.3	15.1	16.5	15.5	16.9	17.2
	4H	14.6	15.9	15.0	16.3	16.7	15.3	16.6	15.7	17.0	17.4
	6H	14.8	16.1	15.3	16.4	16.8	15.4	16.6	15.8	17.0	17.3
	8H	14.9	16.0	15.3	16.4	16.8	15.3	16.5	15.8	16.9	17.3
	12H	14.9	16.0	15.3	16.4	16.8	15.3	16.4	15.8	16.8	17.3

UGR Viewed Endwise

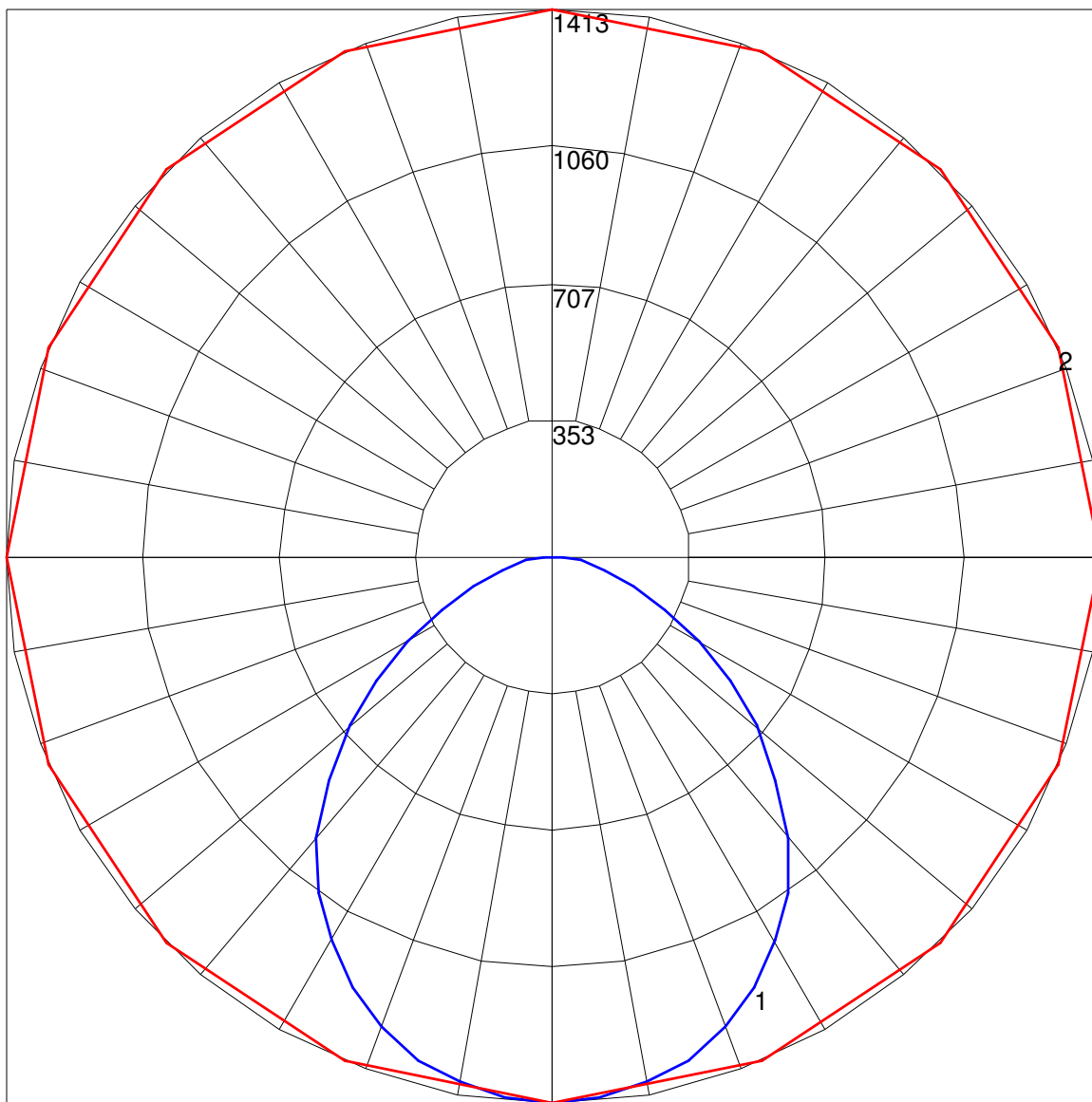
4H	2H	13.7	15.0	14.1	15.3	15.7	14.6	16.0	15.0	16.3	16.7
	3H	15.1	16.2	15.5	16.6	17.0	15.8	16.9	16.2	17.3	17.7
	4H	15.6	16.6	16.1	17.0	17.5	16.1	17.1	16.5	17.5	17.9
	6H	15.9	16.8	16.4	17.2	17.7	16.2	17.0	16.6	17.5	17.9
	8H	16.0	16.8	16.5	17.2	17.7	16.2	17.0	16.6	17.4	17.9
	12H	16.0	16.7	16.5	17.2	17.7	16.2	16.9	16.7	17.4	17.8

8H	4H	15.8	16.6	16.3	17.1	17.5	16.2	17.0	16.7	17.5	17.9
	6H	16.2	16.8	16.7	17.3	17.8	16.4	17.0	16.9	17.5	18.0
	8H	16.3	16.9	16.8	17.4	17.9	16.4	17.0	16.9	17.5	18.0
	12H	16.4	16.9	16.9	17.4	17.9	16.4	16.9	16.9	17.4	18.0

12H	4H	15.8	16.5	16.3	17.0	17.5	16.2	16.9	16.7	17.4	17.9
	6H	16.2	16.8	16.7	17.2	17.8	16.4	17.0	16.9	17.4	18.0
	8H	16.3	16.8	16.8	17.3	17.9	16.4	16.9	16.9	17.4	18.0

Maximum UGR = 18.0

POLAR GRAPH



Maximum Candela = 1413.418 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.)