



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L62-840-DFR-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] 06-25-2021
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 4' VAPORTITE LED LUMINAIRE
[MORE] WHITE FLAT REFLECTOR w/DROP FROSTED LENS
[LUMCAT] 96-4-L62-840-DFR-DIM-UNV
[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6756
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	48.3
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	9906	8199	7824
55	8272	6775	6661
65	6331	5580	6066
75	4136	4644	5474
85	1599	3809	4568

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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	2433.90	2433.90	2433.90	2433.90	2433.90
5	2469.60	2421.30	2412.90	2403.45	2397.15
10	2432.85	2385.60	2359.35	2337.30	2322.60
15	2371.95	2315.25	2277.45	2245.95	2226.00
20	2281.65	2215.50	2173.50	2111.55	2085.30
25	2169.30	2090.55	2040.15	1966.65	1958.25
30	2029.65	1945.65	1895.25	1859.55	1871.10
35	1869.00	1782.90	1749.30	1761.90	1789.20
40	1671.60	1587.60	1608.60	1612.80	1639.05
45	1438.50	1382.85	1447.95	1442.70	1458.45
50	1208.55	1185.45	1250.55	1268.40	1271.55
55	990.15	1001.70	1057.35	1105.65	1115.10
60	782.25	823.20	883.05	974.40	988.05
65	573.30	630.00	729.75	842.10	869.40
70	394.80	455.70	597.45	714.00	753.90
75	242.55	310.80	471.45	595.35	628.95
80	119.70	200.55	360.15	479.85	496.65
85	39.90	124.95	263.55	371.70	379.05
90	15.75	80.85	194.25	277.20	285.60
95	14.70	55.65	157.50	217.35	227.85
100	12.60	34.65	119.70	169.05	180.60
105	8.40	19.95	88.20	131.25	144.90
110	5.25	7.35	63.00	101.85	113.40
115	4.20	2.10	40.95	75.60	89.25
120	2.10	1.05	25.20	54.60	64.05
125	0.00	0.00	8.40	33.60	44.10
130	0.00	0.00	0.00	15.75	25.20
135	0.00	0.00	0.00	5.25	9.45
140	0.00	0.00	0.00	4.20	4.20
145	0.00	0.00	0.00	2.10	2.10
150	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	872.08	N.A.	12.90
0-30	1814.02	N.A.	26.90
0-40	2924.66	N.A.	43.30
0-60	4975.37	N.A.	73.60
0-80	6186.03	N.A.	91.60
0-90	6458.01	N.A.	95.60
10-90	6228.92	N.A.	92.20
20-40	2052.58	N.A.	30.40
20-50	3155.5	N.A.	46.70
40-70	2778.34	N.A.	41.10
60-80	1210.66	N.A.	17.90
70-80	483.02	N.A.	7.10
80-90	271.99	N.A.	4.00
90-110	236.92	N.A.	3.50
90-120	279.02	N.A.	4.10
90-130	294.33	N.A.	4.40
90-150	297.53	N.A.	4.40
90-180	297.53	N.A.	4.40
110-180	60.61	N.A.	0.90
0-180	6755.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	229.09
10-20	642.99
20-30	941.94
30-40	1110.64
40-50	1102.92
50-60	947.78
60-70	727.64
70-80	483.02
80-90	271.99
90-100	151.90
100-110	85.02
110-120	42.10
120-130	15.31
130-140	2.69
140-150	0.51
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

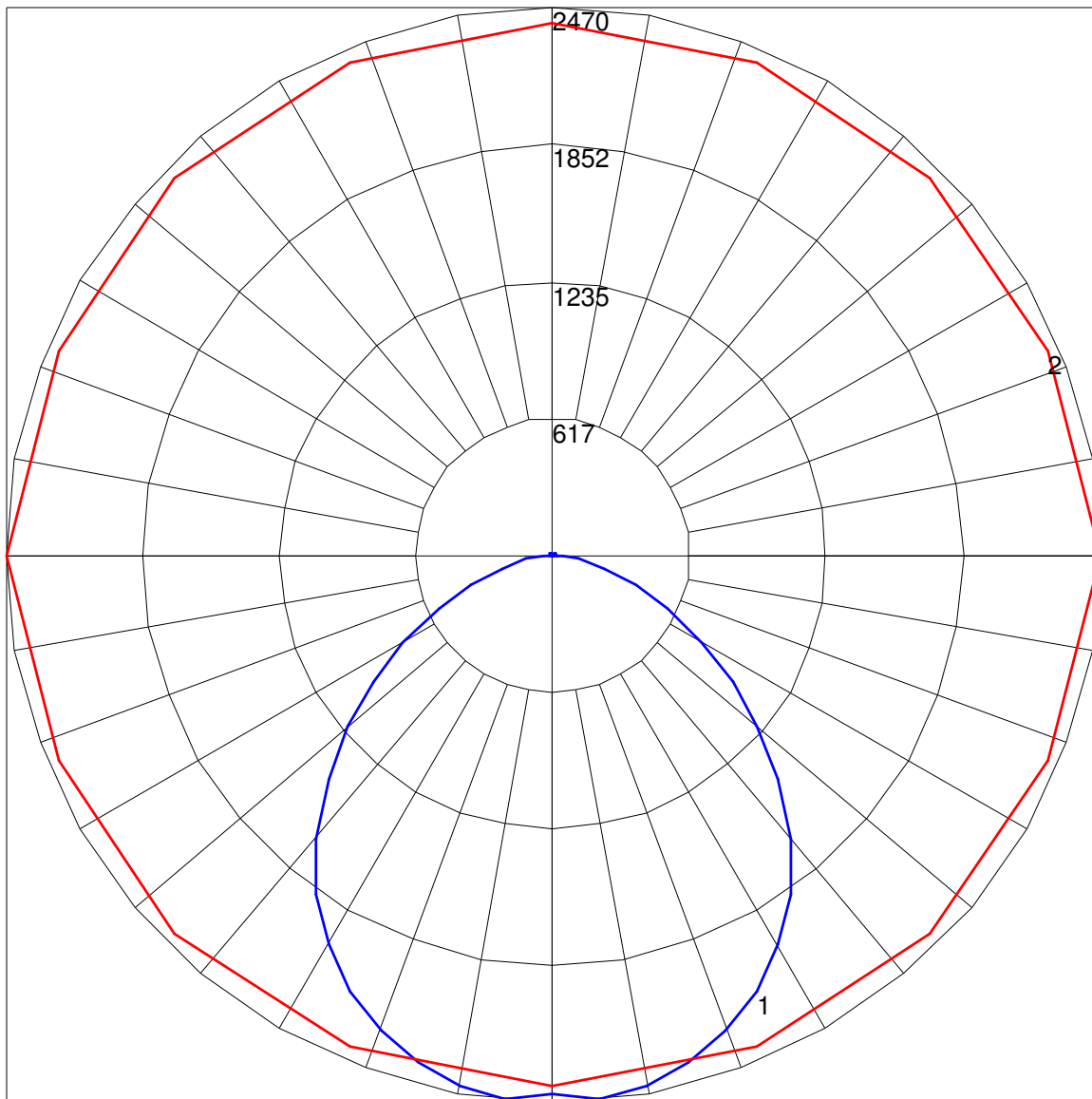
Reflectances

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	17.3	18.8	17.7	19.2	19.6	19.0	20.5	19.4	20.9	21.3
	3H	18.4	19.8	18.8	20.2	20.7	21.3	22.7	21.7	23.1	23.6
	4H	18.7	20.0	19.1	20.4	20.9	22.4	23.7	22.8	24.1	24.6
	6H	18.8	20.1	19.3	20.5	21.0	23.4	24.7	23.9	25.1	25.6
	8H	18.8	20.0	19.3	20.5	21.0	23.9	25.1	24.4	25.6	26.1
	12H	18.8	20.0	19.3	20.4	21.0	24.4	25.6	24.9	26.0	26.6
4H	2H	18.0	19.3	18.4	19.7	20.2	19.4	20.7	19.8	21.1	21.6
	3H	19.3	20.5	19.8	20.9	21.4	21.9	23.0	22.4	23.5	24.0
	4H	19.8	20.8	20.3	21.3	21.8	23.2	24.2	23.7	24.7	25.2
	6H	20.0	20.9	20.5	21.4	21.9	24.4	25.3	24.9	25.8	26.4
	8H	20.0	20.9	20.5	21.4	21.9	25.0	25.8	25.5	26.4	26.9
	12H	20.1	20.8	20.6	21.4	21.9	25.6	26.4	26.2	26.9	27.5
8H	4H	20.3	21.2	20.9	21.7	22.3	23.3	24.2	23.8	24.7	25.2
	6H	20.7	21.4	21.3	22.0	22.6	24.7	25.4	25.3	26.0	26.6
	8H	20.8	21.5	21.4	22.1	22.6	25.5	26.1	26.0	26.7	27.3
	12H	20.9	21.5	21.5	22.0	22.7	26.3	26.8	26.8	27.4	28.0
12H	4H	20.5	21.3	21.1	21.8	22.4	23.3	24.1	23.9	24.6	25.2
	6H	21.0	21.6	21.6	22.2	22.8	24.7	25.4	25.3	25.9	26.6
	8H	21.2	21.8	21.7	22.3	23.0	25.5	26.1	26.1	26.7	27.3

Maximum UGR = 28.0

POLAR GRAPH



Maximum Candela = 2469.6 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.)