H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-835-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-L27-835-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2705
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
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	2417	2342	2325
55	2175	2188	2236
65	1900	2103	2304
75	1534	2123	2649
85	711	2292	2769

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1053.361	1053.361	1053.361	1053.361	1053.361
5	1058.595	1046.965	1041.150	1026.613	1039.987
10	1038.243	1025.741	1018.181	1016.728	1018.763
15	1003.935	991.724	985.037	982.711	980.966
20	958.288	946.368	935.320	929.796	930.668
25	901.303	891.417	886.766	872.228	866.704
30	834.723	824.547	814.080	806.230	801.869
35	765.526	756.222	743.720	732.963	726.857
40	686.153	678.594	665.510	657.079	652.136
45	609.397	600.675	590.499	585.847	586.138
50	528.280	525.663	514.615	516.650	519.267
55	444.837	444.837	447.453	454.431	457.338
60	367.208	368.953	380.873	392.794	400.062
65	286.382	296.848	316.910	337.552	347.147
70	208.753	226.198	254.981	282.602	293.941
75	141.592	159.618	195.961	231.722	244.515
80	74.139	104.958	142.755	180.551	192.472
85	22.096	49.717	71.232	80.827	86.060
90	0.000	0.872	1.163	2.035	1.163

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	376.91	N.A.	13.90
0-30	783.12	N.A.	29.00
0-40	1248.57	N.A.	46.20
0-60	2110.09	N.A.	78.00
0-80	2631.54	N.A.	97.30
0-90	2704.9	N.A.	100.00
10-90	2606.06	N.A.	96.30
20-40	871.66	N.A.	32.20
20-50	1330.27	N.A.	49.20
40-70	1175.88	N.A.	43.50
60-80	521.45	N.A.	19.30
70-80	207.09	N.A.	7.70
80-90	73.36	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	2704.9	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	98.85
10-20	278.06
20-30	406.22
30-40	465.44
40-50	458.61
50-60	402.92
60-70	314.36
70-80	207.09
80-90	73.36
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	82	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	14.5	16.1	14.9	16.5	16.8	14.8	16.4	15.2	16.8	17.1
	3H	16.2	17.6	16.5	18.0	18.3	17.1	18.6	17.5	18.9	19.2
	4H	16.8	18.1	17.2	18.5	18.9	18.2	19.6	18.6	19.9	20.3
	6H	17.1	18.4	17.6	18.8	19.2	19.2	20.5	19.6	20.9	21.3
	8H	17.2	18.5	17.7	18.9	19.3	19.6	20.9	20.0	21.3	21.7
	12H	17.3	18.5	17.7	18.9	19.3	19.9	21.1	20.3	21.5	21.9
4H	2H	15.2	16.6	15.6	17.0	17.3	15.5	16.8	15.9	17.2	17.6
	3H	17.1	18.3	17.5	18.7	19.1	18.0	19.1	18.4	19.5	19.9
	4H	17.9	18.9	18.3	19.3	19.8	19.2	20.3	19.7	20.7	21.1
	6H	18.4	19.3	18.9	19.8	20.2	20.5	21.4	20.9	21.9	22.3
	8H	18.6	19.4	19.0	19.9	20.3	21.0	21.8	21.4	22.3	22.8
	12H	18.6	19.4	19.1	19.9	20.4	21.3	22.1	21.8	22.6	23.1
8H	4H	18.4	19.3	18.8	19.7	20.2	19.6	20.4	20.0	20.9	21.3
	6H	19.1	19.8	19.6	20.3	20.8	21.0	21.8	21.5	22.2	22.7
	8H	19.4	20.0	19.9	20.5	21.0	21.6	22.3	22.1	22.8	23.3
	12H	19.5	20.1	20.0	20.6	21.2	22.1	22.7	22.6	23.2	23.7
12H	4H	18.5	19.3	19.0	19.8	20.2	19.6	20.4	20.1	20.9	21.3
	6H	19.3	20.0	19.8	20.4	21.0	21.1	21.8	21.6	22.2	22.8
	8H	19.6	20.2	20.2	20.7	21.3	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.7

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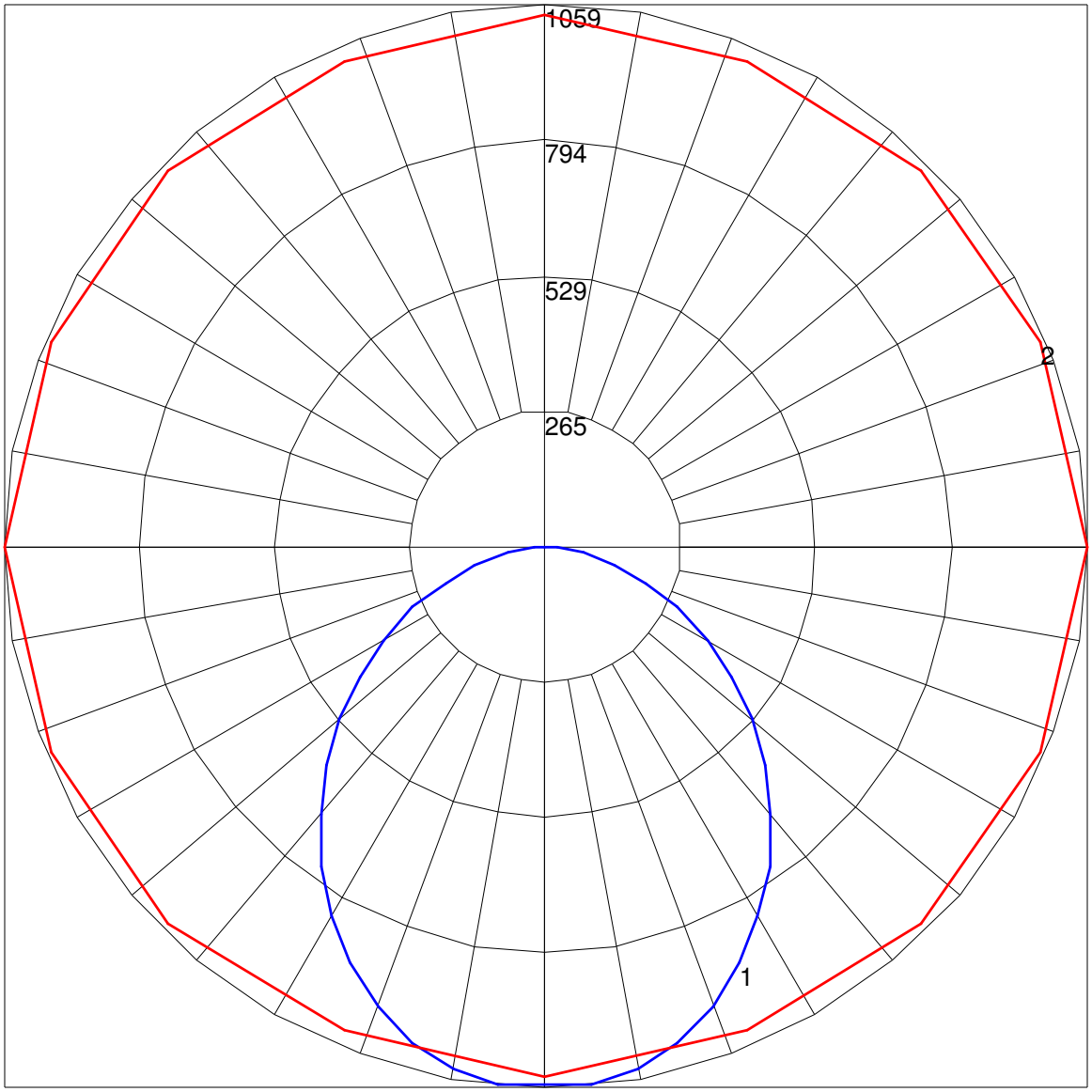
POLAR GRAPH



Maximum Candela = 1058.595 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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