H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-830-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-L61-830-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	6303
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	45.5
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	5632	5457	5417
55	5068	5098	5210
65	4428	4900	5368
75	3575	4948	6174
85	1657	5341	6453

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2454.576	2454.576	2454.576	2454.576	2454.576
5	2466.771	2439.671	2426.121	2392.246	2423.411
10	2419.346	2390.214	2372.599	2369.211	2373.954
15	2339.401	2310.946	2295.364	2289.944	2285.879
20	2233.034	2205.257	2179.512	2166.639	2168.672
25	2100.244	2077.210	2066.370	2032.495	2019.622
30	1945.097	1921.385	1896.995	1878.703	1868.540
35	1783.853	1762.173	1733.040	1707.973	1693.746
40	1598.896	1581.281	1550.793	1531.146	1519.629
45	1420.036	1399.711	1375.999	1365.159	1365.836
50	1231.014	1224.917	1199.172	1203.914	1210.012
55	1036.572	1036.572	1042.670	1058.930	1065.705
60	855.680	859.745	887.523	915.300	932.238
65	667.336	691.726	738.473	786.575	808.933
70	486.444	527.094	594.166	658.528	684.951
75	329.942	371.947	456.634	539.966	569.776
80	172.762	244.577	332.652	420.726	448.504
85	51.490	115.852	165.987	188.345	200.539
90	0.000	2.032	2.710	4.742	2.710

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	878.28	N.A.	13.90
0-30	1824.85	N.A.	29.00
0-40	2909.45	N.A.	46.20
0-60	4917.00	N.A.	78.00
0-80	6132.1	N.A.	97.30
0-90	6303.05	N.A.	100.00
10-90	6072.71	N.A.	96.30
20-40	2031.17	N.A.	32.20
20-50	3099.84	N.A.	49.20
40-70	2740.08	N.A.	43.50
60-80	1215.1	N.A.	19.30
70-80	482.57	N.A.	7.70
80-90	170.95	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	6303.05	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	230.34
10-20	647.94
20-30	946.58
30-40	1084.59
40-50	1068.67
50-60	938.89
60-70	732.53
70-80	482.57
80-90	170.95
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	17.4	19.0	17.8	19.4	19.7	17.7	19.3	18.1	19.7	20.0
	3H	19.1	20.5	19.4	20.9	21.2	20.0	21.5	20.4	21.8	22.1
	4H	19.7	21.0	20.1	21.4	21.8	21.1	22.5	21.5	22.8	23.2
	6H	20.0	21.3	20.5	21.7	22.1	22.1	23.4	22.5	23.8	24.2
	8H	20.1	21.4	20.6	21.8	22.2	22.5	23.8	22.9	24.2	24.6
	12H	20.2	21.4	20.6	21.8	22.2	22.8	24.0	23.2	24.4	24.8
4H	2H	18.1	19.5	18.5	19.9	20.2	18.4	19.7	18.8	20.1	20.5
	3H	20.0	21.2	20.4	21.6	22.0	20.9	22.0	21.3	22.4	22.8
	4H	20.8	21.8	21.2	22.2	22.7	22.1	23.2	22.6	23.6	24.0
	6H	21.3	22.2	21.8	22.7	23.1	23.4	24.3	23.8	24.8	25.2
	8H	21.5	22.3	21.9	22.8	23.2	23.9	24.8	24.3	25.2	25.7
	12H	21.5	22.3	22.0	22.8	23.3	24.2	25.0	24.7	25.5	26.0
8H	4H	21.3	22.2	21.7	22.6	23.1	22.5	23.3	22.9	23.8	24.2
	6H	22.0	22.7	22.5	23.2	23.7	23.9	24.7	24.4	25.1	25.6
	8H	22.3	22.9	22.8	23.4	23.9	24.5	25.2	25.0	25.7	26.2
	12H	22.4	23.0	22.9	23.5	24.1	25.0	25.6	25.5	26.1	26.6
12H	4H	21.4	22.2	21.9	22.7	23.1	22.5	23.3	23.0	23.8	24.2
	6H	22.2	22.9	22.7	23.3	23.9	24.0	24.7	24.5	25.1	25.7
	8H	22.5	23.1	23.1	23.6	24.2	24.7	25.2	25.2	25.7	26.3

Maximum UGR = 26.6

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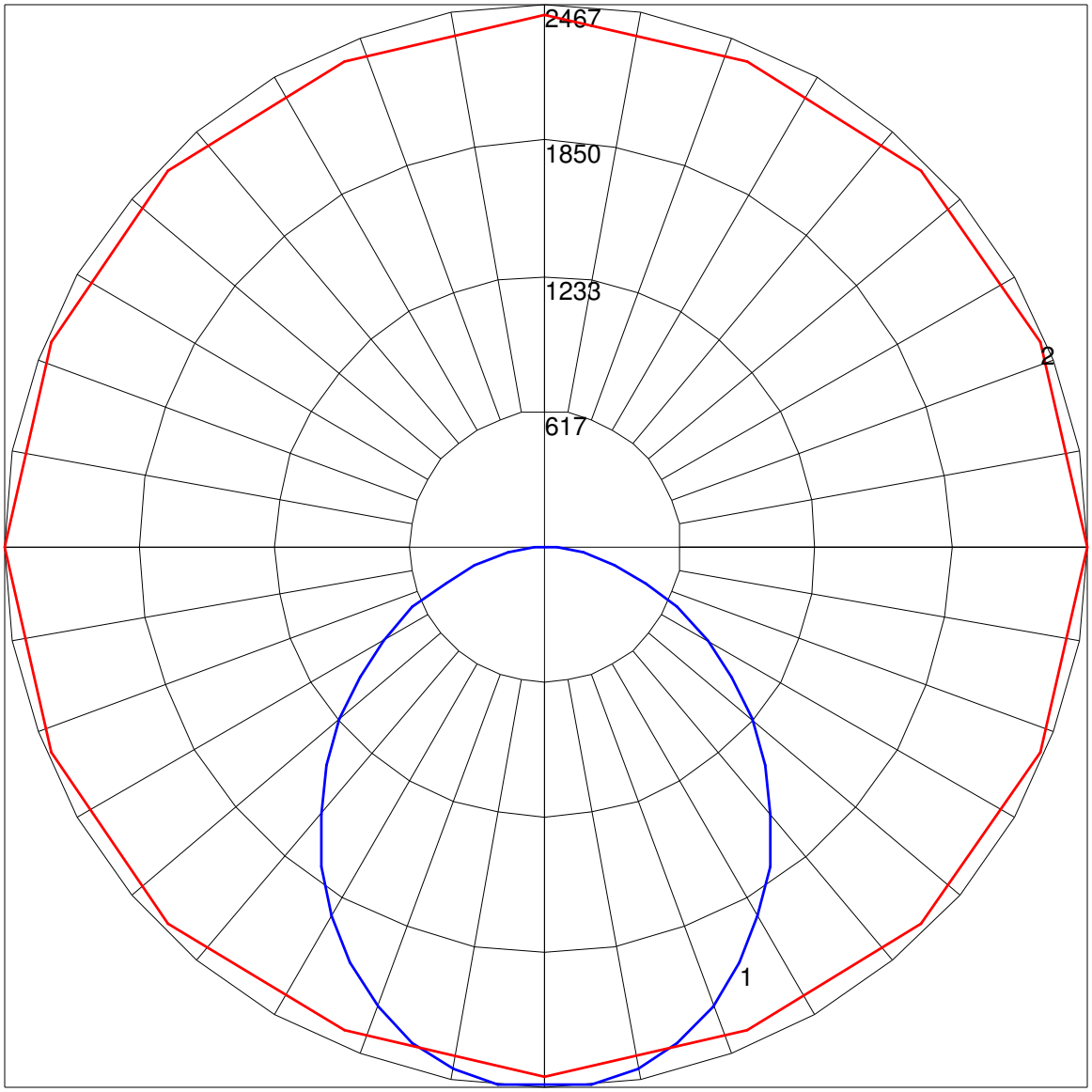
POLAR GRAPH



Maximum Candela = 2466.771 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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