H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-950-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-L49-950-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	4708
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
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	4206	4076	4046
55	3785	3807	3891
65	3307	3660	4009
75	2670	3695	4611
85	1237	3989	4819

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1833.233	1833.233	1833.233	1833.233	1833.233
5	1842.341	1822.101	1811.981	1786.681	1809.957
10	1806.921	1785.163	1772.007	1769.477	1773.019
15	1747.213	1725.961	1714.323	1710.276	1707.240
20	1667.772	1647.026	1627.798	1618.184	1619.702
25	1568.596	1551.392	1543.296	1517.996	1508.382
30	1452.722	1435.012	1416.796	1403.134	1395.544
35	1332.295	1316.103	1294.345	1275.623	1264.997
40	1194.157	1181.001	1158.231	1143.557	1134.955
45	1060.573	1045.393	1027.683	1019.587	1020.093
50	919.400	914.846	895.618	899.160	903.714
55	774.178	774.178	778.732	790.876	795.936
60	639.076	642.112	662.858	683.604	696.254
65	498.409	516.625	551.539	587.464	604.162
70	363.307	393.667	443.761	491.831	511.565
75	246.421	277.793	341.043	403.281	425.545
80	129.030	182.666	248.445	314.225	334.971
85	38.456	86.526	123.970	140.668	149.776
90	0.000	1.518	2.024	3.542	2.024

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	655.95	N.A.	13.90
0-30	1362.92	N.A.	29.00
0-40	2172.96	N.A.	46.20
0-60	3672.33	N.A.	78.00
0-80	4579.84	N.A.	97.30
0-90	4707.52	N.A.	100.00
10-90	4535.49	N.A.	96.30
20-40	1517.01	N.A.	32.20
20-50	2315.16	N.A.	49.20
40-70	2046.47	N.A.	43.50
60-80	907.51	N.A.	19.30
70-80	360.42	N.A.	7.70
80-90	127.67	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	4707.52	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	172.03
10-20	483.92
20-30	706.96
30-40	810.04
40-50	798.15
50-60	701.22
60-70	547.10
70-80	360.42
80-90	127.67
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	16.4	18.0	16.8	18.4	18.7	16.7	18.3	17.1	18.7	19.0
	3H	18.1	19.5	18.4	19.9	20.2	19.0	20.5	19.4	20.8	21.1
	4H	18.7	20.0	19.1	20.4	20.8	20.1	21.5	20.5	21.8	22.2
	6H	19.0	20.3	19.5	20.7	21.1	21.1	22.4	21.5	22.8	23.2
	8H	19.1	20.4	19.6	20.8	21.2	21.5	22.8	21.9	23.2	23.6
	12H	19.2	20.4	19.6	20.8	21.2	21.8	23.0	22.2	23.4	23.8
4H	2H	17.1	18.5	17.5	18.9	19.2	17.4	18.7	17.8	19.1	19.5
	3H	19.0	20.2	19.4	20.6	21.0	19.9	21.0	20.3	21.4	21.8
	4H	19.8	20.8	20.2	21.2	21.7	21.1	22.2	21.6	22.6	23.0
	6H	20.3	21.2	20.8	21.7	22.1	22.4	23.3	22.8	23.8	24.2
	8H	20.5	21.3	20.9	21.8	22.2	22.9	23.7	23.3	24.2	24.7
	12H	20.5	21.3	21.0	21.8	22.3	23.2	24.0	23.7	24.5	24.9
8H	4H	20.3	21.2	20.7	21.6	22.1	21.5	22.3	21.9	22.8	23.2
	6H	21.0	21.7	21.5	22.2	22.7	22.9	23.7	23.4	24.1	24.6
	8H	21.3	21.9	21.8	22.4	22.9	23.5	24.2	24.0	24.7	25.2
	12H	21.4	22.0	21.9	22.5	23.1	24.0	24.6	24.5	25.1	25.6
12H	4H	20.4	21.2	20.9	21.7	22.1	21.5	22.3	22.0	22.8	23.2
	6H	21.2	21.9	21.7	22.3	22.9	23.0	23.7	23.5	24.1	24.7
	8H	21.5	22.1	22.1	22.6	23.2	23.7	24.2	24.2	24.7	25.3

Maximum UGR = 25.6

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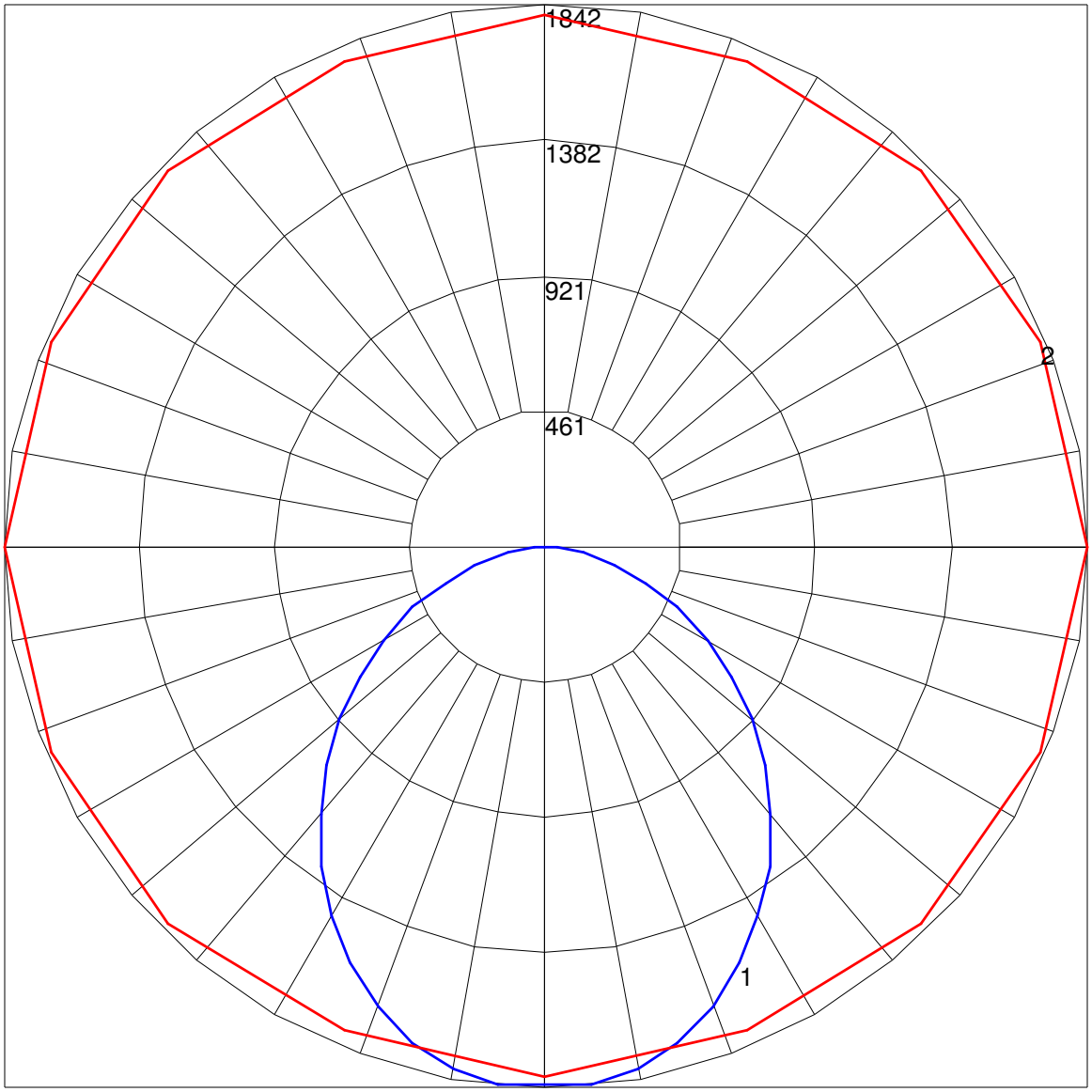
POLAR GRAPH



Maximum Candela = 1842.341 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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