H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-835-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-L61-835-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	6367
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
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	5689	5512	5471
55	5119	5149	5263
65	4473	4950	5422
75	3611	4998	6236
85	1673	5395	6518

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2479.370	2479.370	2479.370	2479.370	2479.370
5	2491.688	2464.314	2450.627	2416.410	2447.890
10	2443.784	2414.357	2396.564	2393.143	2397.933
15	2363.032	2334.289	2318.549	2313.075	2308.969
20	2255.590	2227.532	2201.527	2188.524	2190.577
25	2121.459	2098.191	2087.242	2053.025	2040.022
30	1964.745	1940.793	1916.157	1897.679	1887.414
35	1801.871	1779.973	1750.546	1725.225	1710.854
40	1615.046	1597.253	1566.458	1546.612	1534.978
45	1434.380	1413.850	1389.898	1378.948	1379.633
50	1243.449	1237.290	1211.285	1216.075	1222.234
55	1047.043	1047.043	1053.202	1069.626	1076.469
60	864.323	868.430	896.488	924.546	941.654
65	674.076	698.713	745.932	794.521	817.104
70	491.357	532.418	600.168	665.180	691.869
75	333.274	375.704	461.246	545.420	575.531
80	174.507	247.047	336.012	424.976	453.034
85	52.010	117.022	167.664	190.247	202.565
90	0.000	2.053	2.737	4.790	2.737

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	887.15	N.A.	13.90
0-30	1843.29	N.A.	29.00
0-40	2938.84	N.A.	46.20
0-60	4966.67	N.A.	78.00
0-80	6194.04	N.A.	97.30
0-90	6366.72	N.A.	100.00
10-90	6134.05	N.A.	96.30
20-40	2051.69	N.A.	32.20
20-50	3131.15	N.A.	49.20
40-70	2767.76	N.A.	43.50
60-80	1227.37	N.A.	19.30
70-80	487.45	N.A.	7.70
80-90	172.67	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	6366.72	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	232.67
10-20	654.48
20-30	956.14
30-40	1095.55
40-50	1079.46
50-60	948.37
60-70	739.92
70-80	487.45
80-90	172.67
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	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	24.7	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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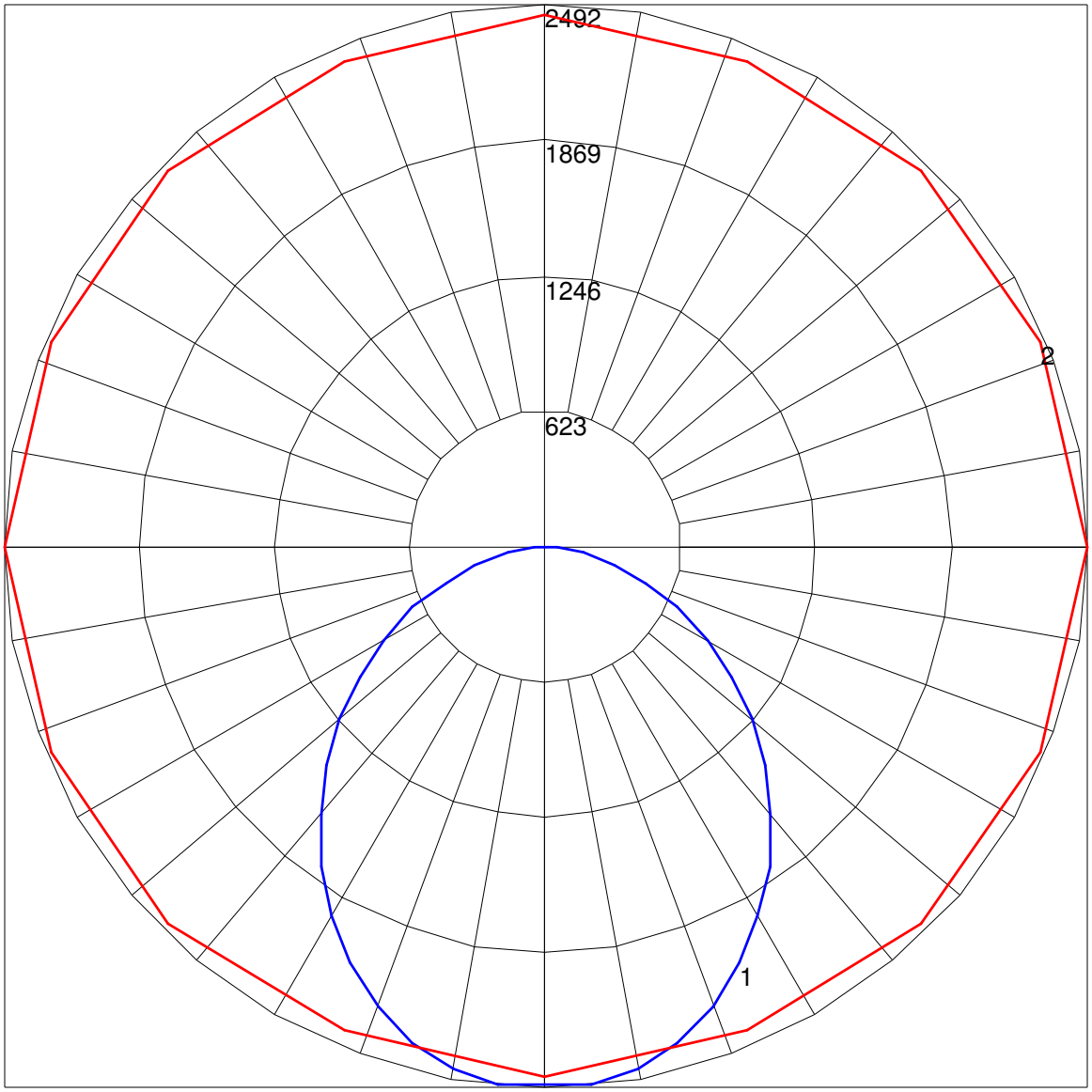
POLAR GRAPH



Maximum Candela = 2491.688 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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