H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-950-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-L38-950-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	3506
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	28.5
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	3133	3035	3013
55	2819	2836	2898
65	2463	2726	2986
75	1989	2752	3434
85	922	2971	3589

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1365.358	1365.358	1365.358	1365.358	1365.358
5	1372.141	1357.067	1349.530	1330.687	1348.023
10	1345.761	1329.556	1319.758	1317.874	1320.512
15	1301.292	1285.464	1276.796	1273.781	1271.520
20	1242.125	1226.674	1212.354	1205.193	1206.324
25	1168.261	1155.448	1149.418	1130.575	1123.415
30	1081.961	1068.770	1055.204	1045.028	1039.376
35	992.268	980.209	964.004	950.060	942.146
40	889.386	879.588	862.629	851.700	845.293
45	789.895	778.589	765.399	759.370	759.747
50	684.752	681.360	667.039	669.677	673.069
55	576.593	576.593	579.985	589.030	592.798
60	475.972	478.233	493.685	509.136	518.557
65	371.206	384.772	410.776	437.533	449.969
70	270.584	293.196	330.505	366.306	381.004
75	183.530	206.895	254.003	300.356	316.938
80	96.099	136.046	185.037	234.029	249.480
85	28.641	64.443	92.330	104.767	111.550
90	0.000	1.131	1.507	2.638	1.507

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	488.54	N.A.	13.90
0-30	1015.08	N.A.	29.00
0-40	1618.38	N.A.	46.20
0-60	2735.08	N.A.	78.00
0-80	3410.98	N.A.	97.30
0-90	3506.07	N.A.	100.00
10-90	3377.95	N.A.	96.30
20-40	1129.84	N.A.	32.20
20-50	1724.29	N.A.	49.20
40-70	1524.17	N.A.	43.50
60-80	675.90	N.A.	19.30
70-80	268.43	N.A.	7.70
80-90	95.09	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	3506.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	128.13
10-20	360.42
20-30	526.53
30-40	603.31
40-50	594.45
50-60	522.26
60-70	407.47
70-80	268.43
80-90	95.09
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	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	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	15.4	17.0	15.8	17.4	17.7	15.7	17.3	16.1	17.7	18.0
	3H	17.1	18.5	17.4	18.9	19.2	18.0	19.5	18.4	19.8	20.1
	4H	17.7	19.0	18.1	19.4	19.8	19.1	20.5	19.5	20.8	21.2
	6H	18.0	19.3	18.5	19.7	20.1	20.1	21.4	20.5	21.8	22.2
	8H	18.1	19.4	18.6	19.8	20.2	20.5	21.8	20.9	22.2	22.6
	12H	18.2	19.4	18.6	19.8	20.2	20.8	22.0	21.2	22.4	22.8
4H	2H	16.1	17.5	16.5	17.9	18.2	16.4	17.7	16.8	18.1	18.5
	3H	18.0	19.2	18.4	19.6	20.0	18.9	20.0	19.3	20.4	20.8
	4H	18.8	19.8	19.2	20.2	20.7	20.1	21.2	20.6	21.6	22.0
	6H	19.3	20.2	19.8	20.7	21.1	21.4	22.3	21.8	22.8	23.2
	8H	19.5	20.3	19.9	20.8	21.2	21.9	22.8	22.3	23.2	23.7
	12H	19.5	20.3	20.0	20.8	21.3	22.2	23.0	22.7	23.5	24.0
8H	4H	19.3	20.2	19.7	20.6	21.1	20.5	21.3	20.9	21.8	22.2
	6H	20.0	20.7	20.5	21.2	21.7	21.9	22.7	22.4	23.1	23.6
	8H	20.3	20.9	20.8	21.4	21.9	22.5	23.2	23.0	23.7	24.2
	12H	20.4	21.0	20.9	21.5	22.1	23.0	23.6	23.5	24.1	24.6
12H	4H	19.4	20.2	19.9	20.7	21.1	20.5	21.3	21.0	21.8	22.2
	6H	20.2	20.9	20.7	21.3	21.9	22.0	22.7	22.5	23.1	23.7
	8H	20.5	21.1	21.1	21.6	22.2	22.7	23.2	23.2	23.7	24.3

Maximum UGR = 24.6

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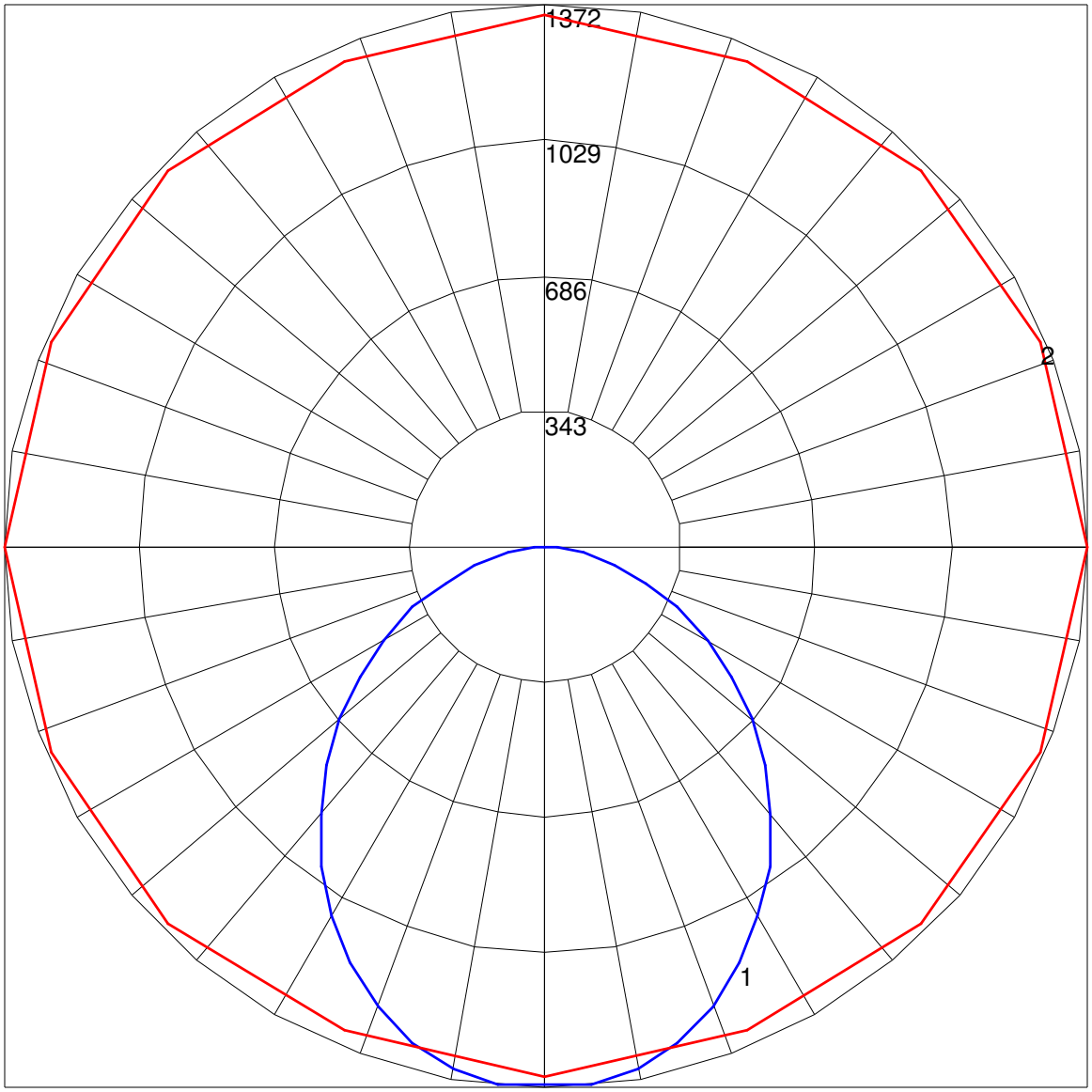
POLAR GRAPH



Maximum Candela = 1372.141 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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