



IES INDOOR REPORT  
PHOTOMETRIC FILENAME : HZL-4-L250-840-HIA-XXXX-DRV-UNV\_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TESTLAB] GEN from BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 4-DEC-2024  
[TEST]BALLABS TEST NO. 21051.0  
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] FULLY SEALED & GASKETED HAZARDOUS LOCATION LED LUMINAIRE  
[MORE] WHITE REFLECTOR w/CLEAR ACRYLIC DROP LENS  
[LUMCAT] HZL-4-L250-840-HIA-xxxx-DRV-UNV  
[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	25714
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	149
Total Luminaire Watts	173
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	1.10 ft
Luminous Height	0.23 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19152	14697	14683
55	17349	11965	15661
65	14082	13434	12726
75	8195	7588	9479
85	2829	5396	5934

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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	8974.652	8974.652	8974.652	8974.652	8974.652
5	9079.177	8995.350	8849.429	8831.836	8821.487
10	8956.024	8825.627	8798.719	8785.266	8799.754
15	8755.254	8672.462	8716.962	8695.229	8685.915
20	8504.808	8465.482	8448.923	8440.644	8436.504
25	8177.779	8202.617	8156.047	8170.535	8178.814
30	7801.076	7795.901	7831.088	7863.170	7870.414
35	7351.929	7380.906	7395.395	7630.317	7048.704
40	6859.317	6862.422	7655.155	4931.298	4891.972
45	6226.993	6218.714	5372.166	4604.270	5469.446
50	5511.877	5562.587	3959.527	6113.154	5851.324
55	4675.678	5127.929	3784.629	4996.497	5080.324
60	3808.432	3654.232	4471.803	4328.986	4485.256
65	2896.685	2175.360	3458.636	3623.185	3390.332
70	1976.659	1577.188	2710.403	2368.886	1865.925
75	1111.483	1120.797	1447.825	1340.195	1899.041
80	475.019	822.745	728.570	1056.633	1086.645
85	173.863	370.494	638.533	802.047	760.651
90	42.431	179.038	247.341	241.132	233.887
95	54.850	64.164	78.652	96.246	99.350
100	86.932	58.989	71.408	77.617	76.583
105	73.478	68.303	68.303	92.106	94.176
110	53.815	49.675	54.850	68.303	73.478
115	36.221	45.536	45.536	50.710	54.850
120	25.872	25.872	71.408	41.396	45.536
125	17.593	12.419	51.745	94.176	74.513
130	12.419	0.000	22.768	50.710	90.036
135	9.314	0.000	35.187	26.907	26.907
140	0.000	0.000	14.489	54.850	36.221
145	0.000	0.000	0.000	23.803	40.361
150	0.000	0.000	0.000	10.349	13.454
155	0.000	0.000	0.000	0.000	9.314
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	3301.48	N.A.	12.80
0-30	7071.87	N.A.	27.50
0-40	11606.29	N.A.	45.10
0-60	20214.32	N.A.	78.60
0-80	24808.1	N.A.	96.50
0-90	25404.17	N.A.	98.80
10-90	24556.2	N.A.	95.50
20-40	8304.82	N.A.	32.30
20-50	12687.85	N.A.	49.30
40-70	11698.64	N.A.	45.50
60-80	4593.78	N.A.	17.90
70-80	1503.16	N.A.	5.80
80-90	596.08	N.A.	2.30
90-110	194.12	N.A.	0.80
90-120	242.93	N.A.	0.90
90-130	282.71	N.A.	1.10
90-150	308.55	N.A.	1.20
90-180	309.36	N.A.	1.20
110-180	115.24	N.A.	0.40
0-180	25713.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	847.98
10-20	2453.5
20-30	3770.4
30-40	4534.42
40-50	4383.03
50-60	4224.99
60-70	3090.61
70-80	1503.16
80-90	596.08
90-100	117.95
100-110	76.17
110-120	48.81
120-130	39.78
130-140	18.11
140-150	7.73
150-160	0.81
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	74	74	74	74	72	72	72	72	69	69	69	66	66	66	63	63	63	61
1	68	65	62	59	66	63	61	58	60	58	56	58	56	55	55	54	53	51
2	61	56	52	49	60	55	51	48	53	49	47	51	48	45	49	46	44	43
3	56	49	44	40	54	48	44	40	46	42	39	45	41	38	43	40	38	36
4	51	44	38	34	50	43	38	34	41	37	33	40	36	33	38	35	32	31
5	47	39	34	29	46	38	33	29	37	32	29	36	32	28	34	31	28	27
6	44	35	30	26	42	35	29	26	33	29	25	32	28	25	31	28	25	23
7	40	32	27	23	39	31	26	23	30	26	22	29	25	22	29	25	22	21
8	38	29	24	20	37	29	24	20	28	23	20	27	23	20	26	22	20	18
9	35	27	22	18	34	26	21	18	26	21	18	25	21	18	24	20	18	17
10	33	25	20	17	32	24	20	16	24	19	16	23	19	16	22	19	16	15

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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

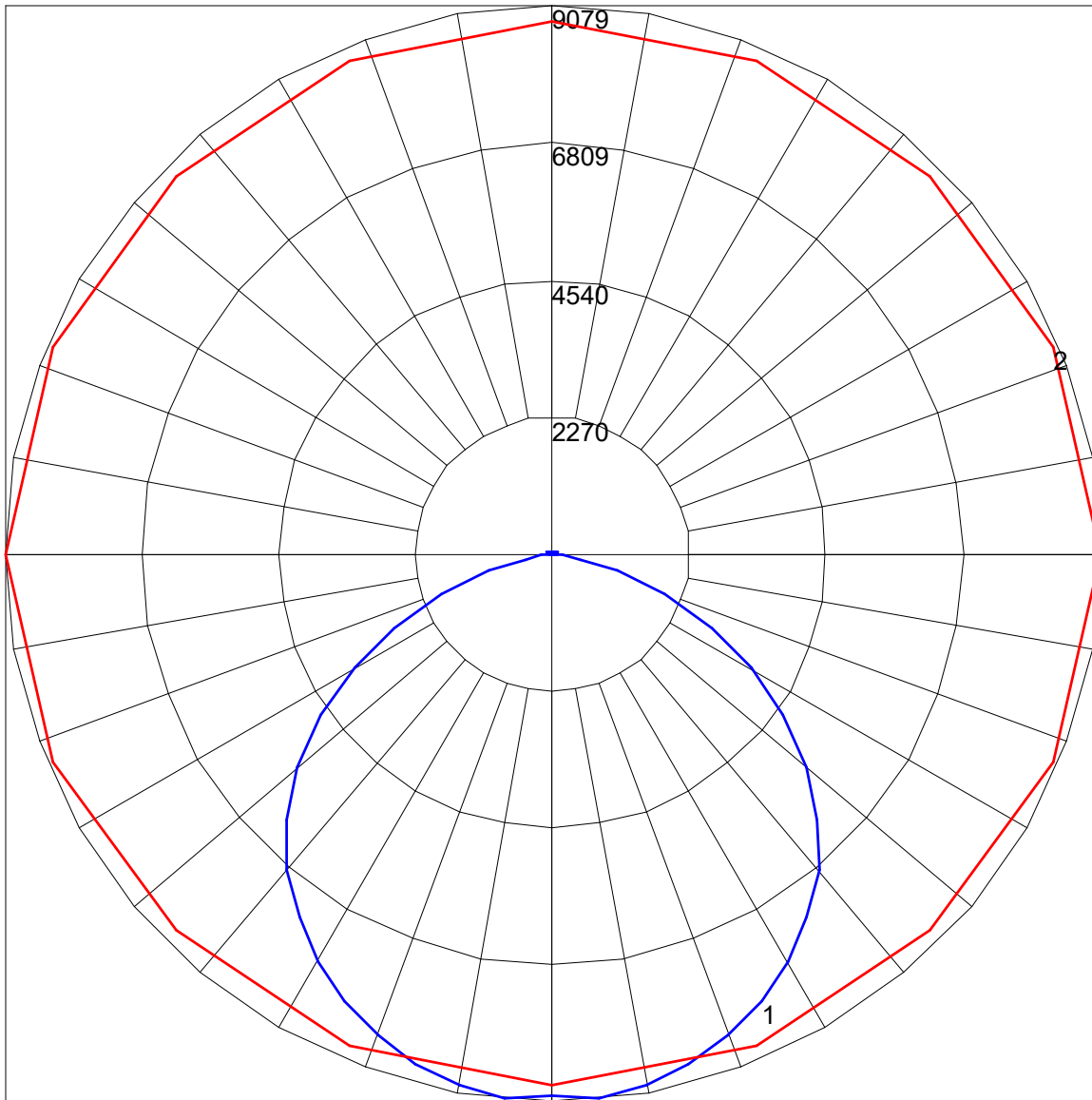
X=2H	Y=2H	23.0	24.6	23.4	24.9	25.3	23.9	25.5	24.3	25.9	26.2
	3H	23.9	25.3	24.3	25.7	26.1	25.3	26.7	25.7	27.1	27.5
	4H	24.2	25.5	24.6	25.9	26.3	25.8	27.2	26.2	27.6	28.0
	6H	24.3	25.6	24.7	25.9	26.4	26.3	27.5	26.7	27.9	28.3
	8H	24.3	25.5	24.7	25.9	26.4	26.5	27.7	26.9	28.1	28.5
	12H	24.3	25.5	24.8	25.9	26.3	26.7	27.8	27.1	28.2	28.7

### UGR Viewed Endwise

4H	2H	23.7	25.0	24.1	25.4	25.8	24.4	25.8	24.8	26.2	26.6
	3H	24.7	25.9	25.2	26.3	26.7	26.0	27.1	26.4	27.6	28.0
	4H	25.1	26.1	25.5	26.6	27.0	26.6	27.6	27.0	28.0	28.5
	6H	25.3	26.2	25.8	26.7	27.1	27.1	28.0	27.6	28.5	29.0
	8H	25.3	26.2	25.8	26.7	27.1	27.4	28.2	27.9	28.7	29.2
	12H	25.4	26.1	25.9	26.6	27.1	27.6	28.4	28.1	28.9	29.4
8H	4H	25.3	26.2	25.8	26.6	27.1	26.7	27.5	27.2	28.0	28.5
	6H	25.6	26.3	26.1	26.8	27.3	27.3	28.0	27.8	28.5	29.0
	8H	25.7	26.4	26.2	26.9	27.4	27.7	28.3	28.2	28.8	29.3
	12H	25.8	26.3	26.3	26.8	27.4	28.0	28.6	28.6	29.1	29.7
12H	4H	25.4	26.1	25.9	26.6	27.1	26.7	27.4	27.2	27.9	28.4
	6H	25.7	26.3	26.2	26.8	27.4	27.3	28.0	27.9	28.5	29.0
	8H	25.8	26.4	26.3	26.9	27.5	27.7	28.3	28.2	28.8	29.4

Maximum UGR = 29.7

POLAR GRAPH



Maximum Candela = 9079.177 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)