H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-935-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-L49-935-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	4394
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
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	3926	3804	3776
55	3533	3554	3632
65	3087	3416	3742
75	2492	3449	4303
85	1155	3723	4498

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1711.018	1711.018	1711.018	1711.018	1711.018
5	1719.519	1700.628	1691.183	1667.570	1689.294
10	1686.460	1666.153	1653.874	1651.512	1654.818
15	1630.733	1610.898	1600.036	1596.257	1593.424
20	1556.587	1537.224	1519.278	1510.305	1511.722
25	1464.023	1447.966	1440.410	1416.797	1407.823
30	1355.874	1339.345	1322.343	1309.592	1302.508
35	1243.475	1228.363	1208.055	1190.581	1180.664
40	1114.547	1102.268	1081.016	1067.320	1059.292
45	989.869	975.701	959.171	951.615	952.087
50	858.106	853.856	835.910	839.216	843.466
55	722.566	722.566	726.817	738.151	742.874
60	596.471	599.305	618.668	638.031	649.837
65	465.182	482.183	514.769	548.300	563.885
70	339.087	367.423	414.177	459.042	477.460
75	229.993	259.274	318.307	376.396	397.175
80	120.428	170.488	231.882	293.277	312.640
85	35.892	80.757	115.705	131.290	139.791
90	0.000	1.417	1.889	3.306	1.889

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	612.22	N.A.	13.90
0-30	1272.06	N.A.	29.00
0-40	2028.1	N.A.	46.20
0-60	3427.51	N.A.	78.00
0-80	4274.52	N.A.	97.30
0-90	4393.68	N.A.	100.00
10-90	4233.12	N.A.	96.30
20-40	1415.87	N.A.	32.20
20-50	2160.81	N.A.	49.20
40-70	1910.04	N.A.	43.50
60-80	847.01	N.A.	19.30
70-80	336.39	N.A.	7.70
80-90	119.16	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	4393.68	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.56
10-20	451.66
20-30	659.83
30-40	756.04
40-50	744.94
50-60	654.47
60-70	510.62
70-80	336.39
80-90	119.16
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	55	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	16.1	17.7	16.5	18.1	18.4	16.4	18.0	16.8	18.4	18.7
	3H	17.8	19.2	18.1	19.6	19.9	18.7	20.2	19.1	20.5	20.8
	4H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.5	21.9
	6H	18.7	20.0	19.2	20.4	20.8	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.1	19.3	20.5	20.9	21.2	22.5	21.6	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.5	22.7	21.9	23.1	23.5
4H	2H	16.8	18.2	17.2	18.6	18.9	17.1	18.4	17.5	18.8	19.2
	3H	18.7	19.9	19.1	20.3	20.7	19.6	20.7	20.0	21.1	21.5
	4H	19.5	20.5	19.9	20.9	21.4	20.8	21.9	21.3	22.3	22.7
	6H	20.0	20.9	20.5	21.4	21.8	22.1	23.0	22.5	23.5	23.9
	8H	20.2	21.0	20.6	21.5	21.9	22.6	23.4	23.0	23.9	24.4
	12H	20.2	21.0	20.7	21.5	22.0	22.9	23.7	23.4	24.2	24.6
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.0	21.6	22.5	22.9
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	21.0	21.6	21.5	22.1	22.6	23.2	23.9	23.7	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.1	20.9	20.6	21.4	21.8	21.2	22.0	21.7	22.5	22.9
	6H	20.9	21.6	21.4	22.0	22.6	22.7	23.4	23.2	23.8	24.4
	8H	21.2	21.8	21.8	22.3	22.9	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.3

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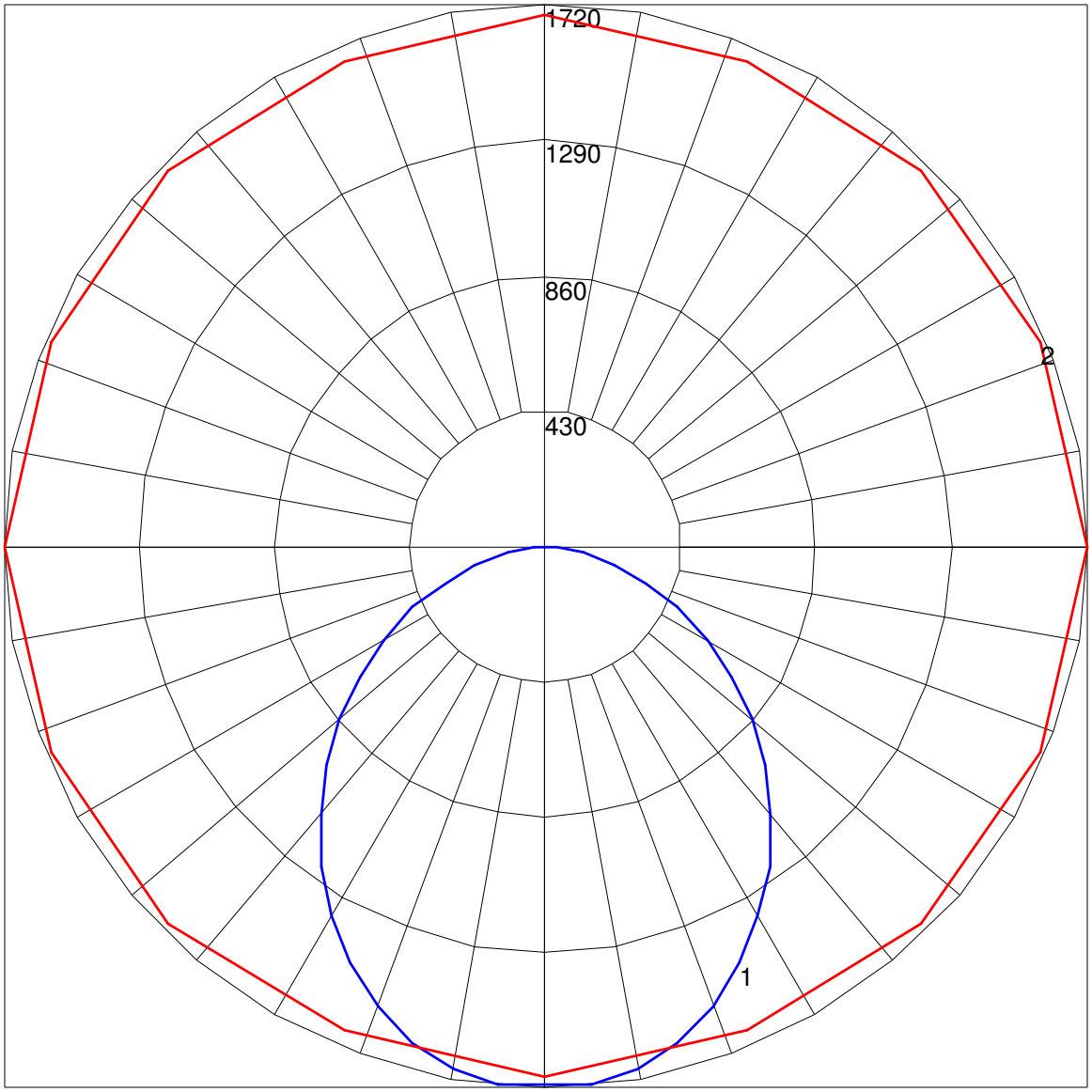
POLAR GRAPH



Maximum Candela = 1719.519 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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