H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-840-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-L45-840-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4579
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
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	4091	3964	3935
55	3682	3703	3785
65	3217	3560	3900
75	2597	3594	4485
85	1204	3880	4688

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1783.205	1783.205	1783.205	1783.205	1783.205
5	1792.064	1772.377	1762.533	1737.923	1760.564
10	1757.611	1736.447	1723.650	1721.189	1724.634
15	1699.532	1678.860	1667.540	1663.603	1660.649
20	1622.259	1602.079	1583.376	1574.024	1575.500
25	1525.789	1509.055	1501.180	1476.570	1467.219
30	1413.078	1395.851	1378.132	1364.843	1357.460
35	1295.937	1280.186	1259.022	1240.811	1230.475
40	1161.569	1148.772	1126.623	1112.350	1103.982
45	1031.630	1016.865	999.638	991.763	992.255
50	894.309	889.880	871.176	874.622	879.052
55	753.051	753.051	757.481	769.293	774.215
60	621.636	624.589	644.769	664.949	677.254
65	484.807	502.526	536.487	571.433	587.675
70	353.392	382.924	431.651	478.409	497.604
75	239.697	270.212	331.736	392.276	413.932
80	125.508	177.681	241.665	305.650	325.830
85	37.406	84.165	120.587	136.829	145.688
90	0.000	1.477	1.969	3.445	1.969

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	638.05	N.A.	13.90
0-30	1325.72	N.A.	29.00
0-40	2113.66	N.A.	46.20
0-60	3572.11	N.A.	78.00
0-80	4454.86	N.A.	97.30
0-90	4579.05	N.A.	100.00
10-90	4411.71	N.A.	96.30
20-40	1475.61	N.A.	32.20
20-50	2251.98	N.A.	49.20
40-70	1990.62	N.A.	43.50
60-80	882.75	N.A.	19.30
70-80	350.58	N.A.	7.70
80-90	124.19	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	4579.05	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	167.34
10-20	470.72
20-30	687.67
30-40	787.94
40-50	776.37
50-60	682.09
60-70	532.17
70-80	350.58
80-90	124.19
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	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	36	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	16.3	17.9	16.7	18.3	18.6	16.6	18.2	17.0	18.6	18.9
	3H	18.0	19.4	18.3	19.8	20.1	18.9	20.4	19.3	20.7	21.0
	4H	18.6	19.9	19.0	20.3	20.7	20.0	21.4	20.4	21.7	22.1
	6H	18.9	20.2	19.4	20.6	21.0	21.0	22.3	21.4	22.7	23.1
	8H	19.0	20.3	19.5	20.7	21.1	21.4	22.7	21.8	23.1	23.5
	12H	19.1	20.3	19.5	20.7	21.1	21.7	22.9	22.1	23.3	23.7
4H	2H	17.0	18.4	17.4	18.8	19.1	17.3	18.6	17.7	19.0	19.4
	3H	18.9	20.1	19.3	20.5	20.9	19.8	20.9	20.2	21.3	21.7
	4H	19.7	20.7	20.1	21.1	21.6	21.0	22.1	21.5	22.5	22.9
	6H	20.2	21.1	20.7	21.6	22.0	22.3	23.2	22.7	23.7	24.1
	8H	20.4	21.2	20.8	21.7	22.1	22.8	23.7	23.2	24.1	24.6
	12H	20.4	21.2	20.9	21.7	22.2	23.1	23.9	23.6	24.4	24.9
8H	4H	20.2	21.1	20.6	21.5	22.0	21.4	22.2	21.8	22.7	23.1
	6H	20.9	21.6	21.4	22.1	22.6	22.8	23.6	23.3	24.0	24.5
	8H	21.2	21.8	21.7	22.3	22.8	23.4	24.1	23.9	24.6	25.1
	12H	21.3	21.9	21.8	22.4	23.0	23.9	24.5	24.4	25.0	25.5
12H	4H	20.3	21.1	20.8	21.6	22.0	21.4	22.2	21.9	22.7	23.1
	6H	21.1	21.8	21.6	22.2	22.8	22.9	23.6	23.4	24.0	24.6
	8H	21.4	22.0	22.0	22.5	23.1	23.6	24.1	24.1	24.6	25.2

Maximum UGR = 25.5

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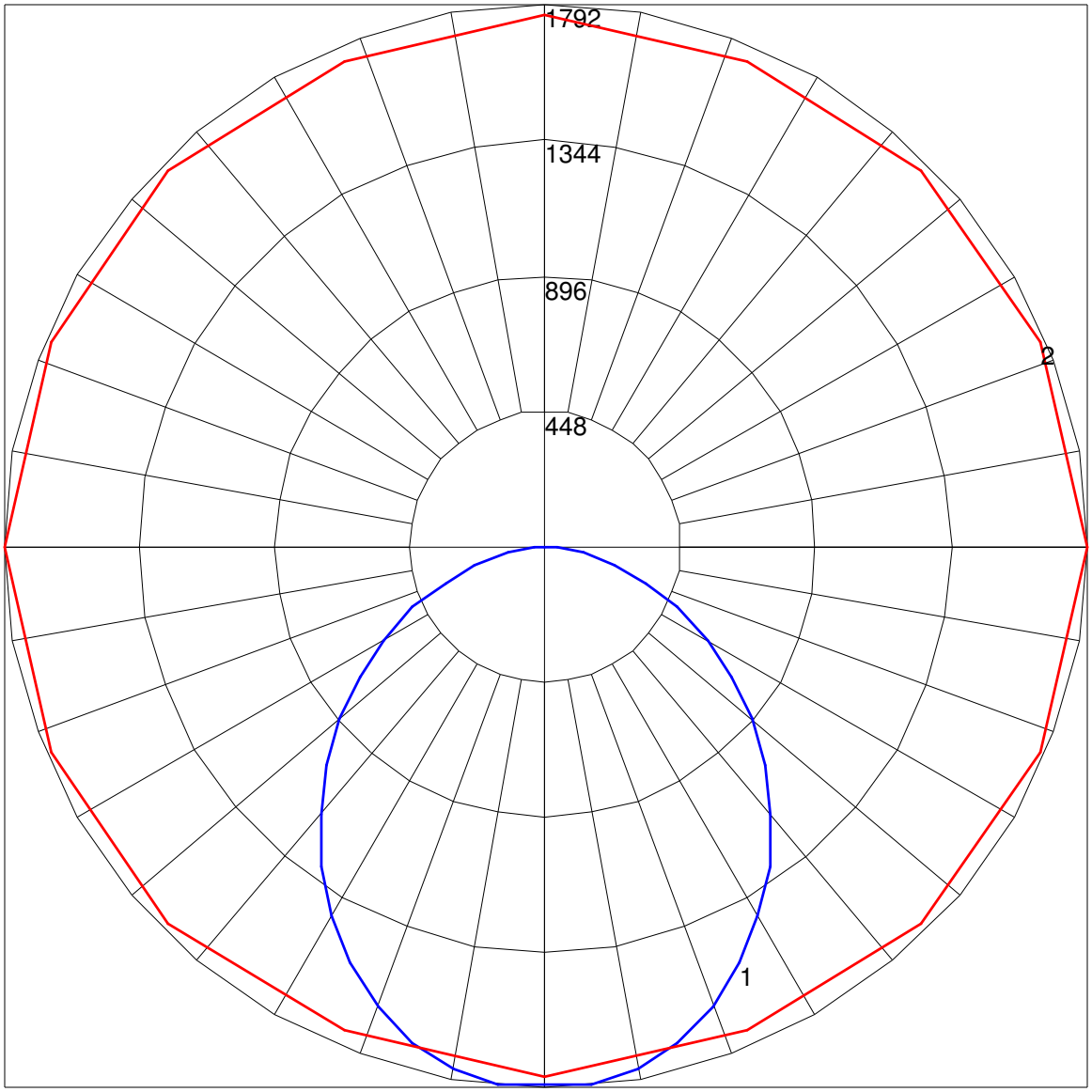
POLAR GRAPH



Maximum Candela = 1792.064 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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