H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-930-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-L49-930-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	4215
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	36.7
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	1807	1907	2005
55	1620	1773	1915
65	1424	1687	1917
75	1102	1692	2095
85	665	2221	2544

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1612.468	1612.468	1612.468	1612.468	1612.468
5	1587.846	1585.657	1585.657	1580.186	1577.450
10	1582.921	1582.921	1585.657	1587.846	1587.846
15	1541.338	1543.526	1546.262	1550.092	1552.828
20	1439.567	1445.038	1451.604	1460.359	1463.094
25	1358.040	1362.965	1376.097	1387.587	1393.058
30	1190.064	1153.404	1303.325	1260.100	1253.534
35	1097.594	1107.990	1132.612	1153.404	1161.612
40	976.673	989.805	1017.162	1044.520	1054.916
45	892.411	903.901	941.655	976.673	989.805
50	775.320	793.376	834.960	871.619	884.204
55	648.927	668.624	710.208	751.792	767.112
60	529.100	549.891	596.947	639.625	655.493
65	420.216	447.573	497.912	547.703	565.759
70	309.690	341.972	401.612	454.139	472.195
75	199.165	239.107	305.860	358.934	378.632
80	109.431	161.411	238.013	289.993	305.860
85	40.490	92.469	135.147	152.109	154.845
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	584.52	N.A.	13.90
0-30	1211.41	N.A.	28.70
0-40	1918.08	N.A.	45.50
0-60	3275.67	N.A.	77.70
0-80	4088.8	N.A.	97.00
0-90	4214.85	N.A.	100.00
10-90	4063.28	N.A.	96.40
20-40	1333.57	N.A.	31.60
20-50	2054.36	N.A.	48.70
40-70	1849.16	N.A.	43.90
60-80	813.13	N.A.	19.30
70-80	321.55	N.A.	7.60
80-90	126.05	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	4214.85	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	151.57
10-20	432.94
20-30	626.89
30-40	706.68
40-50	720.79
50-60	636.80
60-70	491.57
70-80	321.55
80-90	126.05
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	13.4	15.0	13.7	15.3	15.6	14.4	16.0	14.7	16.3	16.6
	3H	15.0	16.5	15.4	16.8	17.2	16.5	18.0	16.9	18.4	18.7
	4H	15.6	17.0	16.0	17.3	17.7	17.5	18.9	17.9	19.3	19.7
	6H	15.9	17.3	16.4	17.6	18.0	18.6	19.9	19.0	20.2	20.6
	8H	16.1	17.3	16.5	17.7	18.1	19.0	20.2	19.4	20.6	21.0
	12H	16.1	17.3	16.6	17.7	18.1	19.3	20.5	19.8	20.9	21.3
4H	2H	14.1	15.5	14.5	15.9	16.3	14.9	16.3	15.3	16.7	17.0
	3H	16.0	17.2	16.5	17.6	18.0	17.4	18.6	17.8	19.0	19.4
	4H	16.7	17.8	17.2	18.2	18.7	18.5	19.6	19.0	20.0	20.5
	6H	17.3	18.2	17.7	18.7	19.1	19.8	20.7	20.2	21.2	21.6
	8H	17.4	18.3	17.9	18.8	19.2	20.3	21.2	20.8	21.6	22.1
	12H	17.6	18.4	18.1	18.8	19.3	20.7	21.5	21.2	22.0	22.5
8H	4H	17.3	18.2	17.8	18.7	19.1	18.9	19.8	19.3	20.2	20.7
	6H	18.1	18.8	18.6	19.3	19.8	20.3	21.1	20.8	21.6	22.0
	8H	18.4	19.0	18.9	19.5	20.0	21.0	21.7	21.5	22.2	22.6
	12H	18.6	19.2	19.1	19.7	20.2	21.6	22.1	22.1	22.6	23.2
12H	4H	17.5	18.3	18.0	18.8	19.2	18.9	19.7	19.4	20.2	20.7
	6H	18.3	19.0	18.9	19.5	20.0	20.4	21.1	21.0	21.6	22.1
	8H	18.7	19.3	19.2	19.8	20.4	21.2	21.7	21.7	22.2	22.8

Maximum UGR = 23.2

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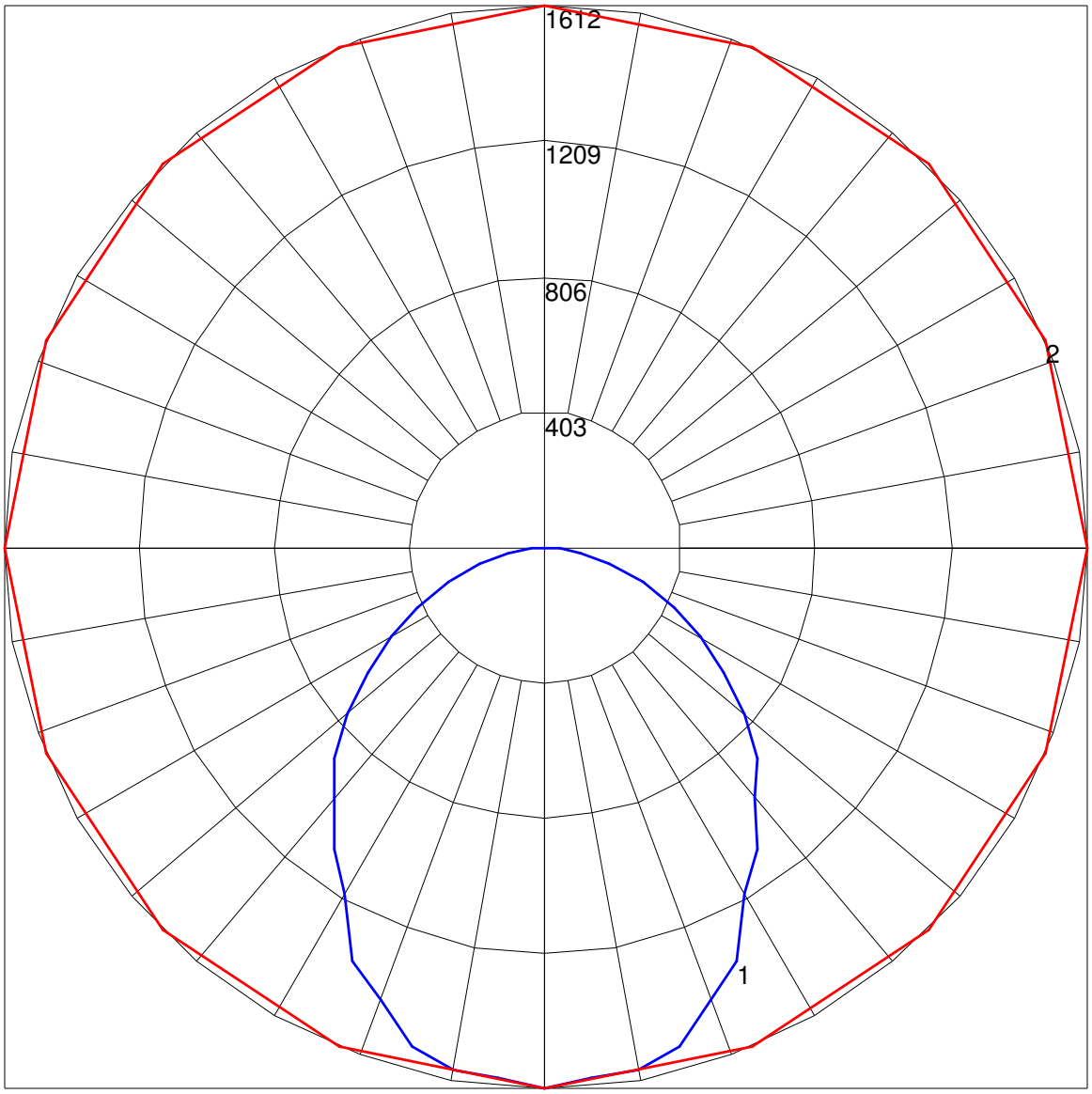
POLAR GRAPH



Maximum Candela = 1612.468 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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