

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L81-835-HIAFR-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 20008.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 08-22-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-56 LED 22"ARRAYS 4'VAPORTITE LUMINAIRE
[MORE] WHITE FLAT REFLECTOR w/HIAFR LENS
[LUMCAT] 96-4-L81-835-HIAFR-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8055
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	61.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11811	9775	9329
55	9863	8078	7942
65	7549	6653	7232
75	4931	5537	6527
85	1906	4542	5447

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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	2902.004	2902.004	2902.004	2902.004	2902.004
5	2944.570	2886.981	2876.965	2865.698	2858.186
10	2900.752	2844.414	2813.116	2786.825	2769.298
15	2828.139	2760.534	2715.464	2677.906	2654.119
20	2720.472	2641.600	2591.522	2517.657	2486.359
25	2586.514	2492.618	2432.525	2344.889	2334.874
30	2420.006	2319.850	2259.757	2217.191	2230.962
35	2228.459	2125.799	2085.737	2100.760	2133.311
40	1993.093	1892.938	1917.977	1922.984	1954.283
45	1715.162	1648.809	1726.429	1720.170	1738.949
50	1440.986	1413.444	1491.064	1512.347	1516.103
55	1180.582	1194.354	1260.707	1318.296	1329.563
60	932.698	981.523	1052.884	1161.803	1178.078
65	683.561	751.166	870.100	1004.058	1036.609
70	470.731	543.343	712.356	851.321	898.895
75	289.199	370.575	562.122	709.852	749.914
80	142.722	239.121	429.416	572.138	592.169
85	47.574	148.981	314.238	443.188	451.951
90	18.779	96.400	231.609	330.513	340.528
95	17.527	66.353	187.791	259.152	271.672
100	15.023	41.314	142.722	201.563	215.334
105	10.016	23.787	105.163	156.493	172.768
110	6.260	8.764	75.117	121.438	135.210
115	5.008	2.504	48.826	90.140	106.415
120	2.504	1.252	30.047	65.101	76.369
125	0.000	0.000	10.016	40.062	52.582
130	0.000	0.000	0.000	18.779	30.047
135	0.000	0.000	0.000	6.260	11.267
140	0.000	0.000	0.000	5.008	5.008
145	0.000	0.000	0.000	2.504	2.504
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
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	1039.81	N.A.	12.90
0-30	2162.91	N.A.	26.90
0-40	3487.15	N.A.	43.30
0-60	5932.26	N.A.	73.60
0-80	7375.76	N.A.	91.60
0-90	7700.06	N.A.	95.60
10-90	7426.91	N.A.	92.20
20-40	2447.34	N.A.	30.40
20-50	3762.39	N.A.	46.70
40-70	3312.69	N.A.	41.10
60-80	1443.5	N.A.	17.90
70-80	575.92	N.A.	7.20
80-90	324.30	N.A.	4.00
90-110	282.49	N.A.	3.50
90-120	332.68	N.A.	4.10
90-130	350.94	N.A.	4.40
90-150	354.75	N.A.	4.40
90-180	354.75	N.A.	4.40
110-180	72.26	N.A.	0.90
0-180	8054.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	273.16
10-20	766.65
20-30	1123.1
30-40	1324.24
40-50	1315.05
50-60	1130.06
60-70	867.58
70-80	575.92
80-90	324.30
90-100	181.12
100-110	101.37
110-120	50.20
120-130	18.25
130-140	3.21
140-150	0.61
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	107	102	97	93	104	99	95	91	94	91	88	89	87	84	85	83	81	78
2	97	89	82	76	94	86	80	75	82	77	72	78	74	70	75	71	68	65
3	89	78	70	63	86	76	68	62	72	66	61	69	64	59	66	61	57	55
4	81	69	60	54	79	68	59	53	65	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	61	52	46	58	51	45	56	49	44	53	48	43	41
6	69	56	47	41	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	51	42	36	62	50	41	36	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	41	35	30	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	31	26	36	30	25	35	29	25	23

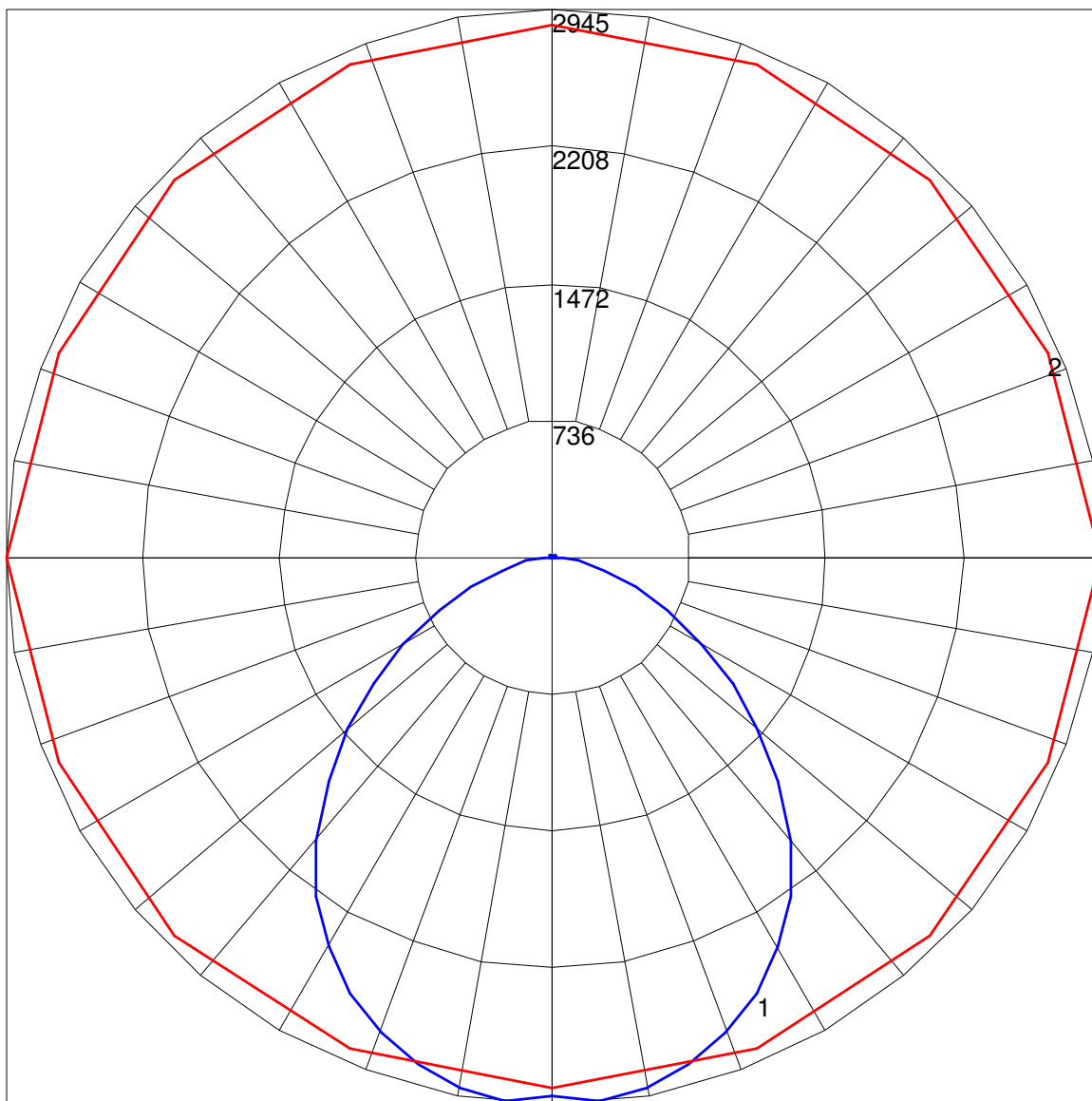
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	17.9	19.4	18.3	19.8	20.2	19.6	21.1	20.0	21.5	21.9
	3H	19.0	20.4	19.4	20.8	21.3	21.9	23.3	22.3	23.7	24.2
	4H	19.3	20.6	19.7	21.0	21.5	23.0	24.3	23.4	24.7	25.2
	6H	19.4	20.7	19.9	21.1	21.6	24.0	25.3	24.5	25.7	26.2
	8H	19.4	20.6	19.9	21.1	21.6	24.5	25.7	25.0	26.2	26.7
	12H	19.4	20.6	19.9	21.0	21.6	25.0	26.2	25.5	26.6	27.2
4H	2H	18.6	19.9	19.0	20.3	20.8	20.0	21.3	20.4	21.7	22.2
	3H	19.9	21.1	20.4	21.5	22.0	22.5	23.6	23.0	24.1	24.6
	4H	20.4	21.4	20.9	21.9	22.4	23.8	24.8	24.3	25.3	25.8
	6H	20.6	21.5	21.1	22.0	22.5	25.0	25.9	25.5	26.4	27.0
	8H	20.6	21.5	21.1	22.0	22.5	25.6	26.4	26.1	27.0	27.5
	12H	20.7	21.4	21.2	22.0	22.5	26.2	27.0	26.8	27.5	28.1
8H	4H	20.9	21.8	21.5	22.3	22.9	23.9	24.8	24.4	25.3	25.8
	6H	21.3	22.0	21.9	22.6	23.2	25.3	26.0	25.9	26.6	27.2
	8H	21.4	22.1	22.0	22.7	23.2	26.1	26.7	26.6	27.3	27.9
	12H	21.5	22.1	22.1	22.6	23.3	26.9	27.4	27.4	28.0	28.6
12H	4H	21.1	21.9	21.7	22.4	23.0	23.9	24.7	24.5	25.2	25.8
	6H	21.6	22.2	22.2	22.8	23.4	25.3	26.0	25.9	26.5	27.2
	8H	21.8	22.4	22.3	22.9	23.6	26.1	26.7	26.7	27.3	27.9

Maximum UGR = 28.6

POLAR GRAPH



Maximum Candela = 2944.57 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.)