



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L76-840-A-(L62)-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] 11-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4-28 LED 22"ARRAYS DUAL APERATURE 2x4'RECESSED
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [MORE] EVERLINE #D15CC55UNV
 [LUMCAT] HETG-S24-L76-840-A-(L62)-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	6451
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	41
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	3024	3236	3368
55	2540	2948	3091
65	1977	2521	2140
75	1406	1637	1052
85	701	427	320

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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	2569.888	2569.888	2569.888	2569.888	2569.888
5	2556.056	2556.056	2544.991	2542.225	2545.913
10	2514.562	2513.640	2509.029	2506.263	2509.029
15	2450.015	2450.015	2458.314	2450.015	2454.626
20	2357.805	2359.649	2382.702	2370.715	2376.247
25	2234.244	2242.543	2272.050	2266.518	2279.427
30	2091.319	2114.371	2129.125	2153.099	2157.710
35	1926.263	1954.848	1965.914	2009.252	2012.018
40	1724.324	1758.441	1787.949	1824.832	1844.197
45	1484.578	1525.151	1588.775	1618.282	1653.322
50	1242.988	1285.405	1381.303	1421.876	1456.915
55	1011.542	1054.880	1173.831	1231.001	1231.001
60	791.160	831.733	972.814	1017.074	945.151
65	580.000	627.027	739.523	733.068	627.949
70	402.035	444.451	508.076	454.594	364.229
75	252.655	281.240	294.149	233.291	189.030
80	130.016	141.081	128.172	97.742	79.300
85	42.417	35.040	25.819	23.052	19.364
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	934.01	N.A.	14.50
0-30	1975.09	N.A.	30.60
0-40	3207.52	N.A.	49.70
0-60	5446.05	N.A.	84.40
0-80	6403.76	N.A.	99.30
0-90	6451.46	N.A.	100.00
10-90	6209.3	N.A.	96.20
20-40	2273.52	N.A.	35.20
20-50	3489.46	N.A.	54.10
40-70	2911.56	N.A.	45.10
60-80	957.71	N.A.	14.80
70-80	284.68	N.A.	4.40
80-90	47.70	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	6451.46	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	242.16
10-20	691.85
20-30	1041.08
30-40	1232.44
40-50	1215.95
50-60	1022.59
60-70	673.03
70-80	284.68
80-90	47.70
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	15.0	16.6	15.4	16.9	17.2	16.3	17.8	16.6	18.1	18.5
	3H	16.3	17.7	16.7	18.0	18.4	17.2	18.6	17.6	19.0	19.3
	4H	16.7	18.0	17.1	18.4	18.8	17.4	18.7	17.8	19.1	19.5
	6H	16.9	18.2	17.4	18.5	18.9	17.5	18.7	17.9	19.1	19.4
	8H	17.0	18.1	17.4	18.5	18.9	17.4	18.6	17.9	19.0	19.4
	12H	17.0	18.1	17.4	18.5	18.9	17.4	18.5	17.9	18.9	19.4

UGR Viewed Endwise

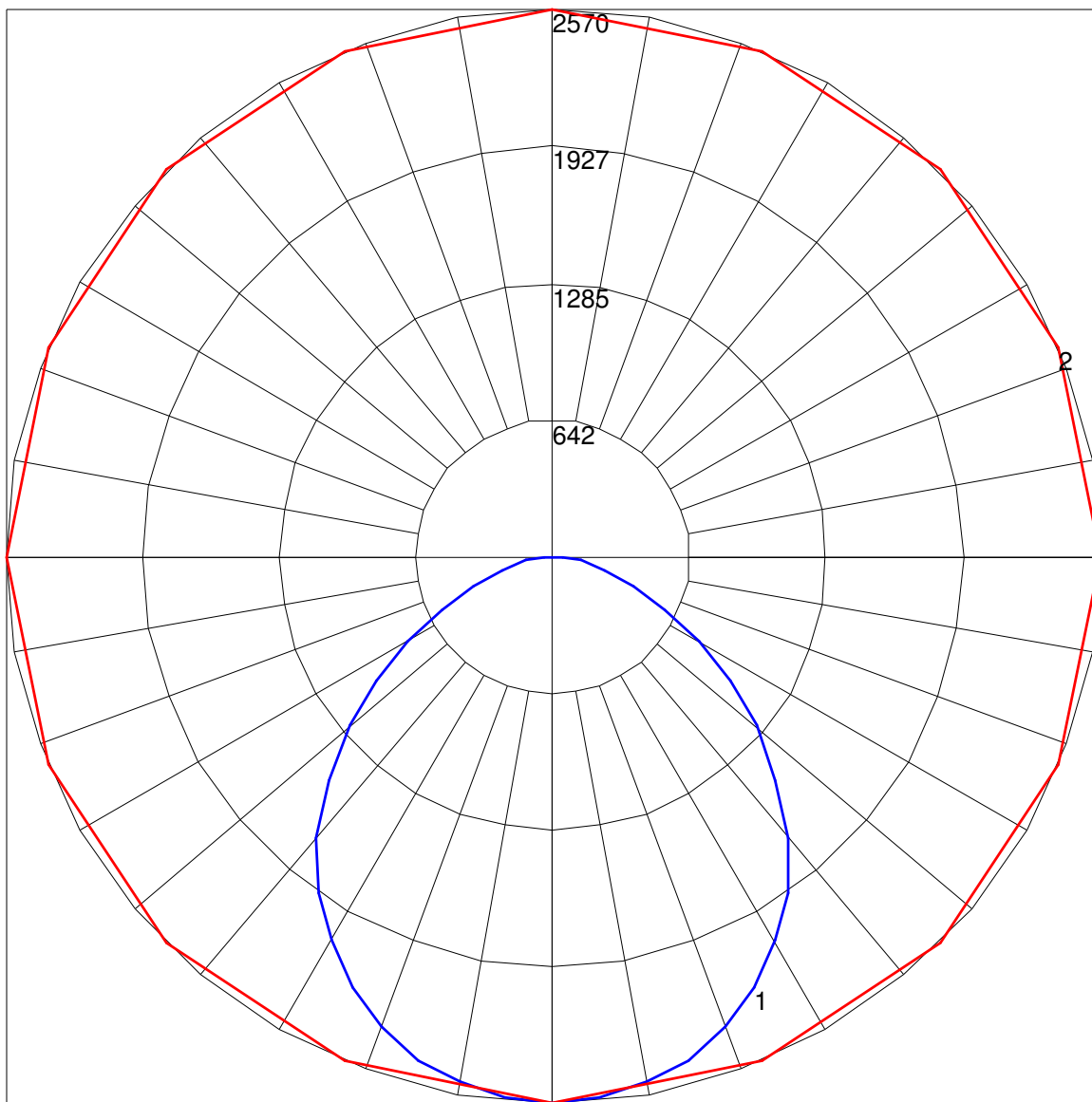
4H	2H	15.8	17.1	16.2	17.4	17.8	16.7	18.1	17.1	18.4	18.8
	3H	17.2	18.3	17.6	18.7	19.1	17.9	19.0	18.3	19.4	19.8
	4H	17.7	18.7	18.2	19.1	19.6	18.2	19.2	18.6	19.6	20.0
	6H	18.0	18.9	18.5	19.3	19.8	18.3	19.1	18.7	19.6	20.0
	8H	18.1	18.9	18.6	19.3	19.8	18.3	19.1	18.7	19.5	20.0
	12H	18.1	18.8	18.6	19.3	19.8	18.3	19.0	18.8	19.5	19.9

8H	4H	17.9	18.7	18.4	19.2	19.6	18.3	19.1	18.8	19.6	20.0
	6H	18.3	18.9	18.8	19.4	19.9	18.5	19.1	19.0	19.6	20.1
	8H	18.4	19.0	18.9	19.5	20.0	18.5	19.1	19.0	19.6	20.1
	12H	18.5	19.0	19.0	19.5	20.0	18.5	19.0	19.0	19.5	20.1

12H	4H	17.9	18.6	18.4	19.1	19.6	18.3	19.0	18.8	19.5	20.0
	6H	18.3	18.9	18.8	19.3	19.9	18.5	19.1	19.0	19.5	20.1
	8H	18.4	18.9	18.9	19.4	20.0	18.5	19.0	19.0	19.5	20.1

Maximum UGR = 20.1

POLAR GRAPH



Maximum Candela = 2569.888 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.)