H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-840-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-L61-840-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	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)	1.14
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	2730	2881	3028
55	2447	2679	2893
65	2151	2549	2896
75	1665	2556	3165
85	1005	3354	3843

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2435.658	2435.658	2435.658	2435.658	2435.658
5	2398.466	2395.160	2395.160	2386.895	2382.762
10	2391.027	2391.027	2395.160	2398.466	2398.466
15	2328.214	2331.520	2335.653	2341.438	2345.570
20	2174.488	2182.752	2192.670	2205.894	2210.027
25	2051.341	2058.779	2078.615	2095.971	2104.236
30	1797.609	1742.235	1968.692	1903.400	1893.482
35	1657.933	1673.636	1710.828	1742.235	1754.632
40	1475.280	1495.115	1536.440	1577.764	1593.467
45	1348.000	1365.357	1422.384	1475.280	1495.115
50	1171.132	1198.406	1261.219	1316.594	1335.603
55	980.214	1009.967	1072.780	1135.593	1158.735
60	799.213	830.620	901.697	966.163	990.132
65	634.742	676.066	752.103	827.314	854.588
70	467.792	516.554	606.642	685.984	713.258
75	300.841	361.175	462.006	542.176	571.929
80	165.297	243.814	359.522	438.038	462.006
85	61.160	139.676	204.142	229.763	233.896
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	882.92	N.A.	13.90
0-30	1829.85	N.A.	28.70
0-40	2897.29	N.A.	45.50
0-60	4947.95	N.A.	77.70
0-80	6176.2	N.A.	97.00
0-90	6366.59	N.A.	100.00
10-90	6137.64	N.A.	96.40
20-40	2014.37	N.A.	31.60
20-50	3103.14	N.A.	48.70
40-70	2793.19	N.A.	43.90
60-80	1228.24	N.A.	19.30
70-80	485.71	N.A.	7.60
80-90	190.40	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	6366.59	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	228.95
10-20	653.97
20-30	946.93
30-40	1067.45
40-50	1088.76
50-60	961.89
60-70	742.53
70-80	485.71
80-90	190.40
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	14.8	16.4	15.1	16.7	17.0	15.8	17.4	16.1	17.7	18.0
	3H	16.4	17.9	16.8	18.2	18.6	17.9	19.4	18.3	19.8	20.1
	4H	17.0	18.4	17.4	18.7	19.1	18.9	20.3	19.3	20.7	21.1
	6H	17.3	18.7	17.8	19.0	19.4	20.0	21.3	20.4	21.6	22.0
	8H	17.5	18.7	17.9	19.1	19.5	20.4	21.6	20.8	22.0	22.4
	12H	17.5	18.7	18.0	19.1	19.5	20.7	21.9	21.2	22.3	22.7
4H	2H	15.5	16.9	15.9	17.3	17.7	16.3	17.7	16.7	18.1	18.4
	3H	17.4	18.6	17.9	19.0	19.4	18.8	20.0	19.2	20.4	20.8
	4H	18.1	19.2	18.6	19.6	20.1	19.9	21.0	20.4	21.4	21.9
	6H	18.7	19.6	19.1	20.1	20.5	21.2	22.1	21.6	22.6	23.0
	8H	18.8	19.7	19.3	20.2	20.6	21.7	22.6	22.2	23.0	23.5
	12H	19.0	19.8	19.5	20.2	20.7	22.1	22.9	22.6	23.4	23.9
8H	4H	18.7	19.6	19.2	20.1	20.5	20.3	21.2	20.7	21.6	22.1
	6H	19.5	20.2	20.0	20.7	21.2	21.7	22.5	22.2	23.0	23.4
	8H	19.8	20.4	20.3	20.9	21.4	22.4	23.1	22.9	23.6	24.0
	12H	20.0	20.6	20.5	21.1	21.6	23.0	23.5	23.5	24.0	24.6
12H	4H	18.9	19.7	19.4	20.2	20.6	20.3	21.1	20.8	21.6	22.1
	6H	19.7	20.4	20.3	20.9	21.4	21.8	22.5	22.4	23.0	23.5
	8H	20.1	20.7	20.6	21.2	21.8	22.6	23.1	23.1	23.6	24.2

Maximum UGR = 24.6

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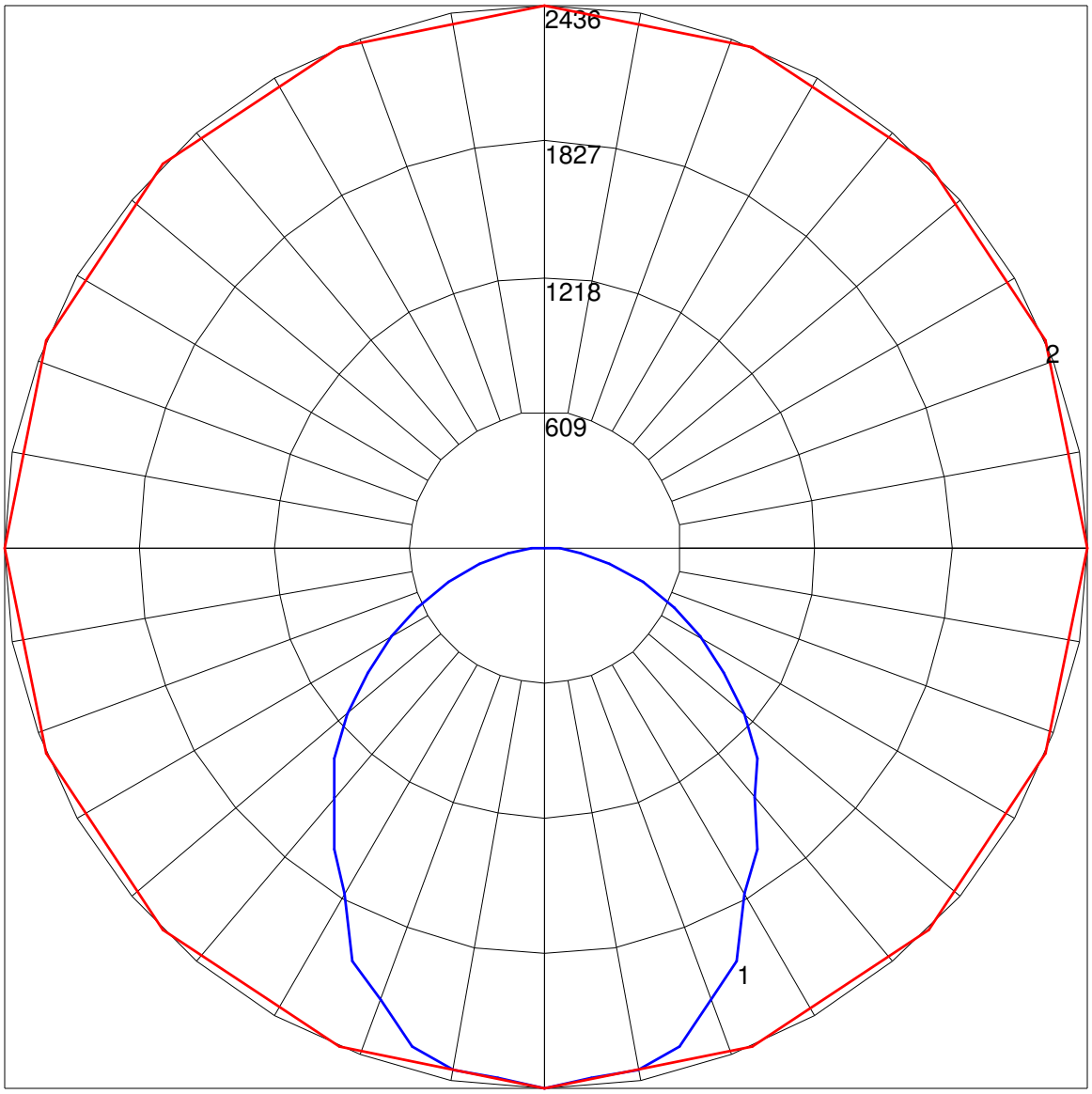
POLAR GRAPH



Maximum Candela = 2435.658 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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