H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-935-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-L49-935-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	4266
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
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	1829	1930	2029
55	1640	1795	1938
65	1441	1708	1940
75	1115	1713	2120
85	673	2248	2575

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1631.895	1631.895	1631.895	1631.895	1631.895
5	1606.976	1604.761	1604.761	1599.224	1596.455
10	1601.993	1601.993	1604.761	1606.976	1606.976
15	1559.908	1562.123	1564.892	1568.768	1571.537
20	1456.911	1462.448	1469.093	1477.953	1480.722
25	1374.402	1379.386	1392.676	1404.305	1409.842
30	1204.402	1167.301	1319.027	1275.281	1268.636
35	1110.818	1121.339	1146.258	1167.301	1175.607
40	988.440	1001.730	1029.417	1057.105	1067.626
45	903.163	914.792	953.000	988.440	1001.730
50	784.661	802.934	845.019	882.120	894.857
55	656.745	676.680	718.765	760.850	776.355
60	535.474	556.517	604.139	647.331	663.390
65	425.278	452.966	503.911	554.302	572.575
70	313.421	346.092	406.451	459.611	477.884
75	201.564	241.988	309.545	363.259	383.194
80	110.750	163.356	240.880	293.486	309.545
85	40.977	93.583	136.776	153.942	156.711
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	591.56	N.A.	13.90
0-30	1226.00	N.A.	28.70
0-40	1941.19	N.A.	45.50
0-60	3315.14	N.A.	77.70
0-80	4138.06	N.A.	97.00
0-90	4265.63	N.A.	100.00
10-90	4112.23	N.A.	96.40
20-40	1349.63	N.A.	31.60
20-50	2079.11	N.A.	48.70
40-70	1871.44	N.A.	43.90
60-80	822.93	N.A.	19.30
70-80	325.43	N.A.	7.60
80-90	127.57	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	4265.63	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.40
10-20	438.16
20-30	634.44
30-40	715.19
40-50	729.47
50-60	644.47
60-70	497.50
70-80	325.43
80-90	127.57
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	13.3	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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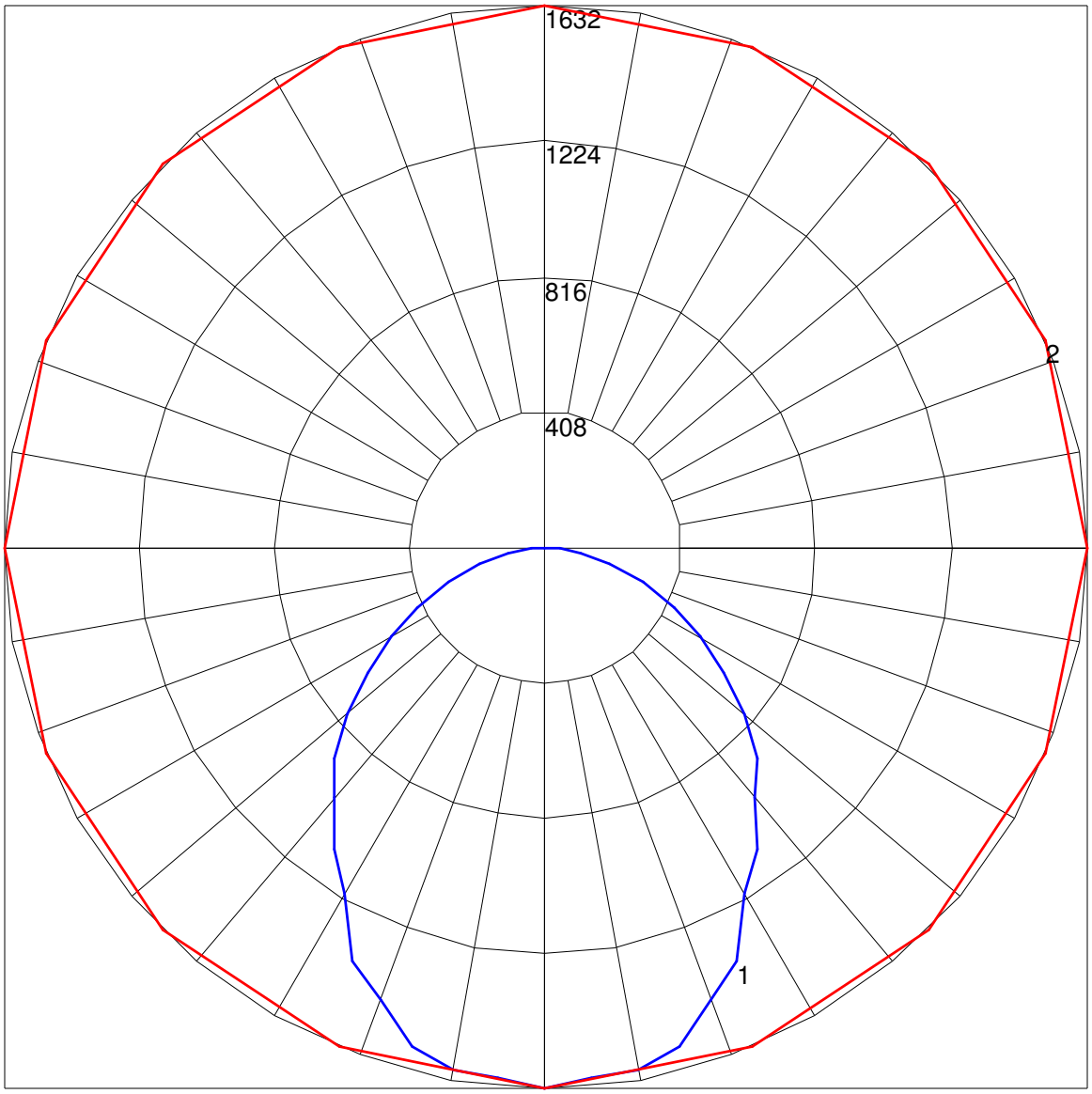
POLAR GRAPH



Maximum Candela = 1631.895 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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