



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L30-927-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19830.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 05-31-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22"ARRAYS 4'SURFACE MOUNT LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC LINEAR RIBBED DIFFUSER

[LUMCAT] 39-4-L30-927-A-DIM-UNV

[LAMPCAT] HLM 90 CRI 2700K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2422
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	22.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.75 ft
Luminous Height	0.19 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2515	2272	2263
55	2064	1901	1965
65	1616	1529	1640
75	1130	1146	1339
85	403	895	1163

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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	900.827	900.827	900.827	900.827	900.827
5	908.362	895.385	893.292	892.036	890.362
10	894.966	881.153	879.897	878.641	877.804
15	870.269	858.967	857.292	857.292	856.037
20	835.107	826.316	823.804	827.990	825.060
25	787.386	783.200	781.107	784.875	785.293
30	733.805	731.294	733.805	736.736	740.503
35	670.597	668.923	675.620	680.225	683.573
40	599.435	597.761	611.993	614.923	619.528
45	519.482	520.738	542.505	550.040	558.412
50	434.925	441.204	469.669	480.971	494.785
55	352.461	362.507	395.577	411.484	426.972
60	277.532	295.113	325.252	343.252	359.996
65	209.719	230.648	261.625	284.229	297.206
70	150.277	169.114	199.254	227.300	239.020
75	95.859	117.208	147.766	177.905	187.114
80	48.139	74.511	105.906	134.789	143.580
85	15.070	42.279	74.092	101.301	109.255
90	0.837	19.256	49.813	73.255	79.953
95	0.837	8.372	31.395	53.162	59.441
100	0.000	2.930	18.000	36.837	42.279
105	0.000	0.837	10.884	24.697	28.883
110	0.000	0.000	6.279	15.907	19.256
115	0.000	0.000	4.186	10.465	12.558
120	0.000	0.000	2.093	6.698	8.372
125	0.000	0.000	0.000	3.767	5.023
130	0.000	0.000	0.000	1.674	2.930
135	0.000	0.000	0.000	0.000	0.837
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
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	327.25	N.A.	13.50
0-30	688.39	N.A.	28.40
0-40	1110.28	N.A.	45.80
0-60	1874.99	N.A.	77.40
0-80	2287.17	N.A.	94.40
0-90	2365.77	N.A.	97.70
10-90	2280.74	N.A.	94.20
20-40	783.03	N.A.	32.30
20-50	1197.85	N.A.	49.50
40-70	1020.48	N.A.	42.10
60-80	412.18	N.A.	17.00
70-80	156.42	N.A.	6.50
80-90	78.60	N.A.	3.20
90-110	48.73	N.A.	2.00
90-120	54.13	N.A.	2.20
90-130	55.76	N.A.	2.30
90-150	55.96	N.A.	2.30
90-180	55.96	N.A.	2.30
110-180	7.22	N.A.	0.30
0-180	2421.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	85.02
10-20	242.23
20-30	361.14
30-40	421.89
40-50	414.82
50-60	349.90
60-70	255.76
70-80	156.42
80-90	78.60
90-100	34.65
100-110	14.08
110-120	5.40
120-130	1.62
130-140	0.20
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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	86	88	85	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	73	70	68
3	90	79	71	65	87	78	70	64	74	68	63	71	66	61	68	64	60	58
4	82	71	62	55	80	69	61	55	66	59	54	64	58	53	61	56	52	50
5	76	63	54	48	74	62	54	47	60	52	47	57	51	46	55	50	45	43
6	70	57	48	42	68	56	48	42	54	47	41	52	45	40	50	44	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	42	36	32	30
9	57	44	35	30	55	43	35	30	42	34	30	40	34	29	39	33	29	27
10	53	40	32	27	52	40	32	27	38	32	27	37	31	27	36	31	26	25

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UGR TABLE - CORRECTED

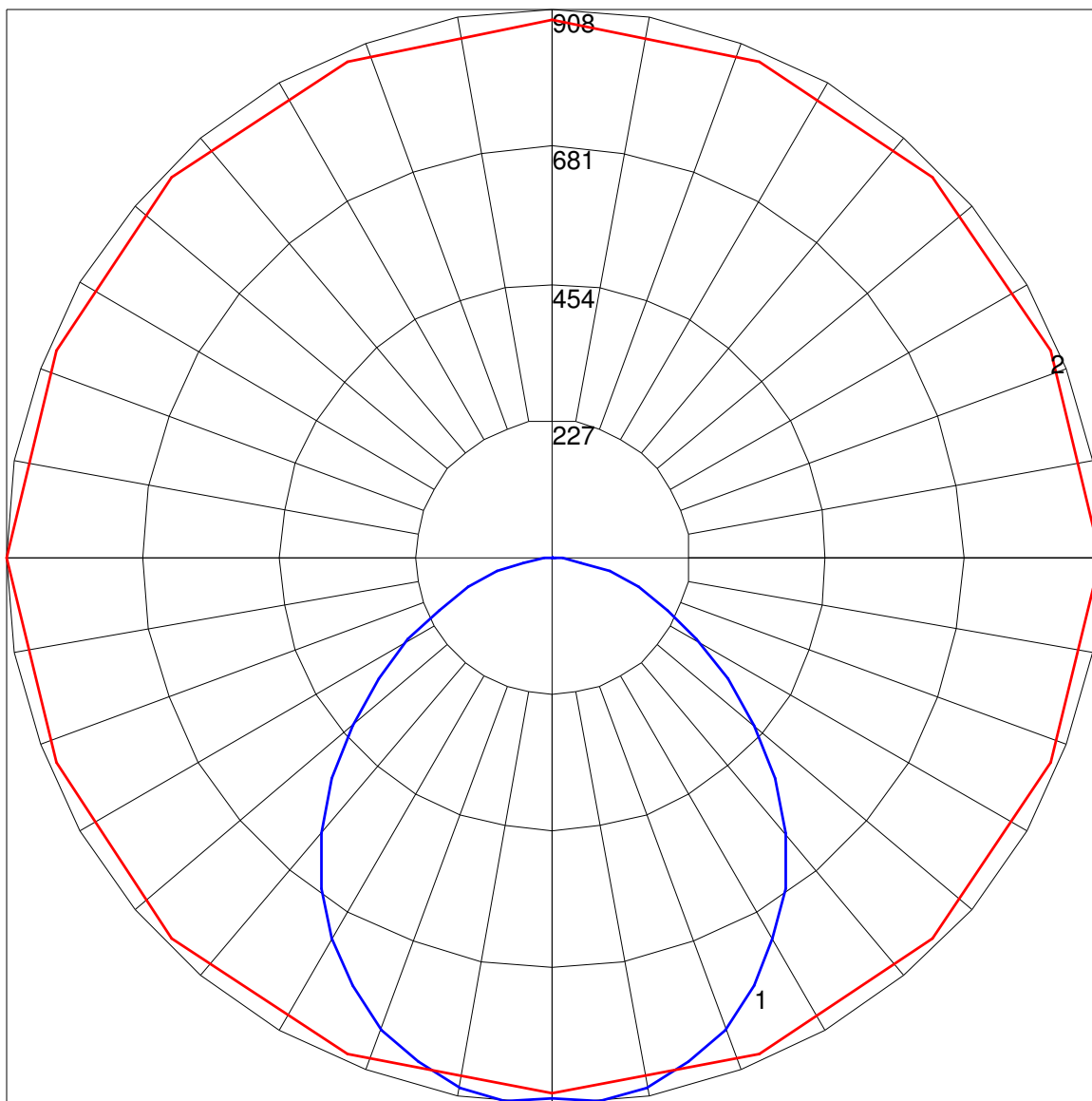
Reflectances

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	13.0	14.5	13.4	14.9	15.3	14.6	16.2	15.0	16.5	16.9
	3H	14.2	15.6	14.6	16.0	16.4	16.5	17.9	16.9	18.3	18.7
	4H	14.6	15.9	15.0	16.3	16.7	17.3	18.7	17.8	19.1	19.5
	6H	14.8	16.0	15.2	16.4	16.9	18.1	19.4	18.6	19.8	20.2
	8H	14.8	16.0	15.3	16.4	16.9	18.5	19.7	19.0	20.2	20.6
	12H	14.8	15.9	15.2	16.4	16.8	18.9	20.1	19.4	20.5	21.0
4H	2H	13.7	15.0	14.1	15.4	15.8	15.0	16.3	15.4	16.7	17.1
	3H	15.1	16.3	15.6	16.7	17.2	17.1	18.2	17.6	18.7	19.1
	4H	15.6	16.6	16.1	17.1	17.6	18.1	19.1	18.6	19.6	20.1
	6H	15.9	16.8	16.4	17.3	17.8	19.1	20.0	19.5	20.5	21.0
	8H	15.9	16.8	16.4	17.3	17.8	19.5	20.4	20.0	20.9	21.4
	12H	16.0	16.7	16.5	17.3	17.8	20.1	20.8	20.6	21.3	21.9
8H	4H	16.0	16.9	16.5	17.4	17.9	18.3	19.1	18.7	19.6	20.1
	6H	16.5	17.2	17.0	17.7	18.2	19.4	20.1	19.9	20.6	21.1
	8H	16.6	17.2	17.1	17.8	18.3	20.0	20.6	20.5	21.2	21.7
	12H	16.7	17.2	17.2	17.8	18.4	20.6	21.2	21.2	21.7	22.3
12H	4H	16.2	16.9	16.7	17.4	17.9	18.3	19.0	18.8	19.5	20.1
	6H	16.6	17.3	17.2	17.8	18.4	19.4	20.1	20.0	20.5	21.1
	8H	16.8	17.4	17.4	17.9	18.5	20.1	20.6	20.6	21.2	21.8

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 908.362 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.)