



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L250-840-HIAFR-XXXX-DRV-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 21052.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 4-DEC-2024

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] FULLY SEALED & GASKETED HAZARDOUS LOCATION LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC DROP LENS

[LUMCAT] HZL-4-L250-840-HIAFR-xxxx-DRV-UNV

[LAMPCAT] HLM 80 CRI, 4000K CCT

[_SEARCH_SOURCE TYPE] LED

[_SEARCH_APPLICATION] INDOOR, OUTDOOR, COMMERCIAL, INDUSTRIAL

[_SEARCH_MOUNTING] SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	25210
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
Total Luminaire Watts	173
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
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	17398	14807	14562
55	14866	12460	13721
65	12159	10830	11833
75	8430	8567	9836
85	3674	6225	7605

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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	8981.773	8981.773	8981.773	8981.773	8981.773
5	9094.137	8952.642	8891.259	8868.370	8860.047
10	8967.208	8837.158	8789.299	8769.532	8762.249
15	8737.279	8637.401	8609.310	8600.987	8589.543
20	8460.533	8367.937	8327.362	8333.604	8304.473
25	8087.029	7976.747	7947.616	7936.171	7927.848
30	7641.738	7551.223	7484.638	7451.345	7371.234
35	7082.003	6991.488	6930.105	6732.429	6635.671
40	6402.622	6336.036	6237.198	5996.866	5957.331
45	5656.655	5707.635	5412.161	5368.464	5424.646
50	4861.789	4821.214	4657.871	4880.517	4968.951
55	4006.581	3959.763	3941.035	4359.276	4450.831
60	3178.422	3225.240	3364.654	3750.642	3855.723
65	2501.122	2479.273	2788.272	3113.917	3152.412
70	1752.034	1847.750	2217.092	2484.475	2533.374
75	1143.400	1274.490	1634.468	1885.205	1970.518
80	625.280	770.936	1151.723	1379.570	1440.954
85	225.767	413.039	736.603	928.037	974.855
90	103.000	236.171	450.493	584.705	616.957
95	93.636	179.989	312.120	384.948	399.514
100	90.515	143.575	241.373	291.312	300.676
105	80.111	112.363	199.757	244.494	258.019
110	64.505	82.192	166.464	213.282	226.807
115	49.939	60.343	135.252	185.191	199.757
120	36.414	39.535	108.202	156.060	173.747
125	27.050	22.889	82.192	130.050	143.575
130	18.727	16.646	58.262	99.878	116.525
135	14.566	0.000	36.414	75.949	87.394
140	0.000	0.000	19.768	49.939	62.424
145	0.000	0.000	0.000	32.252	39.535
150	0.000	0.000	0.000	13.525	18.727
155	0.000	0.000	0.000	0.000	13.525
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HZL-4-L250-840-HIAFR-XXXX-DRV-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	3282.71	N.A.	13.00
0-30	6951.52	N.A.	27.60
0-40	11248.5	N.A.	44.60
0-60	19198.07	N.A.	76.20
0-80	23679.04	N.A.	93.90
0-90	24450.44	N.A.	97.00
10-90	23601.88	N.A.	93.60
20-40	7965.79	N.A.	31.60
20-50	12217.68	N.A.	48.50
40-70	10732.68	N.A.	42.60
60-80	4480.97	N.A.	17.80
70-80	1697.86	N.A.	6.70
80-90	771.41	N.A.	3.10
90-110	518.13	N.A.	2.10
90-120	644.18	N.A.	2.60
90-130	716.92	N.A.	2.80
90-150	758.78	N.A.	3.00
90-180	759.90	N.A.	3.00
110-180	241.77	N.A.	1.00
0-180	25210.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	848.57
10-20	2434.15
20-30	3668.81
30-40	4296.98
40-50	4251.89
50-60	3697.68
60-70	2783.11
70-80	1697.86
80-90	771.41
90-100	324.14
100-110	193.99
110-120	126.05
120-130	72.74
130-140	32.73
140-150	9.14
150-160	1.12
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	110	110	110	105	105	105	100	100	100	97
1	108	103	99	95	105	101	97	93	96	92	89	91	89	86	87	85	83	81
2	98	90	83	77	95	88	82	76	84	78	74	80	76	72	77	73	70	67
3	90	79	71	64	87	77	70	64	74	67	62	71	65	61	68	63	59	57
4	82	70	61	55	80	69	61	54	66	59	53	63	57	52	61	55	51	49
5	76	63	54	47	73	62	53	47	59	52	46	57	50	45	55	49	45	42
6	70	57	48	41	68	56	47	41	53	46	40	51	45	40	50	44	39	37
7	65	51	43	37	63	51	42	36	49	41	36	47	40	35	45	39	35	33
8	61	47	39	33	59	46	38	33	45	37	32	43	37	32	42	36	31	29
9	57	43	35	29	55	42	35	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24

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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	20.0	21.6	20.4	22.0	22.3	21.3	22.9	21.7	23.3	23.7
	3H	21.3	22.7	21.8	23.1	23.6	23.2	24.7	23.7	25.0	25.5
	4H	21.7	23.1	22.2	23.5	23.9	24.1	25.4	24.5	25.8	26.2
	6H	22.0	23.2	22.4	23.6	24.1	24.8	26.0	25.2	26.4	26.9
	8H	22.0	23.2	22.5	23.7	24.1	25.1	26.3	25.6	26.7	27.2
	12H	22.0	23.2	22.5	23.6	24.1	25.4	26.5	25.9	27.0	27.5

UGR Viewed Endwise

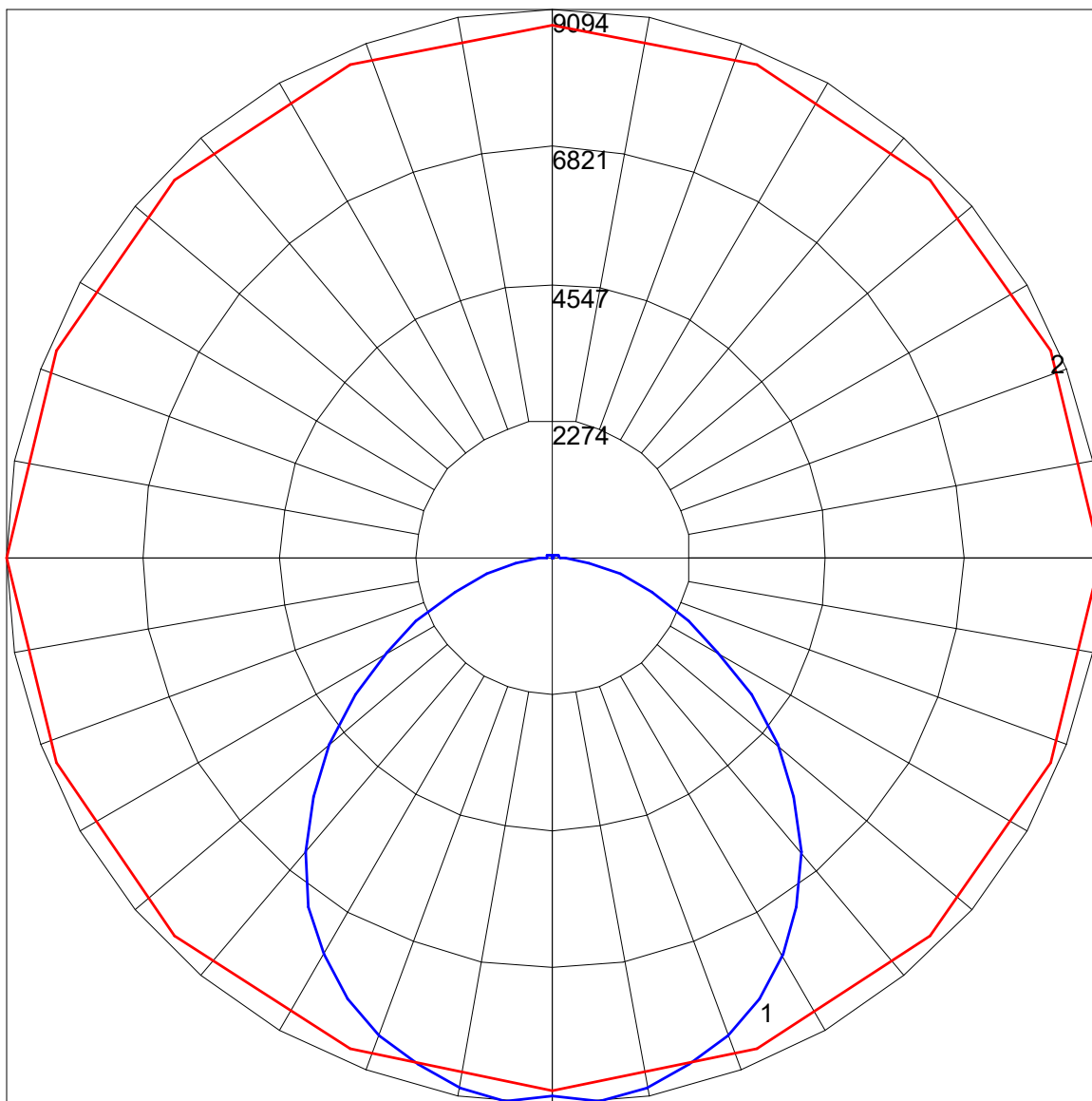
4H	2H	20.7	22.0	21.1	22.4	22.9	21.7	23.1	22.2	23.5	23.9
	3H	22.2	23.3	22.7	23.8	24.3	23.9	25.0	24.4	25.5	25.9
	4H	22.7	23.7	23.2	24.2	24.7	24.9	25.9	25.3	26.3	26.8
	6H	23.1	23.9	23.6	24.4	25.0	25.7	26.6	26.2	27.1	27.7
	8H	23.1	24.0	23.6	24.5	25.0	26.1	27.0	26.6	27.5	28.0
	12H	23.2	23.9	23.7	24.4	25.0	26.5	27.3	27.1	27.8	28.3

8H	4H	23.2	24.0	23.7	24.5	25.0	25.0	25.9	25.5	26.4	26.9
	6H	23.6	24.3	24.1	24.8	25.4	26.1	26.8	26.6	27.3	27.8
	8H	23.7	24.3	24.3	24.9	25.5	26.6	27.2	27.1	27.8	28.3
	12H	23.8	24.4	24.3	24.9	25.5	27.1	27.6	27.6	28.2	28.8

12H	4H	23.2	24.0	23.8	24.5	25.1	25.0	25.8	25.6	26.3	26.9
	6H	23.7	24.4	24.3	24.9	25.5	26.1	26.7	26.7	27.2	27.8
	8H	23.9	24.5	24.5	25.0	25.6	26.6	27.2	27.2	27.7	28.4

Maximum UGR = 28.8

POLAR GRAPH



Maximum Candela = 9094.137 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.)