H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-927-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L27-927-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2218
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	18.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1982	1920	1906
55	1783	1794	1834
65	1558	1724	1889
75	1258	1741	2172
85	583	1879	2271

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	863.756	863.756	863.756	863.756	863.756
5	868.048	858.511	853.743	841.823	852.789
10	851.359	841.107	834.909	833.717	835.385
15	823.227	813.213	807.730	805.823	804.392
20	785.796	776.022	766.962	762.432	763.148
25	739.068	730.962	727.148	715.227	710.698
30	684.473	676.128	667.545	661.108	657.532
35	627.731	620.102	609.850	601.029	596.023
40	562.645	556.447	545.718	538.805	534.752
45	499.705	492.553	484.209	480.394	480.633
50	433.189	431.044	421.984	423.653	425.799
55	364.766	364.766	366.912	372.633	375.018
60	301.111	302.541	312.316	322.091	328.051
65	234.833	243.416	259.866	276.793	284.660
70	171.178	185.482	209.085	231.734	241.032
75	116.105	130.887	160.688	190.012	200.502
80	60.794	86.066	117.059	148.052	157.827
85	18.119	40.768	58.410	66.278	70.569
90	0.000	0.715	0.954	1.669	0.954

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	309.06	N.A.	13.90
0-30	642.16	N.A.	29.00
0-40	1023.82	N.A.	46.20
0-60	1730.28	N.A.	78.00
0-80	2157.86	N.A.	97.30
0-90	2218.02	N.A.	100.00
10-90	2136.96	N.A.	96.30
20-40	714.76	N.A.	32.20
20-50	1090.82	N.A.	49.20
40-70	964.22	N.A.	43.50
60-80	427.59	N.A.	19.30
70-80	169.82	N.A.	7.70
80-90	60.16	N.A.	2.70
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	2218.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	81.06
10-20	228.01
20-30	333.10
30-40	381.66
40-50	376.06
50-60	330.39
60-70	257.77
70-80	169.82
80-90	60.16
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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	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	13.8	15.4	14.2	15.8	16.1	14.1	15.7	14.5	16.1	16.4
	3H	15.5	16.9	15.8	17.3	17.6	16.4	17.9	16.8	18.2	18.5
	4H	16.1	17.4	16.5	17.8	18.2	17.5	18.9	17.9	19.2	19.6
	6H	16.4	17.7	16.9	18.1	18.5	18.5	19.8	18.9	20.2	20.6
	8H	16.5	17.8	17.0	18.2	18.6	18.9	20.2	19.3	20.6	21.0
	12H	16.6	17.8	17.0	18.2	18.6	19.2	20.4	19.6	20.8	21.2
4H	2H	14.5	15.9	14.9	16.3	16.6	14.8	16.1	15.2	16.5	16.9
	3H	16.4	17.6	16.8	18.0	18.4	17.3	18.4	17.7	18.8	19.2
	4H	17.2	18.2	17.6	18.6	19.1	18.5	19.6	19.0	20.0	20.4
	6H	17.7	18.6	18.2	19.1	19.5	19.8	20.7	20.2	21.2	21.6
	8H	17.9	18.7	18.3	19.2	19.6	20.3	21.2	20.7	21.6	22.1
	12H	17.9	18.7	18.4	19.2	19.7	20.6	21.4	21.1	21.9	22.4
8H	4H	17.7	18.6	18.1	19.0	19.5	18.9	19.7	19.3	20.2	20.6
	6H	18.4	19.1	18.9	19.6	20.1	20.3	21.1	20.8	21.5	22.0
	8H	18.7	19.3	19.2	19.8	20.3	20.9	21.6	21.4	22.1	22.6
	12H	18.8	19.4	19.3	19.9	20.5	21.4	22.0	21.9	22.5	23.0
12H	4H	17.8	18.6	18.3	19.1	19.5	18.9	19.7	19.4	20.2	20.6
	6H	18.6	19.3	19.1	19.7	20.3	20.4	21.1	20.9	21.5	22.1
	8H	18.9	19.5	19.5	20.0	20.6	21.1	21.6	21.6	22.1	22.7

Maximum UGR = 23.0

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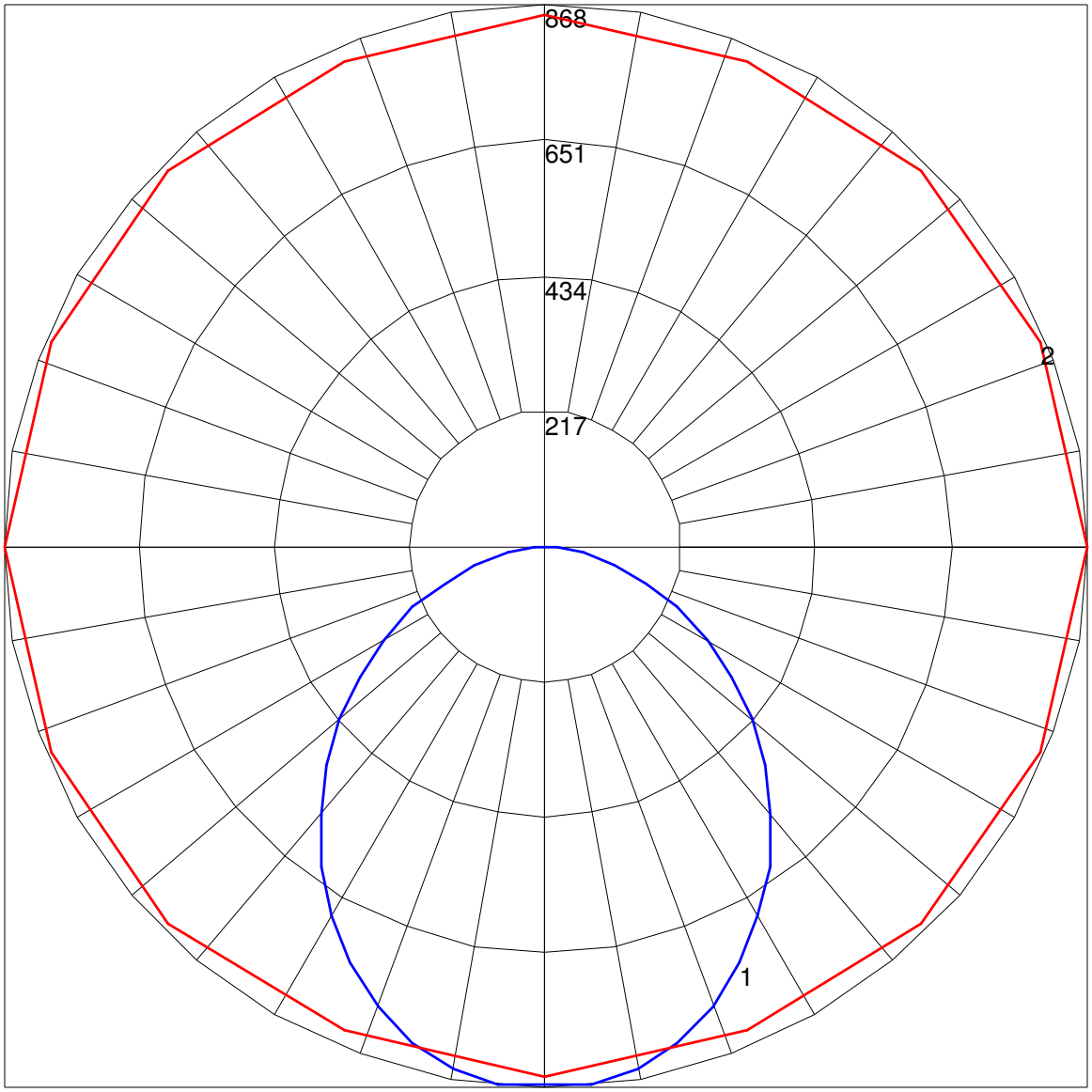
POLAR GRAPH



Maximum Candela = 868.048 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.)

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