H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-940-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-L45-940-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3823
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
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	3416	3310	3286
55	3074	3092	3161
65	2686	2972	3256
75	2168	3001	3745
85	1005	3240	3914

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1488.889	1488.889	1488.889	1488.889	1488.889
5	1496.286	1479.848	1471.629	1451.081	1469.985
10	1467.520	1449.849	1439.164	1437.109	1439.986
15	1419.027	1401.767	1392.315	1389.027	1386.562
20	1354.507	1337.658	1322.042	1314.233	1315.466
25	1273.960	1259.987	1253.412	1232.864	1225.056
30	1179.851	1165.468	1150.673	1139.578	1133.413
35	1082.044	1068.893	1051.222	1036.017	1027.387
40	969.853	959.169	940.676	928.758	921.772
45	861.361	849.033	834.649	828.074	828.485
50	746.705	743.006	727.390	730.267	733.965
55	628.761	628.761	632.459	642.322	646.432
60	519.036	521.502	538.351	555.200	565.474
65	404.790	419.585	447.941	477.119	490.680
70	295.066	319.723	360.407	399.448	415.475
75	200.135	225.614	276.984	327.531	345.613
80	104.793	148.355	201.779	255.203	272.052
85	31.233	70.273	100.684	114.245	121.643
90	0.000	1.233	1.644	2.877	1.644

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	532.74	N.A.	13.90
0-30	1106.91	N.A.	29.00
0-40	1764.8	N.A.	46.20
0-60	2982.54	N.A.	78.00
0-80	3719.59	N.A.	97.30
0-90	3823.29	N.A.	100.00
10-90	3683.57	N.A.	96.30
20-40	1232.06	N.A.	32.20
20-50	1880.29	N.A.	49.20
40-70	1662.07	N.A.	43.50
60-80	737.05	N.A.	19.30
70-80	292.72	N.A.	7.70
80-90	103.69	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	3823.29	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.72
10-20	393.02
20-30	574.17
30-40	657.89
40-50	648.23
50-60	569.51
60-70	444.33
70-80	292.72
80-90	103.69
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	15.7	17.3	16.1	17.7	18.0	16.0	17.6	16.4	18.0	18.3
	3H	17.4	18.8	17.7	19.2	19.5	18.3	19.8	18.7	20.1	20.4
	4H	18.0	19.3	18.4	19.7	20.1	19.4	20.8	19.8	21.1	21.5
	6H	18.3	19.6	18.8	20.0	20.4	20.4	21.7	20.8	22.1	22.5
	8H	18.4	19.7	18.9	20.1	20.5	20.8	22.1	21.2	22.5	22.9
	12H	18.5	19.7	18.9	20.1	20.5	21.1	22.3	21.5	22.7	23.1
4H	2H	16.4	17.8	16.8	18.2	18.5	16.7	18.0	17.1	18.4	18.8
	3H	18.3	19.5	18.7	19.9	20.3	19.2	20.3	19.6	20.7	21.1
	4H	19.1	20.1	19.5	20.5	21.0	20.4	21.5	20.9	21.9	22.3
	6H	19.6	20.5	20.1	21.0	21.4	21.7	22.6	22.1	23.1	23.5
	8H	19.8	20.6	20.2	21.1	21.5	22.2	23.1	22.6	23.5	24.0
	12H	19.8	20.6	20.3	21.1	21.6	22.5	23.3	23.0	23.8	24.3
8H	4H	19.6	20.5	20.0	20.9	21.4	20.8	21.6	21.2	22.1	22.5
	6H	20.3	21.0	20.8	21.5	22.0	22.2	23.0	22.7	23.4	23.9
	8H	20.6	21.2	21.1	21.7	22.2	22.8	23.5	23.3	24.0	24.5
	12H	20.7	21.3	21.2	21.8	22.4	23.3	23.9	23.8	24.4	24.9
12H	4H	19.7	20.5	20.2	21.0	21.4	20.8	21.6	21.3	22.1	22.5
	6H	20.5	21.2	21.0	21.6	22.2	22.3	23.0	22.8	23.4	24.0
	8H	20.8	21.4	21.4	21.9	22.5	23.0	23.5	23.5	24.0	24.6

Maximum UGR = 24.9

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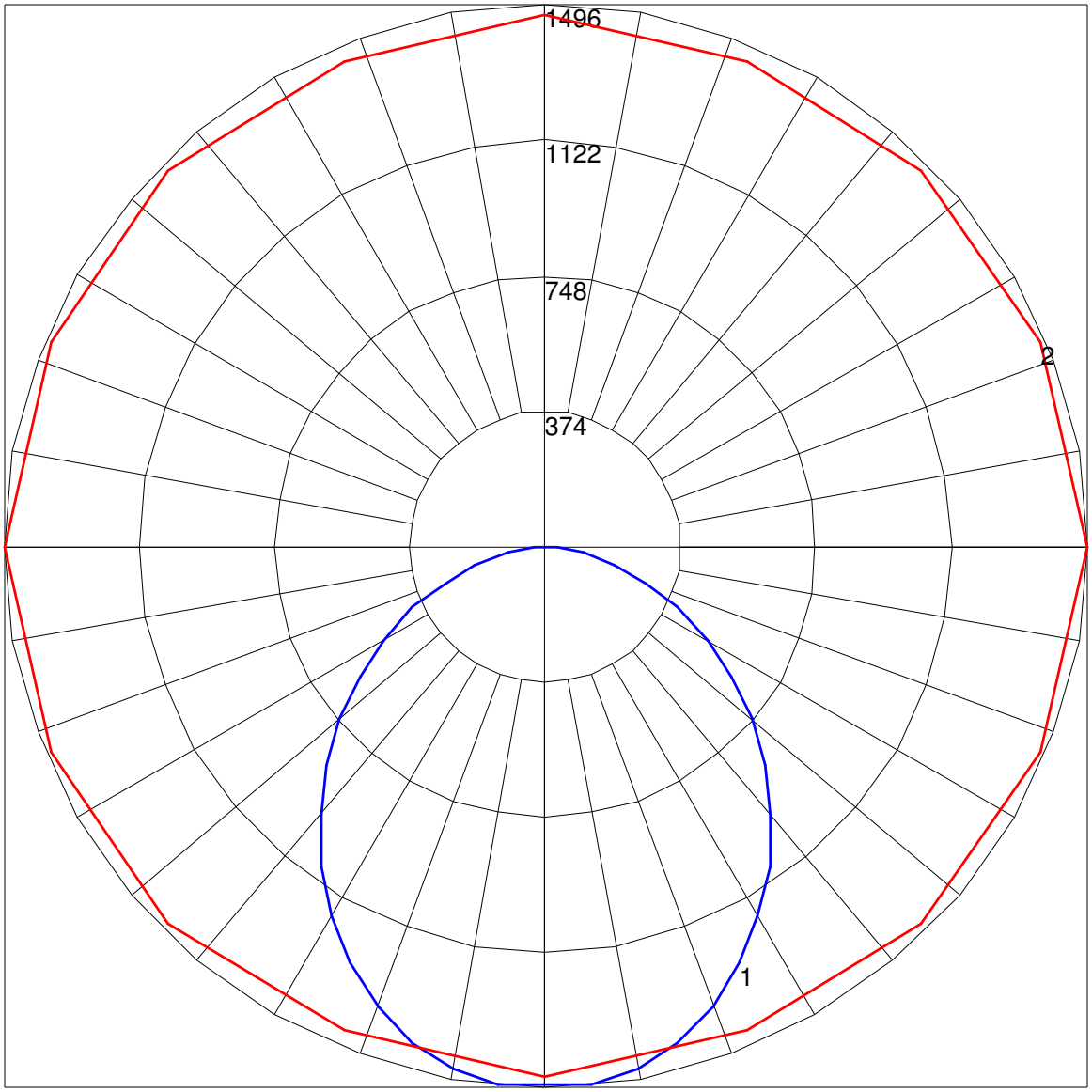
POLAR GRAPH



Maximum Candela = 1496.286 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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