H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-927-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L90-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7429
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	66.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3186	3362	3534
55	2856	3126	3376
65	2510	2974	3379
75	1943	2983	3693
85	1173	3914	4485

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2842.250	2842.250	2842.250	2842.250	2842.250
5	2798.850	2794.992	2794.992	2785.347	2780.525
10	2790.170	2790.170	2794.992	2798.850	2798.850
15	2716.871	2720.729	2725.551	2732.302	2737.124
20	2537.482	2547.127	2558.700	2574.132	2578.954
25	2393.778	2402.458	2425.605	2445.859	2455.504
30	2097.691	2033.072	2297.333	2221.141	2209.567
35	1934.698	1953.022	1996.423	2033.072	2047.539
40	1721.553	1744.700	1792.923	1841.145	1859.470
45	1573.027	1593.280	1659.828	1721.553	1744.700
50	1366.633	1398.460	1471.759	1536.377	1558.560
55	1143.844	1178.565	1251.863	1325.162	1352.167
60	932.628	969.278	1052.221	1127.448	1155.418
65	740.702	788.925	877.654	965.420	997.247
70	545.882	602.785	707.910	800.498	832.325
75	351.062	421.467	539.131	632.683	667.403
80	192.891	284.514	419.538	511.161	539.131
85	71.370	162.993	238.220	268.119	272.941
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1030.31	N.A.	13.90
0-30	2135.31	N.A.	28.70
0-40	3380.95	N.A.	45.50
0-60	5773.93	N.A.	77.70
0-80	7207.21	N.A.	97.00
0-90	7429.39	N.A.	100.00
10-90	7162.22	N.A.	96.40
20-40	2350.64	N.A.	31.60
20-50	3621.15	N.A.	48.70
40-70	3259.46	N.A.	43.90
60-80	1433.28	N.A.	19.30
70-80	566.80	N.A.	7.60
80-90	222.18	N.A.	3.00
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	7429.39	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	267.17
10-20	763.14
20-30	1105.00
30-40	1245.64
40-50	1270.51
50-60	1122.47
60-70	866.48
70-80	566.80
80-90	222.18
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	15.4	17.0	15.7	17.3	17.6	16.4	18.0	16.7	18.3	18.6
	3H	17.0	18.5	17.4	18.8	19.2	18.5	20.0	18.9	20.4	20.7
	4H	17.6	19.0	18.0	19.3	19.7	19.5	20.9	19.9	21.3	21.7
	6H	17.9	19.3	18.4	19.6	20.0	20.6	21.9	21.0	22.2	22.6
	8H	18.1	19.3	18.5	19.7	20.1	21.0	22.2	21.4	22.6	23.0
	12H	18.1	19.3	18.6	19.7	20.1	21.3	22.5	21.8	22.9	23.3
4H	2H	16.1	17.5	16.5	17.9	18.3	16.9	18.3	17.3	18.7	19.0
	3H	18.0	19.2	18.5	19.6	20.0	19.4	20.6	19.8	21.0	21.4
	4H	18.7	19.8	19.2	20.2	20.7	20.5	21.6	21.0	22.0	22.5
	6H	19.3	20.2	19.7	20.7	21.1	21.8	22.7	22.2	23.2	23.6
	8H	19.4	20.3	19.9	20.8	21.2	22.3	23.2	22.8	23.6	24.1
	12H	19.6	20.4	20.1	20.8	21.3	22.7	23.5	23.2	24.0	24.5
8H	4H	19.3	20.2	19.8	20.7	21.1	20.9	21.8	21.3	22.2	22.7
	6H	20.1	20.8	20.6	21.3	21.8	22.3	23.1	22.8	23.6	24.0
	8H	20.4	21.0	20.9	21.5	22.0	23.0	23.7	23.5	24.2	24.6
	12H	20.6	21.2	21.1	21.7	22.2	23.6	24.1	24.1	24.6	25.2
12H	4H	19.5	20.3	20.0	20.8	21.2	20.9	21.7	21.4	22.2	22.7
	6H	20.3	21.0	20.9	21.5	22.0	22.4	23.1	23.0	23.6	24.1
	8H	20.7	21.3	21.2	21.8	22.4	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 25.2

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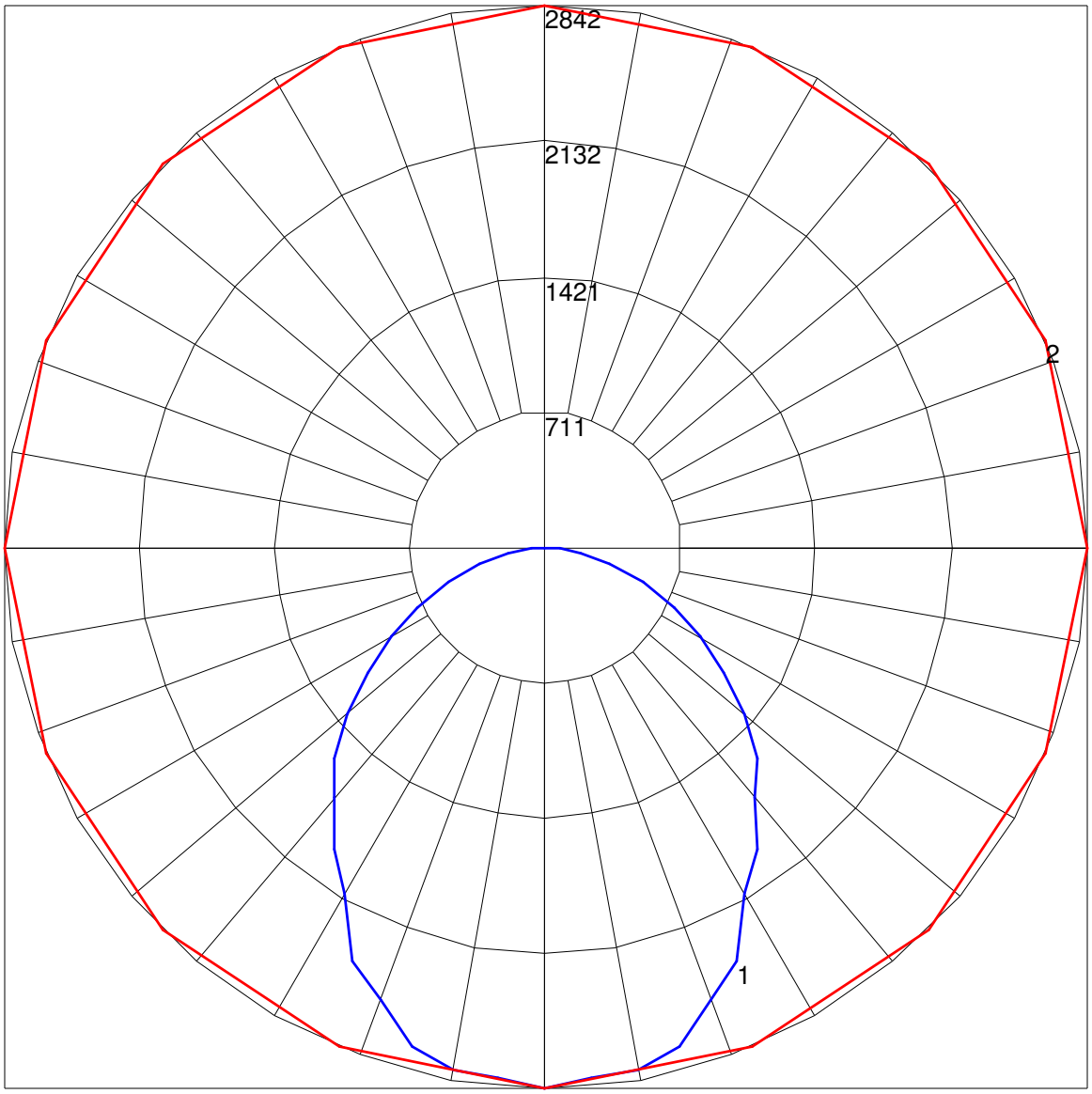
POLAR GRAPH



Maximum Candela = 2842.25 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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