H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-830-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-830-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4401
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	30.4
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	3932	3811	3782
55	3539	3560	3638
65	3092	3422	3748
75	2496	3455	4311
85	1157	3729	4506

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1713.954	1713.954	1713.954	1713.954	1713.954
5	1722.469	1703.546	1694.085	1670.431	1692.192
10	1689.354	1669.012	1656.712	1654.346	1657.658
15	1633.531	1613.662	1602.781	1598.997	1596.158
20	1559.258	1539.862	1521.885	1512.897	1514.316
25	1466.535	1450.451	1442.881	1419.228	1410.239
30	1358.201	1341.643	1324.613	1311.839	1304.743
35	1245.609	1230.470	1210.128	1192.624	1182.690
40	1116.459	1104.159	1082.871	1069.152	1061.109
45	991.567	977.375	960.817	953.248	953.721
50	859.579	855.321	837.344	840.656	844.914
55	723.806	723.806	728.064	739.418	744.148
60	597.495	600.333	619.729	639.126	650.952
65	465.980	483.010	515.653	549.241	564.853
70	339.668	368.053	414.888	459.830	478.280
75	230.388	259.719	318.853	377.041	397.857
80	120.634	170.780	232.280	293.780	313.176
85	35.954	80.896	115.904	131.515	140.030
90	0.000	1.419	1.892	3.312	1.892

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	613.27	N.A.	13.90
0-30	1274.24	N.A.	29.00
0-40	2031.58	N.A.	46.20
0-60	3433.39	N.A.	78.00
0-80	4281.86	N.A.	97.30
0-90	4401.22	N.A.	100.00
10-90	4240.39	N.A.	96.30
20-40	1418.3	N.A.	32.20
20-50	2164.52	N.A.	49.20
40-70	1913.31	N.A.	43.50
60-80	848.47	N.A.	19.30
70-80	336.97	N.A.	7.70
80-90	119.37	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	4401.22	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.84
10-20	452.43
20-30	660.97
30-40	757.34
40-50	746.22
50-60	655.60
60-70	511.50
70-80	336.97
80-90	119.37
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	104	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	16.1	17.7	16.5	18.1	18.4	16.4	18.0	16.8	18.4	18.7
	3H	17.8	19.2	18.1	19.6	19.9	18.7	20.2	19.1	20.5	20.8
	4H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.5	21.9
	6H	18.7	20.0	19.2	20.4	20.8	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.1	19.3	20.5	20.9	21.2	22.5	21.6	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.5	22.7	21.9	23.1	23.5
4H	2H	16.8	18.2	17.2	18.6	18.9	17.1	18.4	17.5	18.8	19.2
	3H	18.7	19.9	19.1	20.3	20.7	19.6	20.7	20.0	21.1	21.5
	4H	19.5	20.5	19.9	20.9	21.4	20.8	21.9	21.3	22.3	22.7
	6H	20.0	20.9	20.5	21.4	21.8	22.1	23.0	22.5	23.5	23.9
	8H	20.2	21.0	20.6	21.5	21.9	22.6	23.5	23.0	23.9	24.4
	12H	20.2	21.0	20.7	21.5	22.0	22.9	23.7	23.4	24.2	24.7
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.0	21.6	22.5	22.9
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	21.0	21.6	21.5	22.1	22.6	23.2	23.9	23.7	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.1	20.9	20.6	21.4	21.8	21.2	22.0	21.7	22.5	22.9
	6H	20.9	21.6	21.4	22.0	22.6	22.7	23.4	23.2	23.8	24.4
	8H	21.2	21.8	21.8	22.3	22.9	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.3

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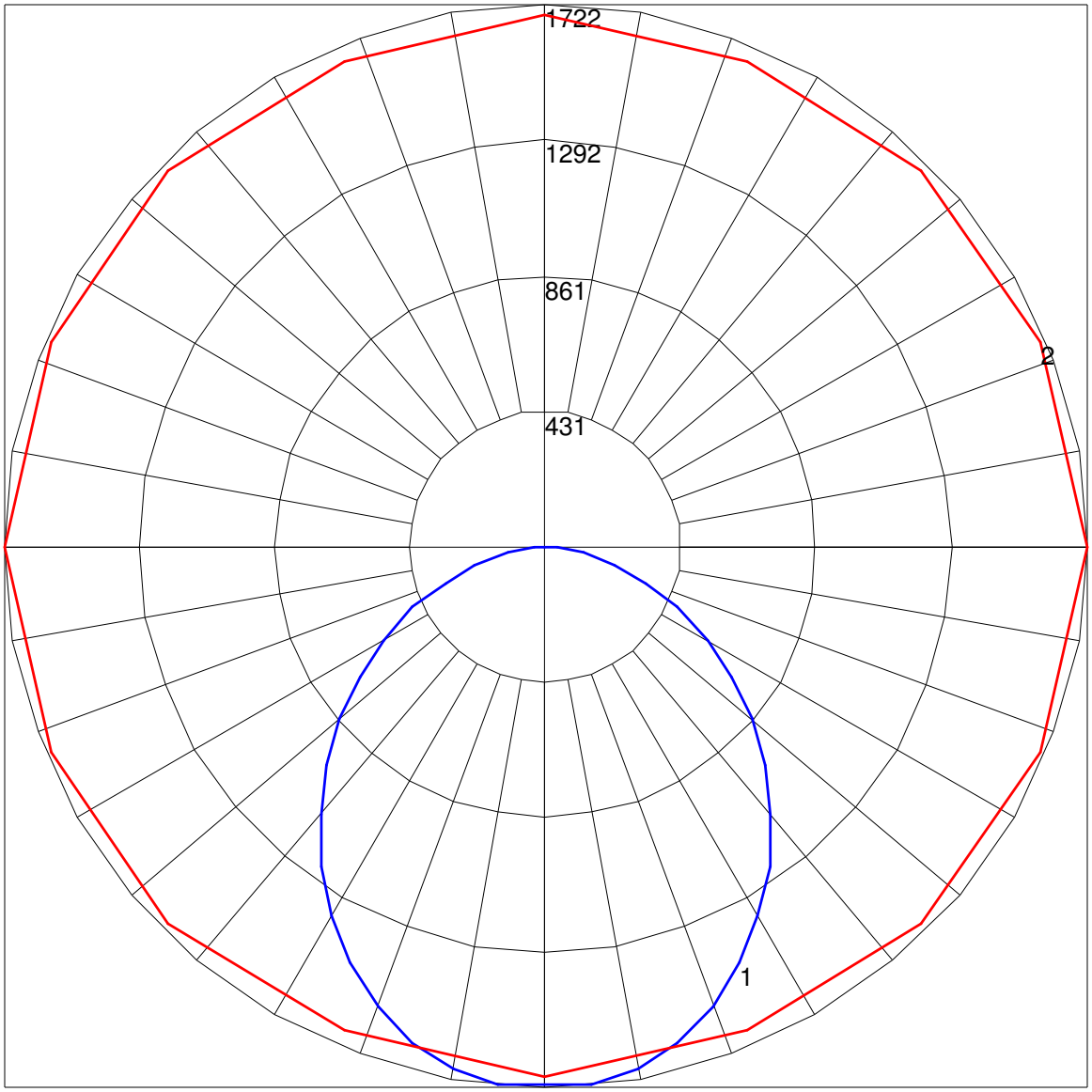
POLAR GRAPH



Maximum Candela = 1722.469 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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