H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-927-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-L90-927-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	7652
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	66.6
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	6837	6625	6576
55	6153	6189	6326
65	5376	5949	6517
75	4340	6007	7495
85	2011	6484	7834

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2980.057	2980.057	2980.057	2980.057	2980.057
5	2994.863	2961.962	2945.511	2904.384	2942.221
10	2937.285	2901.916	2880.530	2876.418	2882.175
15	2840.226	2805.679	2786.761	2780.181	2775.245
20	2711.087	2677.363	2646.107	2630.478	2632.946
25	2549.870	2521.903	2508.743	2467.616	2451.988
30	2361.508	2332.720	2303.108	2280.900	2268.561
35	2165.744	2139.423	2104.054	2073.620	2056.347
40	1941.191	1919.805	1882.791	1858.937	1844.954
45	1724.041	1699.365	1670.576	1657.415	1658.238
50	1494.553	1487.150	1455.893	1461.651	1469.054
55	1258.484	1258.484	1265.887	1285.628	1293.853
60	1038.866	1043.802	1077.526	1111.250	1131.813
65	810.201	839.812	896.567	954.967	982.111
70	590.583	639.935	721.366	799.508	831.587
75	400.576	451.574	554.391	655.563	691.755
80	209.747	296.936	403.866	510.796	544.521
85	62.513	140.654	201.522	228.666	243.471
90	0.000	2.468	3.290	5.758	3.290

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1066.3	N.A.	13.90
0-30	2215.52	N.A.	29.00
0-40	3532.31	N.A.	46.20
0-60	5969.65	N.A.	78.00
0-80	7444.88	N.A.	97.30
0-90	7652.42	N.A.	100.00
10-90	7372.77	N.A.	96.30
20-40	2466.01	N.A.	32.20
20-50	3763.46	N.A.	49.20
40-70	3326.68	N.A.	43.50
60-80	1475.23	N.A.	19.30
70-80	585.89	N.A.	7.70
80-90	207.54	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	7652.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	279.65
10-20	786.65
20-30	1149.22
30-40	1316.79
40-50	1297.45
50-60	1139.89
60-70	889.35
70-80	585.89
80-90	207.54
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	104	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	37	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	18.1	19.7	18.5	20.1	20.4	18.4	20.0	18.8	20.4	20.7
	3H	19.8	21.2	20.1	21.6	21.9	20.7	22.2	21.1	22.5	22.8
	4H	20.4	21.7	20.8	22.1	22.5	21.8	23.2	22.2	23.5	23.9
	6H	20.7	22.0	21.2	22.4	22.8	22.8	24.1	23.2	24.5	24.9
	8H	20.8	22.1	21.3	22.5	22.9	23.2	24.5	23.6	24.9	25.3
	12H	20.9	22.1	21.3	22.5	22.9	23.5	24.7	23.9	25.1	25.5
4H	2H	18.8	20.2	19.2	20.6	20.9	19.1	20.4	19.5	20.8	21.2
	3H	20.7	21.9	21.1	22.3	22.7	21.6	22.7	22.0	23.1	23.5
	4H	21.5	22.5	21.9	22.9	23.4	22.8	23.9	23.3	24.3	24.7
	6H	22.0	22.9	22.5	23.4	23.8	24.1	25.0	24.5	25.5	25.9
	8H	22.2	23.0	22.6	23.5	23.9	24.6	25.4	25.0	25.9	26.4
	12H	22.2	23.0	22.7	23.5	24.0	24.9	25.7	25.4	26.2	26.6
8H	4H	22.0	22.9	22.4	23.3	23.8	23.2	24.0	23.6	24.5	24.9
	6H	22.7	23.4	23.2	23.9	24.4	24.6	25.4	25.1	25.8	26.3
	8H	23.0	23.6	23.5	24.1	24.6	25.2	25.9	25.7	26.4	26.9
	12H	23.1	23.7	23.6	24.2	24.8	25.7	26.3	26.2	26.8	27.3
12H	4H	22.1	22.9	22.6	23.4	23.8	23.2	24.0	23.7	24.5	24.9
	6H	22.9	23.6	23.4	24.0	24.6	24.7	25.4	25.2	25.8	26.4
	8H	23.2	23.8	23.8	24.3	24.9	25.4	25.9	25.9	26.4	27.0

Maximum UGR = 27.3

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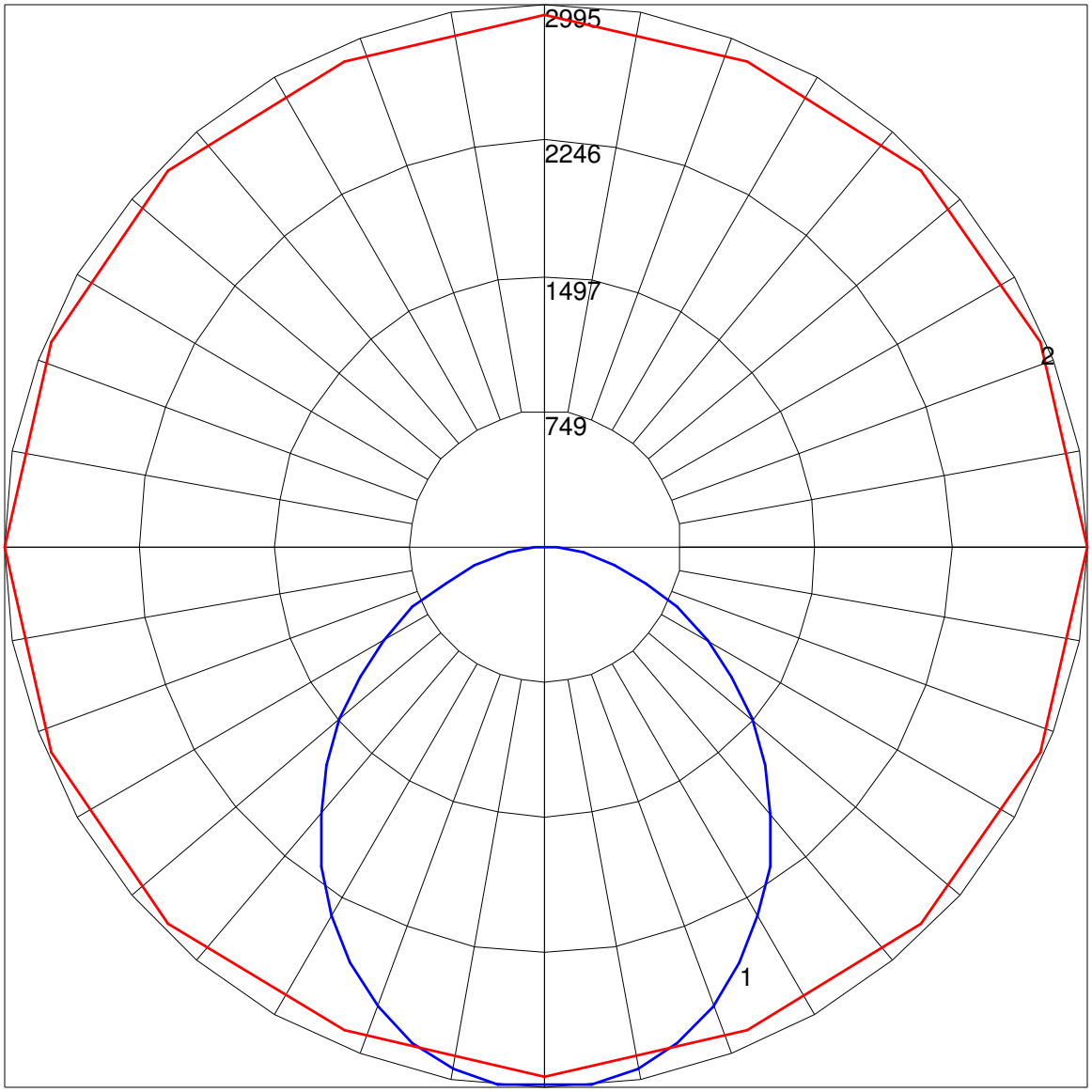
POLAR GRAPH



Maximum Candela = 2994.863 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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