H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-830-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] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-830-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5178
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	36.7
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	4627	4483	4450
55	4164	4188	4281
65	3638	4026	4410
75	2937	4065	5072
85	1361	4388	5301

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2016.557	2016.557	2016.557	2016.557	2016.557
5	2026.576	2004.312	1993.180	1965.350	1990.953
10	1987.614	1963.680	1949.208	1946.425	1950.322
15	1921.935	1898.558	1885.756	1881.303	1877.964
20	1834.549	1811.728	1790.578	1780.002	1781.672
25	1725.456	1706.531	1697.626	1669.796	1659.220
30	1597.995	1578.514	1558.476	1543.448	1535.099
35	1465.524	1447.713	1423.779	1403.185	1391.497
40	1313.573	1299.101	1274.054	1257.913	1248.451
45	1166.631	1149.933	1130.452	1121.546	1122.103
50	1011.340	1006.330	985.180	989.076	994.085
55	851.596	851.596	856.605	869.964	875.530
60	702.984	706.324	729.144	751.965	765.880
65	548.250	568.287	606.692	646.211	664.579
70	399.638	433.034	488.137	541.014	562.721
75	271.064	305.573	375.147	443.609	468.099
80	141.933	200.932	273.290	345.648	368.468
85	42.301	95.178	136.367	154.734	164.753
90	0.000	1.670	2.226	3.896	2.226

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	721.55	N.A.	13.90
0-30	1499.21	N.A.	29.00
0-40	2390.26	N.A.	46.20
0-60	4039.56	N.A.	78.00
0-80	5037.83	N.A.	97.30
0-90	5178.27	N.A.	100.00
10-90	4989.04	N.A.	96.30
20-40	1668.71	N.A.	32.20
20-50	2546.67	N.A.	49.20
40-70	2251.11	N.A.	43.50
60-80	998.27	N.A.	19.30
70-80	396.46	N.A.	7.70
80-90	140.44	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	5178.27	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	189.23
10-20	532.31
20-30	777.66
30-40	891.05
40-50	877.96
50-60	771.34
60-70	601.81
70-80	396.46
80-90	140.44
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	104	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	37	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	16.7	18.3	17.1	18.7	19.0	17.0	18.6	17.4	19.0	19.3
	3H	18.4	19.8	18.7	20.2	20.5	19.3	20.8	19.7	21.1	21.4
	4H	19.0	20.3	19.4	20.7	21.1	20.4	21.8	20.8	22.1	22.5
	6H	19.3	20.6	19.8	21.0	21.4	21.4	22.7	21.8	23.1	23.5
	8H	19.4	20.7	19.9	21.1	21.5	21.8	23.1	22.2	23.5	23.9
	12H	19.5	20.7	19.9	21.1	21.5	22.1	23.3	22.5	23.7	24.1
4H	2H	17.4	18.8	17.8	19.2	19.5	17.7	19.0	18.1	19.4	19.8
	3H	19.3	20.5	19.7	20.9	21.3	20.2	21.3	20.6	21.7	22.1
	4H	20.1	21.1	20.5	21.5	22.0	21.4	22.5	21.9	22.9	23.3
	6H	20.6	21.5	21.1	22.0	22.4	22.7	23.6	23.1	24.1	24.5
	8H	20.8	21.6	21.2	22.1	22.5	23.2	24.1	23.6	24.5	25.0
	12H	20.8	21.6	21.3	22.1	22.6	23.5	24.3	24.0	24.8	25.3
8H	4H	20.6	21.5	21.0	21.9	22.4	21.8	22.6	22.2	23.1	23.5
	6H	21.3	22.0	21.8	22.5	23.0	23.2	24.0	23.7	24.4	24.9
	8H	21.6	22.2	22.1	22.7	23.2	23.8	24.5	24.3	25.0	25.5
	12H	21.7	22.3	22.2	22.8	23.4	24.3	24.9	24.8	25.4	25.9
12H	4H	20.7	21.5	21.2	22.0	22.4	21.8	22.6	22.3	23.1	23.5
	6H	21.5	22.2	22.0	22.6	23.2	23.3	24.0	23.8	24.4	25.0
	8H	21.8	22.4	22.4	22.9	23.5	24.0	24.5	24.5	25.0	25.6

Maximum UGR = 25.9

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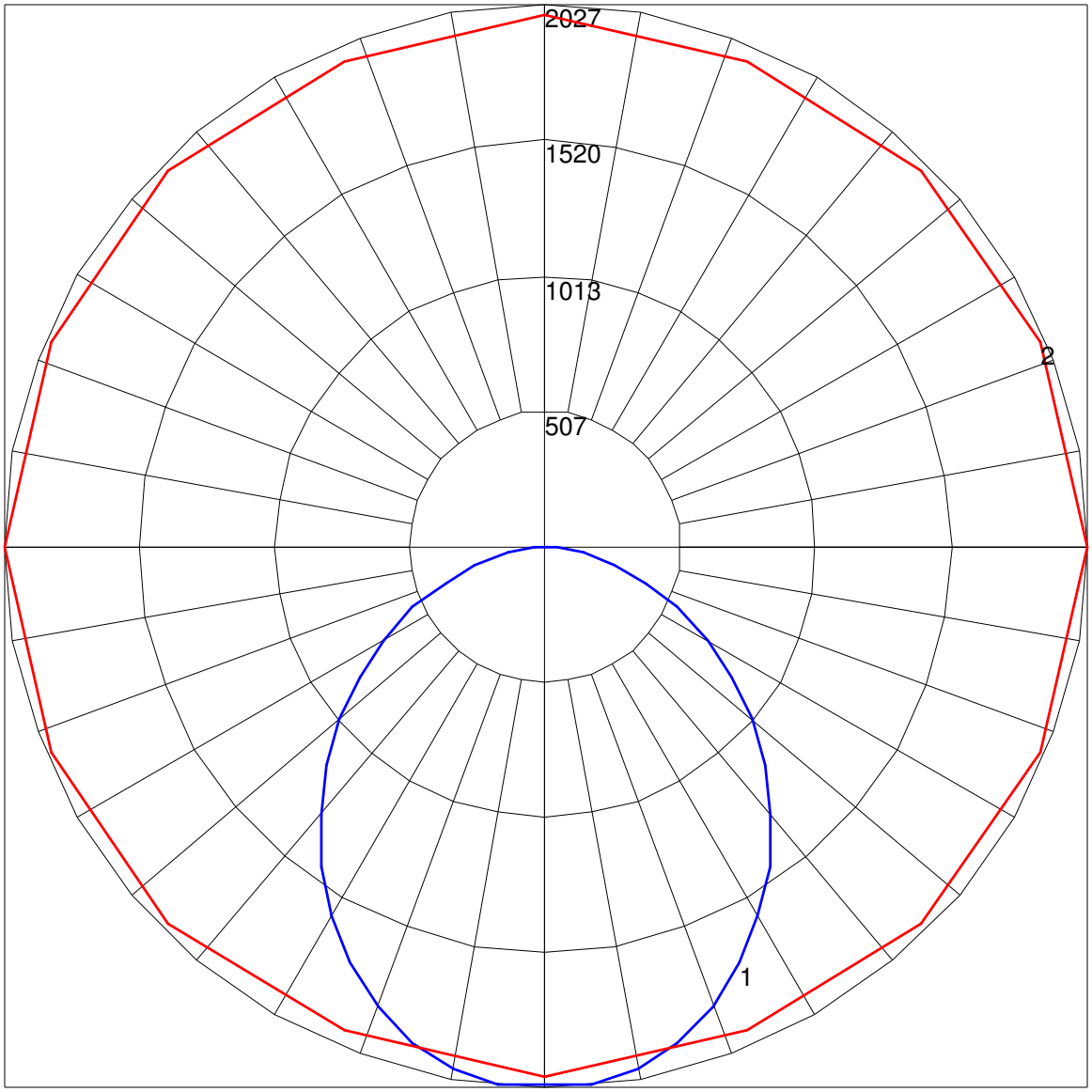
POLAR GRAPH



Maximum Candela = 2026.576 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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