H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-835-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-L90-835-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	9060
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	3885	4100	4309
55	3483	3812	4117
65	3061	3627	4121
75	2369	3638	4504
85	1430	4774	5469

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3466.158	3466.158	3466.158	3466.158	3466.158
5	3413.231	3408.526	3408.526	3396.764	3390.884
10	3402.645	3402.645	3408.526	3413.231	3413.231
15	3313.257	3317.961	3323.842	3332.075	3337.956
20	3094.490	3106.252	3120.366	3139.184	3145.065
25	2919.241	2929.827	2958.055	2982.754	2994.516
30	2558.159	2479.356	2801.625	2708.708	2694.594
35	2359.387	2381.734	2434.662	2479.356	2496.998
40	2099.454	2127.682	2186.491	2245.299	2267.646
45	1918.325	1943.025	2024.180	2099.454	2127.682
50	1666.626	1705.439	1794.828	1873.631	1900.683
55	1394.932	1437.274	1526.662	1616.051	1648.983
60	1137.352	1182.046	1283.196	1374.937	1409.046
65	903.295	962.103	1070.310	1177.341	1216.155
70	665.709	735.103	863.305	976.217	1015.030
75	428.124	513.984	657.476	771.564	813.906
80	235.233	346.969	511.632	623.367	657.476
85	87.036	198.772	290.513	326.974	332.855
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1256.48	N.A.	13.90
0-30	2604.04	N.A.	28.70
0-40	4123.11	N.A.	45.50
0-60	7041.38	N.A.	77.70
0-80	8789.28	N.A.	97.00
0-90	9060.23	N.A.	100.00
10-90	8734.41	N.A.	96.40
20-40	2866.63	N.A.	31.60
20-50	4416.04	N.A.	48.70
40-70	3974.96	N.A.	43.90
60-80	1747.9	N.A.	19.30
70-80	691.21	N.A.	7.60
80-90	270.95	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	9060.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	325.82
10-20	930.66
20-30	1347.56
30-40	1519.07
40-50	1549.41
50-60	1368.86
60-70	1056.69
70-80	691.21
80-90	270.95
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	16.0	17.7	16.4	18.0	18.3	17.1	18.7	17.4	19.0	19.3
	3H	17.7	19.2	18.1	19.5	19.9	19.2	20.7	19.6	21.1	21.4
	4H	18.3	19.7	18.7	20.0	20.4	20.2	21.6	20.6	22.0	22.4
	6H	18.6	20.0	19.1	20.3	20.7	21.3	22.6	21.7	22.9	23.3
	8H	18.8	20.0	19.2	20.4	20.8	21.7	22.9	22.1	23.3	23.7
	12H	18.8	20.0	19.3	20.4	20.8	22.0	23.2	22.5	23.6	24.0
4H	2H	16.8	18.2	17.2	18.6	19.0	17.6	19.0	18.0	19.4	19.7
	3H	18.7	19.9	19.2	20.3	20.7	20.1	21.3	20.5	21.7	22.1
	4H	19.4	20.5	19.9	20.9	21.4	21.2	22.3	21.7	22.7	23.2
	6H	20.0	20.9	20.4	21.4	21.8	22.5	23.4	22.9	23.9	24.3
	8H	20.1	21.0	20.6	21.5	21.9	23.0	23.9	23.5	24.3	24.8
	12H	20.3	21.1	20.8	21.5	22.0	23.4	24.2	23.9	24.7	25.2
8H	4H	20.0	20.9	20.5	21.4	21.8	21.6	22.5	22.0	22.9	23.4
	6H	20.8	21.5	21.3	22.0	22.5	23.0	23.8	23.5	24.3	24.7
	8H	21.1	21.7	21.6	22.2	22.7	23.7	24.4	24.2	24.9	25.3
	12H	21.3	21.9	21.8	22.4	22.9	24.3	24.8	24.8	25.3	25.9
12H	4H	20.2	21.0	20.7	21.5	21.9	21.6	22.4	22.1	22.9	23.4
	6H	21.0	21.7	21.6	22.2	22.7	23.1	23.8	23.7	24.3	24.8
	8H	21.4	22.0	21.9	22.5	23.1	23.9	24.4	24.4	24.9	25.5

Maximum UGR = 25.9

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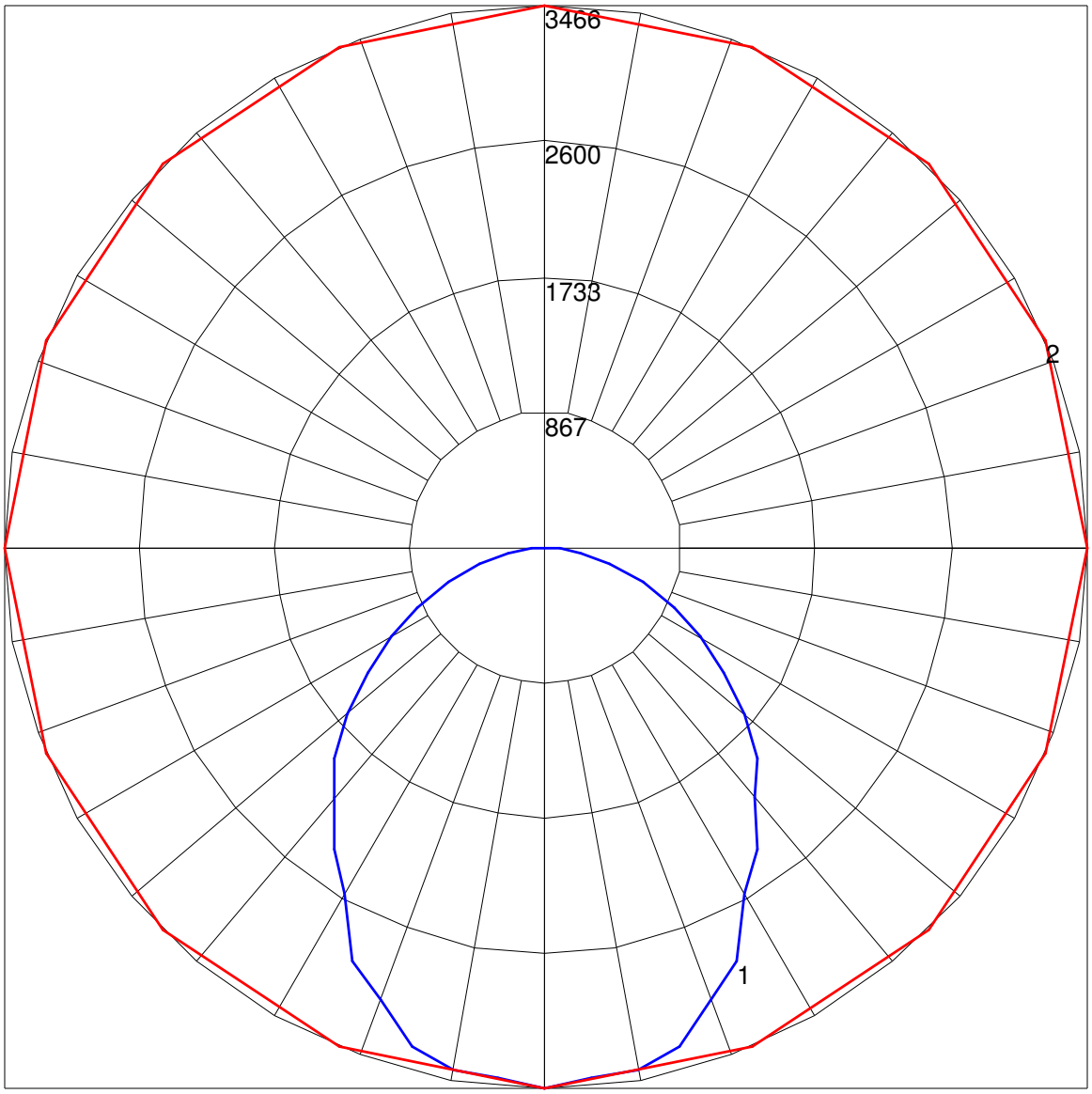
POLAR GRAPH



Maximum Candela = 3466.158 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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