H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-940-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L90-940-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7792
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	66.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3341	3526	3706
55	2995	3278	3541
65	2632	3119	3544
75	2037	3129	3873
85	1230	4105	4704

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2980.896	2980.896	2980.896	2980.896	2980.896
5	2935.379	2931.333	2931.333	2921.218	2916.160
10	2926.275	2926.275	2931.333	2935.379	2935.379
15	2849.401	2853.447	2858.505	2865.585	2870.643
20	2661.262	2671.377	2683.515	2699.699	2704.756
25	2510.548	2519.652	2543.928	2565.169	2575.284
30	2200.017	2132.246	2409.398	2329.489	2317.351
35	2029.073	2048.292	2093.809	2132.246	2147.419
40	1805.531	1829.807	1880.382	1930.957	1950.176
45	1649.760	1671.001	1740.795	1805.531	1829.807
50	1433.298	1466.678	1543.552	1611.323	1634.587
55	1199.641	1236.055	1312.930	1389.804	1418.126
60	978.122	1016.560	1103.549	1182.446	1211.779
65	776.834	827.409	920.467	1012.514	1045.893
70	572.510	632.189	742.442	839.547	872.926
75	368.187	442.026	565.430	663.545	699.959
80	202.300	298.393	440.003	536.096	565.430
85	74.851	170.944	249.841	281.198	286.255
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1080.57	N.A.	13.90
0-30	2239.47	N.A.	28.70
0-40	3545.87	N.A.	45.50
0-60	6055.59	N.A.	77.70
0-80	7558.78	N.A.	97.00
0-90	7791.8	N.A.	100.00
10-90	7511.59	N.A.	96.40
20-40	2465.3	N.A.	31.60
20-50	3797.8	N.A.	48.70
40-70	3418.46	N.A.	43.90
60-80	1503.2	N.A.	19.30
70-80	594.44	N.A.	7.60
80-90	233.02	N.A.	3.00
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	7791.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	280.20
10-20	800.37
20-30	1158.9
30-40	1306.4
40-50	1332.49
50-60	1177.22
60-70	908.75
70-80	594.44
80-90	233.02
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	15.4	17.1	15.8	17.4	17.7	16.5	18.1	16.8	18.4	18.7
	3H	17.1	18.6	17.5	18.9	19.3	18.6	20.1	19.0	20.5	20.8
	4H	17.7	19.1	18.1	19.4	19.8	19.6	21.0	20.0	21.4	21.8
	6H	18.0	19.4	18.5	19.7	20.1	20.7	22.0	21.1	22.3	22.7
	8H	18.2	19.4	18.6	19.8	20.2	21.1	22.3	21.5	22.7	23.1
	12H	18.2	19.4	18.7	19.8	20.2	21.4	22.6	21.9	23.0	23.4
4H	2H	16.2	17.6	16.6	18.0	18.4	17.0	18.4	17.4	18.8	19.1
	3H	18.1	19.3	18.6	19.7	20.1	19.5	20.7	19.9	21.1	21.4
	4H	18.8	19.9	19.3	20.3	20.8	20.6	21.7	21.1	22.1	22.6
	6H	19.4	20.3	19.8	20.8	21.2	21.9	22.8	22.3	23.3	23.7
	8H	19.5	20.4	20.0	20.9	21.3	22.4	23.3	22.9	23.7	24.2
	12H	19.7	20.5	20.2	20.9	21.4	22.8	23.6	23.3	24.1	24.6
8H	4H	19.4	20.3	19.9	20.8	21.2	21.0	21.9	21.4	22.3	22.8
	6H	20.2	20.9	20.7	21.4	21.9	22.4	23.2	22.9	23.7	24.1
	8H	20.5	21.1	21.0	21.6	22.1	23.1	23.8	23.6	24.3	24.7
	12H	20.7	21.3	21.2	21.8	22.3	23.7	24.2	24.2	24.7	25.3
12H	4H	19.6	20.4	20.1	20.9	21.3	21.0	21.8	21.5	22.3	22.8
	6H	20.4	21.1	21.0	21.6	22.1	22.5	23.2	23.1	23.7	24.2
	8H	20.8	21.4	21.3	21.9	22.5	23.3	23.8	23.8	24.3	24.9

Maximum UGR = 25.3

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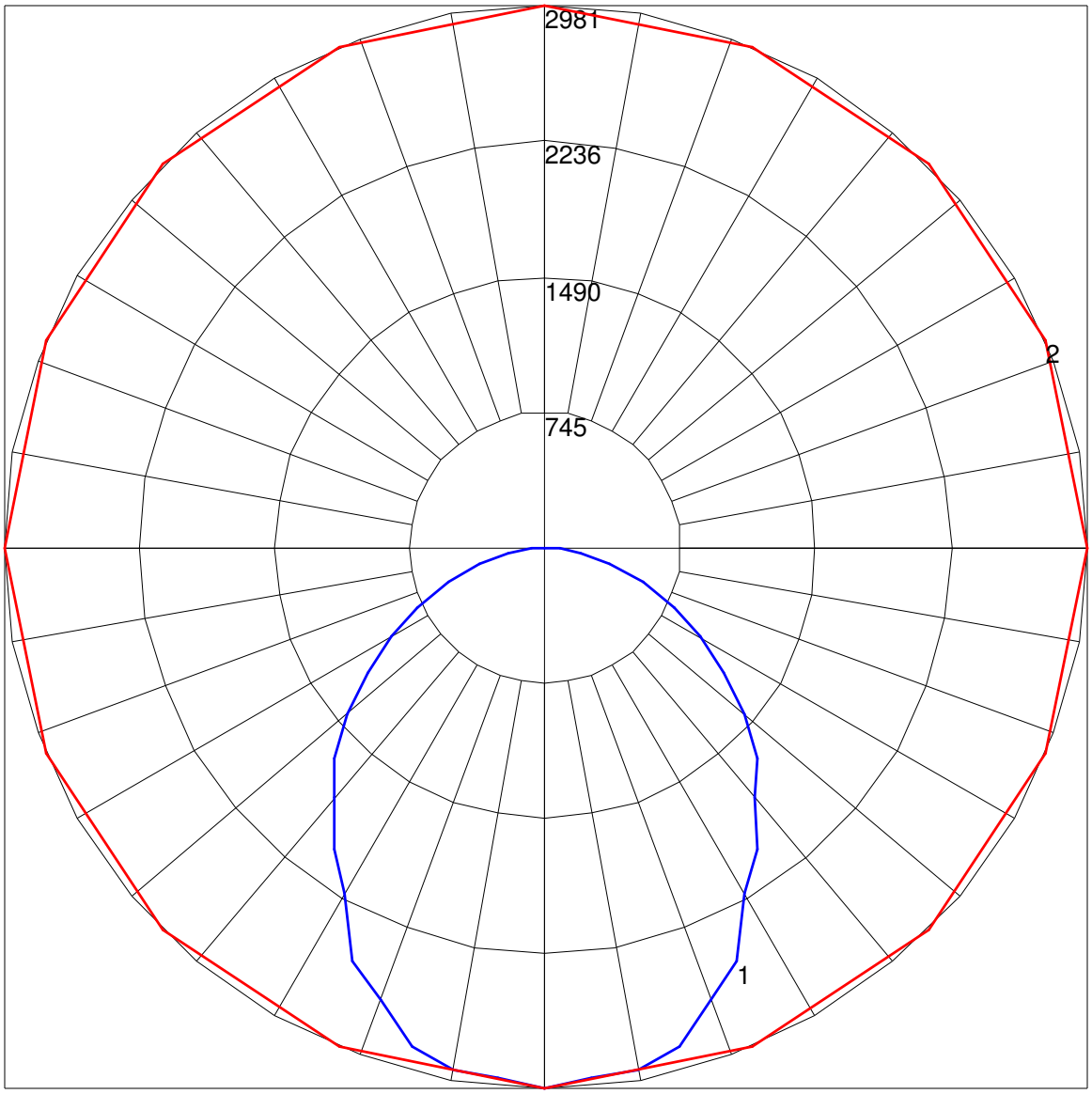
POLAR GRAPH



Maximum Candela = 2980.896 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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