H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-930-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-L90-930-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	7746
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	66.6
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	6921	6706	6657
55	6228	6265	6403
65	5442	6022	6596
75	4393	6080	7587
85	2036	6563	7929

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3016.399	3016.399	3016.399	3016.399	3016.399
5	3031.385	2998.083	2981.431	2939.803	2978.101
10	2973.106	2937.305	2915.658	2911.495	2917.323
15	2874.862	2839.894	2820.745	2814.085	2809.089
20	2744.149	2710.014	2678.376	2662.557	2665.055
25	2580.965	2552.658	2539.337	2497.708	2481.890
30	2390.307	2361.167	2331.195	2308.715	2296.227
35	2192.155	2165.513	2129.713	2098.908	2081.424
40	1964.864	1943.217	1905.752	1881.607	1867.453
45	1745.066	1720.089	1690.949	1677.628	1678.460
50	1512.779	1505.286	1473.648	1479.476	1486.969
55	1273.831	1273.831	1281.324	1301.306	1309.632
60	1051.535	1056.531	1090.666	1124.801	1145.616
65	820.081	850.053	907.501	966.613	994.088
70	597.785	647.739	730.163	809.258	841.728
75	405.461	457.081	561.152	663.558	700.191
80	212.305	300.558	408.792	517.026	551.161
85	63.275	142.369	203.980	231.454	246.441
90	0.000	2.498	3.330	5.828	3.330

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1079.3	N.A.	13.90
0-30	2242.54	N.A.	29.00
0-40	3575.39	N.A.	46.20
0-60	6042.45	N.A.	78.00
0-80	7535.67	N.A.	97.30
0-90	7745.74	N.A.	100.00
10-90	7462.68	N.A.	96.30
20-40	2496.08	N.A.	32.20
20-50	3809.36	N.A.	49.20
40-70	3367.25	N.A.	43.50
60-80	1493.22	N.A.	19.30
70-80	593.03	N.A.	7.70
80-90	210.07	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	7745.74	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	283.06
10-20	796.24
20-30	1163.24
30-40	1332.84
40-50	1313.27
50-60	1153.79
60-70	900.19
70-80	593.03
80-90	210.07
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	18.1	19.7	18.5	20.1	20.4	18.4	20.0	18.8	20.4	20.7
	3H	19.8	21.2	20.1	21.6	21.9	20.7	22.2	21.1	22.5	22.8
	4H	20.4	21.7	20.8	22.1	22.5	21.8	23.2	22.2	23.5	23.9
	6H	20.7	22.0	21.2	22.4	22.8	22.8	24.1	23.2	24.5	24.9
	8H	20.8	22.1	21.3	22.5	22.9	23.2	24.5	23.6	24.9	25.3
	12H	20.9	22.1	21.3	22.5	22.9	23.5	24.7	23.9	25.1	25.5
4H	2H	18.8	20.2	19.2	20.6	20.9	19.1	20.4	19.5	20.8	21.2
	3H	20.7	21.9	21.1	22.3	22.7	21.6	22.7	22.0	23.1	23.5
	4H	21.5	22.5	21.9	22.9	23.4	22.8	23.9	23.3	24.3	24.7
	6H	22.0	22.9	22.5	23.4	23.8	24.1	25.0	24.5	25.5	25.9
	8H	22.2	23.0	22.6	23.5	23.9	24.6	25.4	25.0	25.9	26.4
	12H	22.2	23.0	22.7	23.5	24.0	24.9	25.7	25.4	26.2	26.7
8H	4H	22.0	22.9	22.4	23.3	23.8	23.2	24.0	23.6	24.5	24.9
	6H	22.7	23.4	23.2	23.9	24.4	24.6	25.4	25.1	25.8	26.3
	8H	23.0	23.6	23.5	24.1	24.6	25.2	25.9	25.7	26.4	26.9
	12H	23.1	23.7	23.6	24.2	24.8	25.7	26.3	26.2	26.8	27.3
12H	4H	22.1	22.9	22.6	23.4	23.8	23.2	24.0	23.7	24.5	24.9
	6H	22.9	23.6	23.4	24.0	24.6	24.7	25.4	25.2	25.8	26.4
	8H	23.2	23.8	23.8	24.3	24.9	25.4	25.9	25.9	26.4	27.0

Maximum UGR = 27.3

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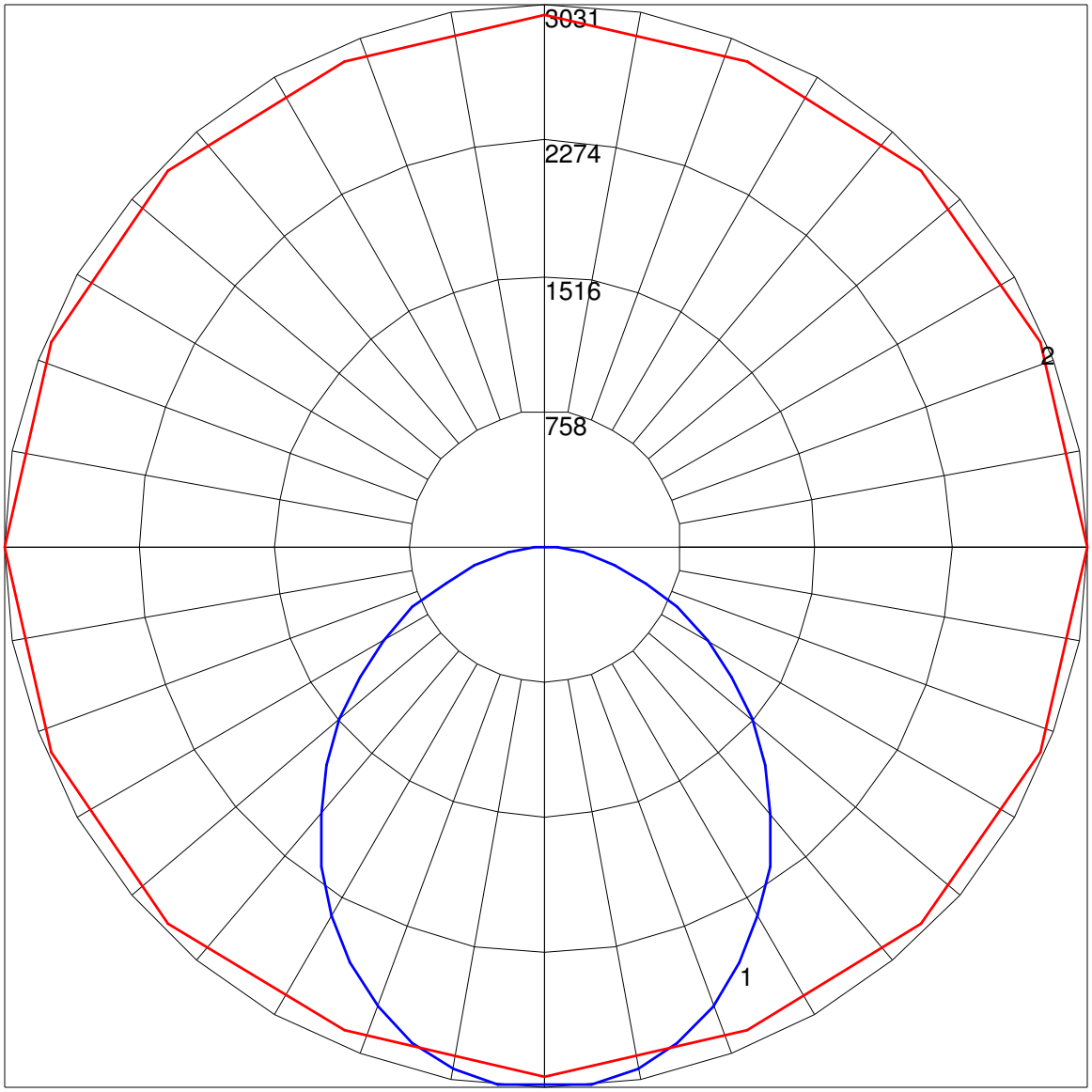
POLAR GRAPH



Maximum Candela = 3031.385 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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