H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-827-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-L90-827-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	9052
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	8088	7837	7779
55	7278	7321	7483
65	6360	7038	7709
75	5134	7106	8866
85	2379	7670	9267

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3525.190	3525.190	3525.190	3525.190	3525.190
5	3542.704	3503.783	3484.323	3435.673	3480.431
10	3474.593	3432.754	3407.456	3402.591	3409.402
15	3359.779	3318.913	3296.534	3288.750	3282.912
20	3207.018	3167.124	3130.150	3111.663	3114.582
25	3016.309	2983.227	2967.659	2919.009	2900.522
30	2793.491	2759.436	2724.408	2698.137	2683.542
35	2561.917	2530.781	2488.941	2452.940	2432.507
40	2296.287	2270.989	2227.204	2198.987	2182.446
45	2039.414	2010.224	1976.169	1960.601	1961.574
50	1767.946	1759.189	1722.215	1729.026	1737.783
55	1488.694	1488.694	1497.451	1520.804	1530.534
60	1228.903	1234.741	1274.634	1314.527	1338.852
65	958.408	993.436	1060.573	1129.656	1161.765
70	698.616	756.996	853.324	945.759	983.706
75	473.852	534.179	655.804	775.483	818.295
80	248.116	351.254	477.744	604.235	644.128
85	73.948	166.383	238.386	270.495	288.009
90	0.000	2.919	3.892	6.811	3.892

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1261.35	N.A.	13.90
0-30	2620.8	N.A.	29.00
0-40	4178.46	N.A.	46.20
0-60	7061.66	N.A.	78.00
0-80	8806.75	N.A.	97.30
0-90	9052.26	N.A.	100.00
10-90	8721.45	N.A.	96.30
20-40	2917.11	N.A.	32.20
20-50	4451.9	N.A.	49.20
40-70	3935.22	N.A.	43.50
60-80	1745.09	N.A.	19.30
70-80	693.06	N.A.	7.70
80-90	245.51	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	9052.26	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	330.81
10-20	930.55
20-30	1359.45
30-40	1557.66
40-50	1534.79
50-60	1348.4
60-70	1052.03
70-80	693.06
80-90	245.51
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	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	18.7	20.3	19.1	20.7	21.0	19.0	20.6	19.4	21.0	21.3
	3H	20.4	21.8	20.7	22.2	22.5	21.3	22.8	21.7	23.1	23.4
	4H	21.0	22.3	21.4	22.7	23.1	22.4	23.8	22.8	24.1	24.5
	6H	21.3	22.6	21.8	23.0	23.4	23.4	24.7	23.8	25.1	25.5
	8H	21.4	22.7	21.9	23.1	23.5	23.8	25.1	24.2	25.5	25.9
	12H	21.5	22.7	21.9	23.1	23.5	24.1	25.3	24.5	25.7	26.1
4H	2H	19.4	20.8	19.8	21.2	21.5	19.7	21.0	20.1	21.4	21.8
	3H	21.3	22.5	21.7	22.9	23.3	22.2	23.3	22.6	23.7	24.1
	4H	22.1	23.1	22.5	23.5	24.0	23.4	24.5	23.9	24.9	25.3
	6H	22.6	23.5	23.1	24.0	24.4	24.7	25.6	25.1	26.1	26.5
	8H	22.8	23.6	23.2	24.1	24.5	25.2	26.0	25.6	26.5	27.0
	12H	22.8	23.6	23.3	24.1	24.6	25.5	26.3	26.0	26.8	27.2
8H	4H	22.6	23.5	23.0	23.9	24.4	23.8	24.6	24.2	25.1	25.5
	6H	23.3	24.0	23.8	24.5	25.0	25.2	26.0	25.7	26.4	26.9
	8H	23.6	24.2	24.1	24.7	25.2	25.8	26.5	26.3	27.0	27.5
	12H	23.7	24.3	24.2	24.8	25.4	26.3	26.9	26.8	27.4	27.9
12H	4H	22.7	23.5	23.2	24.0	24.4	23.8	24.6	24.3	25.1	25.5
	6H	23.5	24.2	24.0	24.6	25.2	25.3	26.0	25.8	26.4	27.0
	8H	23.8	24.4	24.4	24.9	25.5	26.0	26.5	26.5	27.0	27.6

Maximum UGR = 27.9

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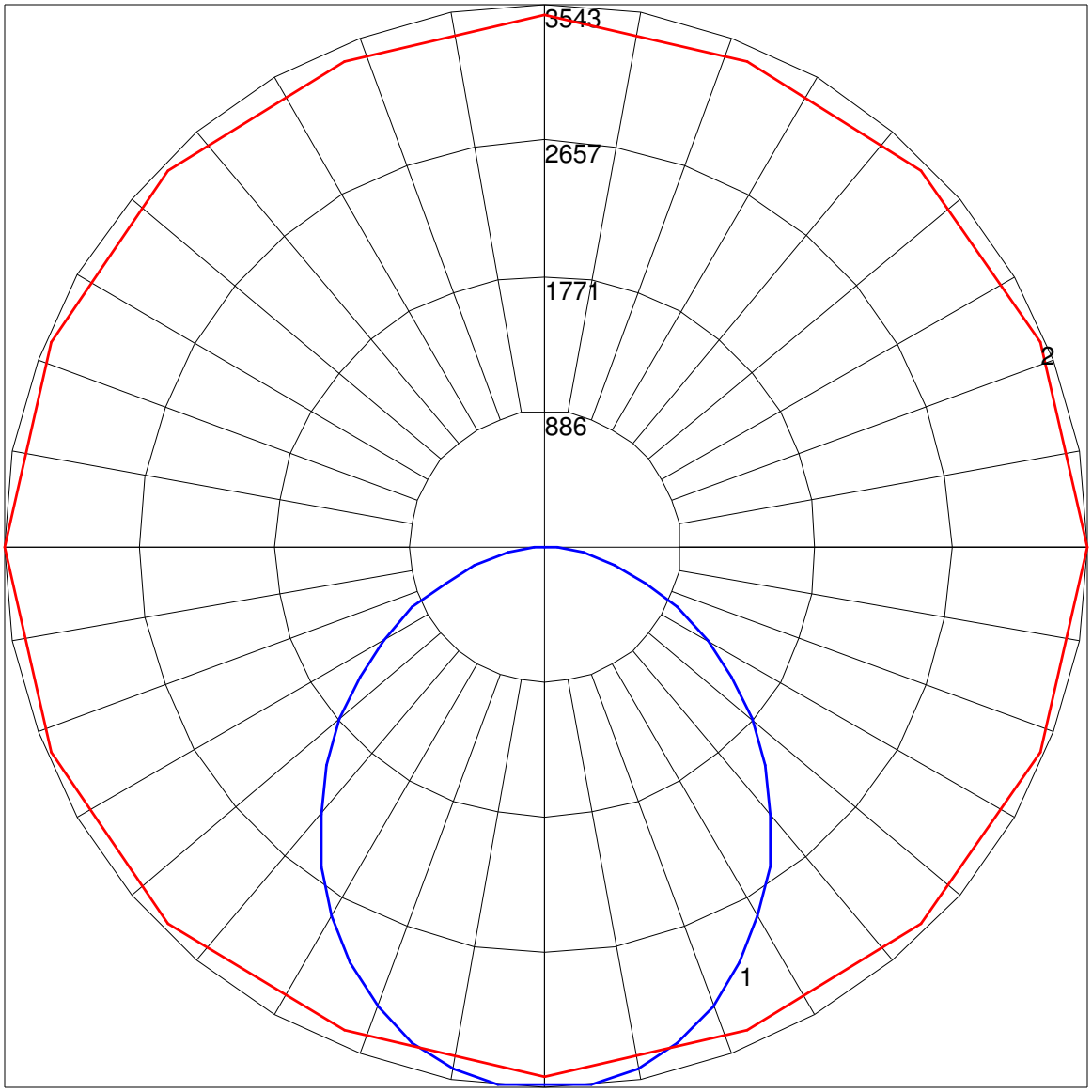
POLAR GRAPH



Maximum Candela = 3542.704 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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