



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L81-830-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] 06-29-2022
 [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
 [MORE] EVERLINE LED DRIVER #D15CC55UNVTW-C @ 1029mA
 [LUMCAT] 96-4-L81-830-HIAFR-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7796
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	65
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	11431	9461	9030
55	9546	7818	7687
65	7307	6439	7000
75	4773	5359	6317
85	1845	4396	5272

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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	2808.751	2808.751	2808.751	2808.751	2808.751
5	2849.949	2794.210	2784.516	2773.611	2766.341
10	2807.539	2753.012	2722.719	2697.273	2680.309
15	2737.260	2671.827	2628.205	2591.854	2568.831
20	2633.052	2556.714	2508.246	2436.755	2406.462
25	2503.399	2412.520	2354.358	2269.538	2259.845
30	2342.241	2245.304	2187.142	2145.944	2159.272
35	2156.849	2057.489	2018.714	2033.254	2064.759
40	1929.047	1832.110	1856.344	1861.191	1891.484
45	1660.047	1595.826	1670.952	1664.894	1683.069
50	1394.682	1368.024	1443.150	1463.749	1467.384
55	1142.645	1155.974	1220.195	1275.934	1286.839
60	902.726	949.983	1019.051	1124.470	1140.222
65	661.595	727.028	842.141	971.794	1003.298
70	455.604	525.883	689.465	823.965	870.010
75	279.906	358.667	544.059	687.041	725.816
80	138.135	231.437	415.618	553.753	573.140
85	46.045	144.194	304.140	428.946	437.428
90	18.176	93.302	224.167	319.892	329.586
95	16.964	64.221	181.757	250.825	262.942
100	14.541	39.987	138.135	195.086	208.415
105	9.694	23.023	101.784	151.464	167.216
110	6.059	8.482	72.703	117.536	130.865
115	4.847	2.423	47.257	87.243	102.996
120	2.423	1.212	29.081	63.009	73.914
125	0.000	0.000	9.694	38.775	50.892
130	0.000	0.000	0.000	18.176	29.081
135	0.000	0.000	0.000	6.059	10.905
140	0.000	0.000	0.000	4.847	4.847
145	0.000	0.000	0.000	2.423	2.423
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	1006.39	N.A.	12.90
0-30	2093.4	N.A.	26.90
0-40	3375.09	N.A.	43.30
0-60	5741.63	N.A.	73.60
0-80	7138.75	N.A.	91.60
0-90	7452.63	N.A.	95.60
10-90	7188.25	N.A.	92.20
20-40	2368.7	N.A.	30.40
20-50	3641.49	N.A.	46.70
40-70	3206.24	N.A.	41.10
60-80	1397.12	N.A.	17.90
70-80	557.42	N.A.	7.20
80-90	313.88	N.A.	4.00
90-110	273.41	N.A.	3.50
90-120	321.99	N.A.	4.10
90-130	339.66	N.A.	4.40
90-150	343.35	N.A.	4.40
90-180	343.35	N.A.	4.40
110-180	69.94	N.A.	0.90
0-180	7795.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	264.38
10-20	742.02
20-30	1087.01
30-40	1281.69
40-50	1272.79
50-60	1093.75
60-70	839.70
70-80	557.42
80-90	313.88
90-100	175.30
100-110	98.11
110-120	48.58
120-130	17.66
130-140	3.10
140-150	0.59
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	31	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

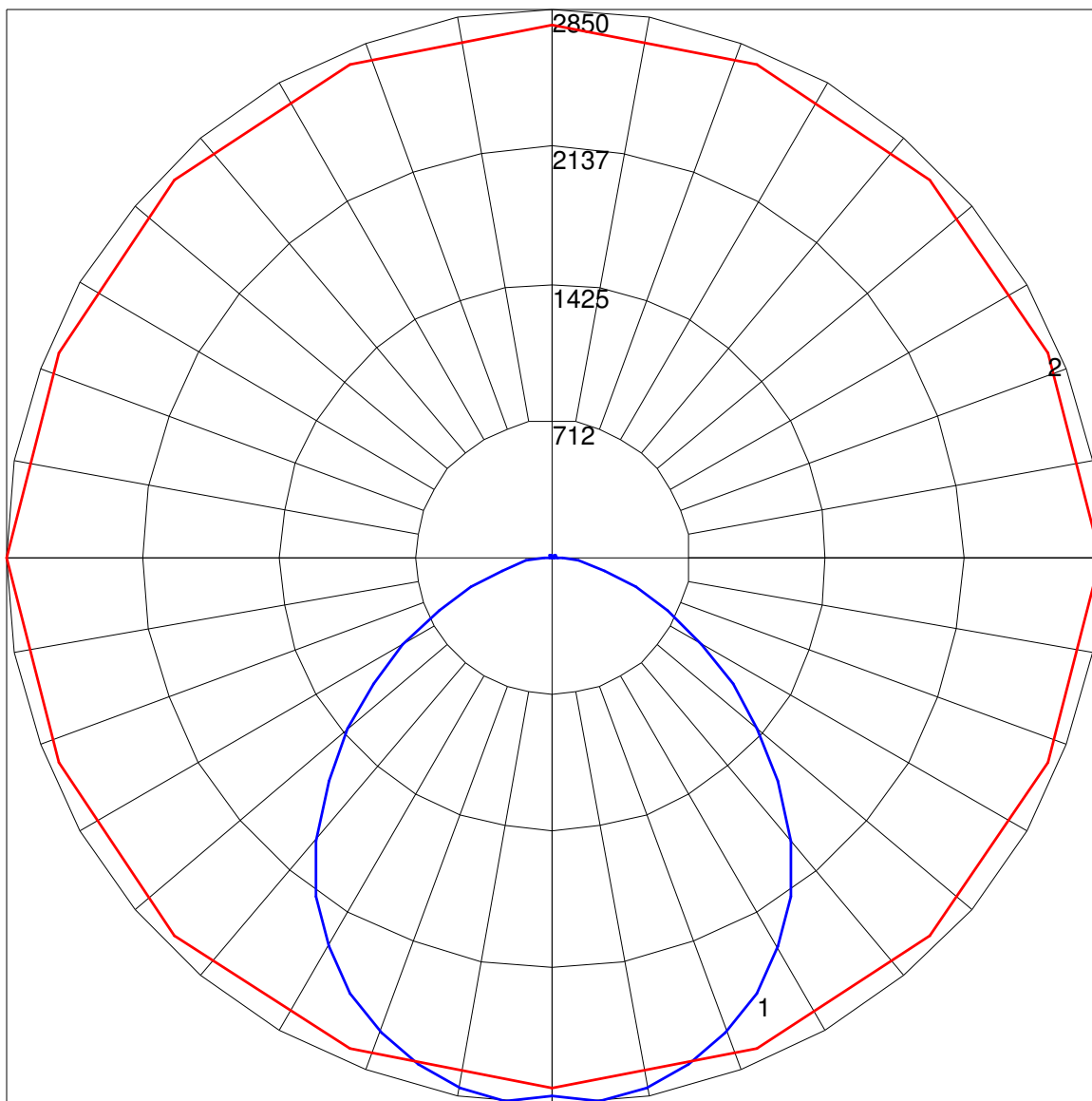
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UGR TABLE - CORRECTED

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	17.8	19.3	18.2	19.7	20.1	19.5	21.0	19.9	21.4	21.8
	3H	18.9	20.3	19.3	20.7	21.2	21.8	23.2	22.2	23.6	24.1
	4H	19.2	20.5	19.6	20.9	21.4	22.9	24.2	23.3	24.6	25.1
	6H	19.3	20.6	19.8	21.0	21.5	23.9	25.2	24.4	25.6	26.1
	8H	19.3	20.5	19.8	21.0	21.5	24.4	25.6	24.9	26.1	26.6
	12H	19.3	20.5	19.8	20.9	21.5	24.9	26.1	25.4	26.5	27.1
4H	2H	18.5	19.8	18.9	20.2	20.7	19.9	21.2	20.3	21.6	22.1
	3H	19.8	21.0	20.3	21.4	21.9	22.4	23.5	22.9	24.0	24.5
	4H	20.3	21.3	20.8	21.8	22.3	23.7	24.7	24.2	25.2	25.7
	6H	20.5	21.4	21.0	21.9	22.4	24.9	25.8	25.4	26.3	26.9
	8H	20.5	21.4	21.0	21.9	22.4	25.5	26.3	26.0	26.9	27.4
	12H	20.6	21.3	21.1	21.9	22.4	26.1	26.9	26.7	27.4	28.0
8H	4H	20.8	21.7	21.4	22.2	22.8	23.8	24.7	24.3	25.2	25.7
	6H	21.2	21.9	21.8	22.5	23.1	25.2	25.9	25.8	26.5	27.1
	8H	21.3	22.0	21.9	22.6	23.1	26.0	26.6	26.5	27.2	27.8
	12H	21.4	22.0	22.0	22.5	23.2	26.8	27.3	27.3	27.9	28.5
12H	4H	21.0	21.8	21.6	22.3	22.9	23.8	24.6	24.4	25.1	25.7
	6H	21.5	22.1	22.1	22.7	23.3	25.2	25.9	25.8	26.4	27.1
	8H	21.7	22.3	22.2	22.8	23.5	26.0	26.6	26.6	27.2	27.8

Maximum UGR = 28.5

POLAR GRAPH



Maximum Candela = 2849.949 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.)