



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L76-835-A-(L60)-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 APERATURE 2x4' RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [LUMCAT] HETG-S24-L76-835-A-(L60)-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	6126
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	45.7
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	2872	3073	3198
55	2412	2799	2936
65	1877	2394	2032
75	1335	1555	999
85	666	405	304

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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	2440.418	2440.418	2440.418	2440.418	2440.418
5	2427.283	2427.283	2416.776	2414.149	2417.651
10	2387.879	2387.004	2382.625	2379.999	2382.625
15	2326.584	2326.584	2334.465	2326.584	2330.962
20	2239.020	2240.771	2262.662	2251.279	2256.533
25	2121.684	2129.565	2157.585	2152.331	2164.590
30	1985.959	2007.850	2021.860	2044.627	2049.005
35	1829.219	1856.364	1866.872	1908.027	1910.654
40	1637.453	1669.852	1697.872	1732.898	1751.287
45	1409.786	1448.314	1508.733	1536.754	1570.028
50	1180.367	1220.647	1311.714	1350.242	1383.516
55	960.581	1001.736	1114.694	1168.984	1168.984
60	751.302	789.830	923.804	965.835	897.534
65	550.780	595.437	702.266	696.136	596.313
70	381.780	422.060	482.479	431.692	345.879
75	239.926	267.071	279.330	221.538	179.507
80	123.466	133.973	121.714	92.818	75.305
85	40.280	33.274	24.518	21.891	18.389
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	886.95	N.A.	14.50
0-30	1875.58	N.A.	30.60
0-40	3045.93	N.A.	49.70
0-60	5171.68	N.A.	84.40
0-80	6081.14	N.A.	99.30
0-90	6126.44	N.A.	100.00
10-90	5896.48	N.A.	96.20
20-40	2158.98	N.A.	35.20
20-50	3313.66	N.A.	54.10
40-70	2764.88	N.A.	45.10
60-80	909.46	N.A.	14.80
70-80	270.34	N.A.	4.40
80-90	45.29	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	6126.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	229.96
10-20	657.00
20-30	988.63
30-40	1170.35
40-50	1154.69
50-60	971.07
60-70	639.12
70-80	270.34
80-90	45.29
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	14.8	16.4	15.2	16.7	17.0	16.1	17.6	16.4	17.9	18.3
	3H	16.1	17.5	16.5	17.8	18.2	17.0	18.4	17.4	18.8	19.1
	4H	16.5	17.8	16.9	18.2	18.6	17.2	18.5	17.6	18.9	19.3
	6H	16.7	18.0	17.2	18.3	18.7	17.3	18.5	17.7	18.9	19.2
	8H	16.8	17.9	17.2	18.3	18.7	17.2	18.4	17.7	18.8	19.2
	12H	16.8	17.9	17.2	18.3	18.7	17.2	18.3	17.7	18.7	19.2

UGR Viewed Endwise

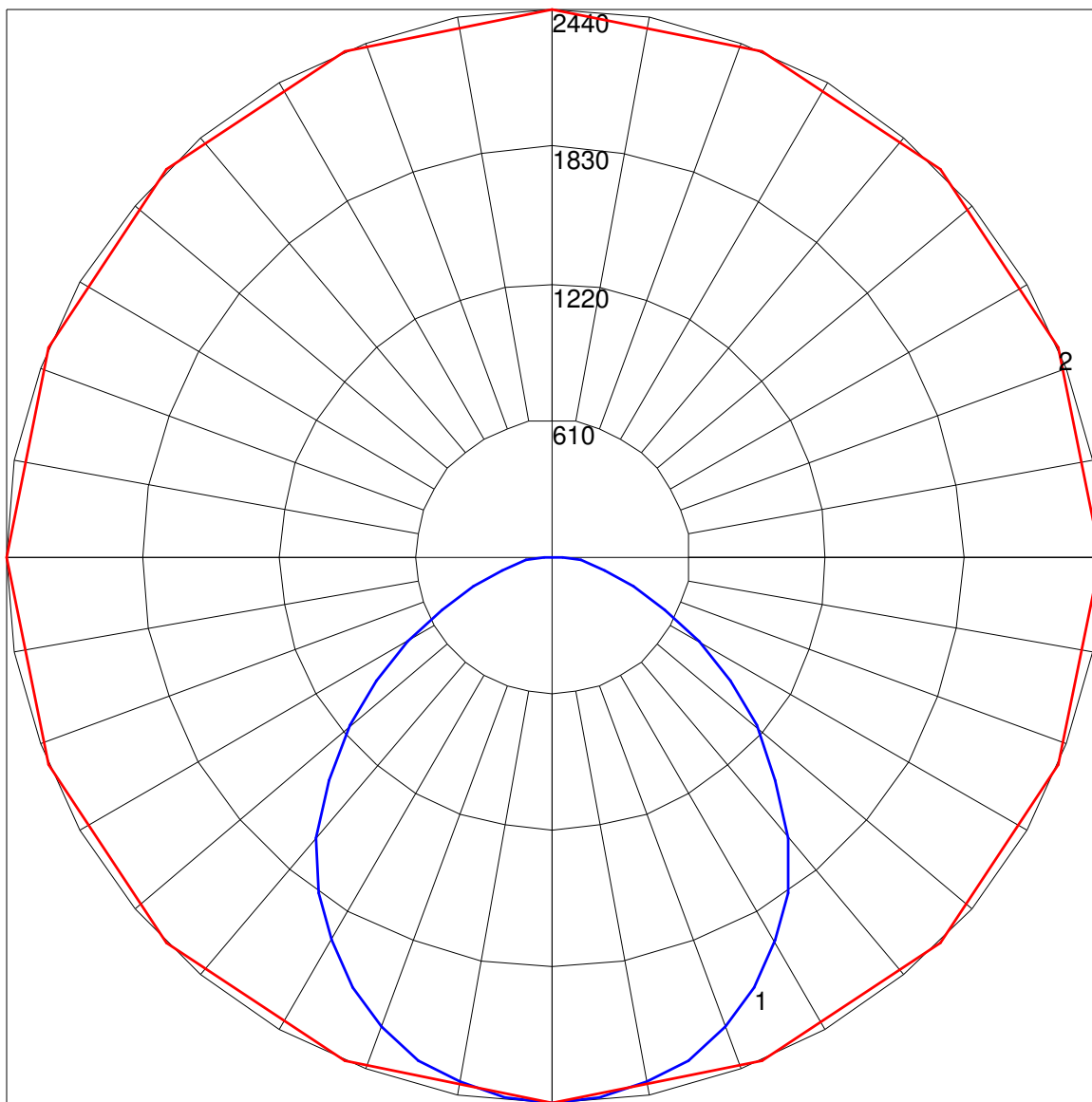
4H	2H	15.6	16.9	16.0	17.2	17.6	16.5	17.9	16.9	18.2	18.6
	3H	17.0	18.1	17.4	18.5	18.9	17.7	18.8	18.1	19.2	19.6
	4H	17.5	18.5	18.0	18.9	19.4	18.0	19.0	18.4	19.4	19.8
	6H	17.8	18.7	18.3	19.1	19.6	18.1	18.9	18.5	19.4	19.8
	8H	17.9	18.7	18.4	19.1	19.6	18.1	18.9	18.5	19.3	19.8
	12H	17.9	18.6	18.4	19.1	19.6	18.1	18.8	18.6	19.3	19.7

8H	4H	17.7	18.5	18.2	19.0	19.4	18.1	18.9	18.6	19.4	19.8
	6H	18.1	18.7	18.6	19.2	19.7	18.3	18.9	18.8	19.4	19.9
	8H	18.2	18.8	18.7	19.3	19.8	18.3	18.9	18.8	19.4	19.9
	12H	18.3	18.8	18.8	19.3	19.8	18.3	18.8	18.8	19.3	19.9

12H	4H	17.7	18.4	18.2	18.9	19.4	18.1	18.8	18.6	19.3	19.8
	6H	18.1	18.7	18.6	19.1	19.7	18.3	18.9	18.8	19.3	19.9
	8H	18.2	18.7	18.7	19.2	19.8	18.3	18.8	18.8	19.3	19.9

Maximum UGR = 19.9

POLAR GRAPH



Maximum Candela = 2440.418 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.)