



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 82-4-L64-840-(L42)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 20804.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 11-03-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4-28 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE
 [MORE] WHITE REFLECTOR w/OPEN BOTTOM
 [LUMCAT] 82-4-L64-840-(L42)-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4119
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	150
Total Luminaire Watts	27.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.08 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3939	3878	3828
55	3848	3812	1977
65	3612	1967	1929
75	2871	637	594
85	992	496	221

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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	1538.173	1538.173	1538.173	1538.173	1538.173
5	1562.691	1535.592	1522.043	1519.462	1520.107
10	1545.915	1519.462	1505.912	1503.332	1503.332
15	1520.107	1493.008	1479.459	1514.300	1538.173
20	1482.685	1455.586	1484.621	1474.297	1498.170
25	1431.068	1409.131	1442.037	1388.485	1389.775
30	1374.290	1358.160	1340.094	1332.352	1331.061
35	1302.027	1333.642	1264.605	1271.057	1264.605
40	1211.053	1271.057	1195.568	1189.761	1181.373
45	1122.014	1118.143	1104.594	1091.045	1090.399
50	1008.458	998.780	993.618	964.584	613.592
55	889.095	886.514	880.707	460.678	456.806
60	749.730	761.344	405.190	396.802	396.802
65	614.882	612.301	334.862	323.249	328.410
70	454.226	459.387	258.083	89.684	70.328
75	299.376	181.948	66.456	61.295	61.940
80	154.204	78.715	47.745	40.003	37.422
85	34.841	29.034	17.421	9.033	7.742
90	1.290	12.259	4.516	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	570.13	N.A.	13.80
0-30	1222.17	N.A.	29.70
0-40	2027.37	N.A.	49.20
0-60	3523.82	N.A.	85.50
0-80	4089.8	N.A.	99.30
0-90	4119.28	N.A.	100.00
10-90	3973.75	N.A.	96.50
20-40	1457.24	N.A.	35.40
20-50	2300.09	N.A.	55.80
40-70	1910.16	N.A.	46.40
60-80	565.97	N.A.	13.70
70-80	152.27	N.A.	3.70
80-90	29.48	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4119.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	145.53
10-20	424.60
20-30	652.05
30-40	805.20
40-50	842.85
50-60	653.61
60-70	413.70
70-80	152.27
80-90	29.48
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	34	28	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

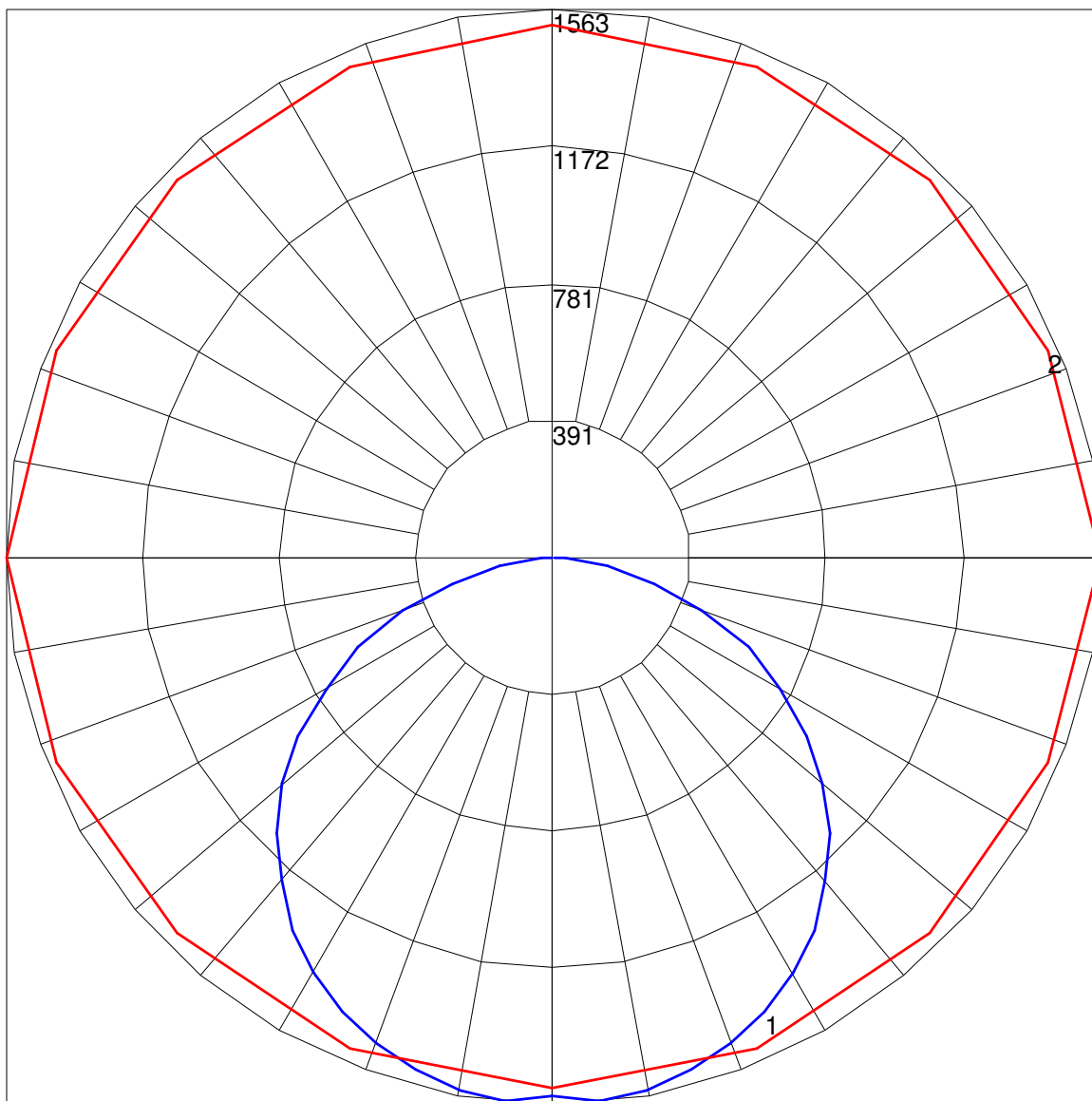
Reflectances

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	17.6	19.1	17.9	19.4	19.8	13.0	14.6	13.4	14.9	15.2
	3H	19.3	20.7	19.7	21.1	21.4	13.6	15.0	14.0	15.4	15.7
	4H	19.8	21.1	20.2	21.4	21.8	13.7	15.0	14.1	15.4	15.8
	6H	20.1	21.3	20.5	21.6	22.0	13.8	15.0	14.2	15.4	15.8
	8H	20.1	21.3	20.6	21.7	22.1	13.8	15.0	14.2	15.3	15.7
	12H	20.1	21.2	20.6	21.6	22.0	13.8	14.9	14.2	15.3	15.7
4H	2H	17.6	19.0	18.0	19.3	19.7	13.7	15.1	14.1	15.4	15.8
	3H	19.7	20.7	20.1	21.1	21.5	14.5	15.6	14.9	15.9	16.4
	4H	20.2	21.1	20.6	21.5	22.0	14.6	15.5	15.0	16.0	16.4
	6H	20.5	21.3	21.0	21.8	22.2	14.7	15.5	15.1	16.0	16.4
	8H	20.6	21.4	21.0	21.8	22.3	14.7	15.5	15.2	15.9	16.4
	12H	20.6	21.3	21.1	21.8	22.3	14.7	15.4	15.2	15.9	16.3
8H	4H	20.1	20.9	20.6	21.3	21.8	14.9	15.7	15.3	16.1	16.6
	6H	20.4	21.1	20.9	21.6	22.1	15.0	15.7	15.5	16.2	16.6
	8H	20.6	21.1	21.1	21.7	22.1	15.1	15.6	15.6	16.2	16.6
	12H	20.6	21.1	21.1	21.6	22.2	15.1	15.6	15.6	16.1	16.6
12H	4H	20.1	20.8	20.6	21.3	21.7	14.9	15.6	15.4	16.1	16.6
	6H	20.4	21.0	21.0	21.5	22.0	15.1	15.6	15.6	16.1	16.7
	8H	20.5	21.1	21.1	21.6	22.1	15.1	15.6	15.6	16.1	16.7

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 1562.691 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.)