H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-935-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-L45-935-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3734
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
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	3337	3233	3209
55	3003	3020	3087
65	2624	2903	3180
75	2118	2931	3658
85	982	3164	3823

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1454.264	1454.264	1454.264	1454.264	1454.264
5	1461.489	1445.433	1437.405	1417.335	1435.800
10	1433.391	1416.131	1405.695	1403.688	1406.498
15	1386.026	1369.168	1359.935	1356.724	1354.316
20	1323.007	1306.550	1291.296	1283.670	1284.874
25	1244.333	1230.685	1224.263	1204.193	1196.567
30	1152.413	1138.364	1123.914	1113.076	1107.055
35	1056.880	1044.035	1026.775	1011.924	1003.494
40	947.299	936.862	918.799	907.159	900.335
45	841.330	829.288	815.239	808.816	809.218
50	729.340	725.727	710.474	713.284	716.896
55	614.138	614.138	617.751	627.385	631.399
60	506.965	509.374	525.831	542.288	552.323
65	395.377	409.827	437.523	466.023	479.269
70	288.204	312.287	352.026	390.159	405.813
75	195.481	220.367	270.542	319.914	337.575
80	102.356	144.905	197.086	249.268	265.725
85	30.506	68.639	98.342	111.589	118.814
90	0.000	1.204	1.606	2.810	1.606

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	520.35	N.A.	13.90
0-30	1081.17	N.A.	29.00
0-40	1723.76	N.A.	46.20
0-60	2913.18	N.A.	78.00
0-80	3633.09	N.A.	97.30
0-90	3734.37	N.A.	100.00
10-90	3597.9	N.A.	96.30
20-40	1203.41	N.A.	32.20
20-50	1836.56	N.A.	49.20
40-70	1623.42	N.A.	43.50
60-80	719.91	N.A.	19.30
70-80	285.91	N.A.	7.70
80-90	101.28	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	3734.37	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	136.47
10-20	383.88
20-30	560.82
30-40	642.59
40-50	633.15
50-60	556.26
60-70	434.00
70-80	285.91
80-90	101.28
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	15.6	17.2	16.0	17.6	17.9	15.9	17.5	16.3	17.9	18.2
	3H	17.3	18.7	17.6	19.1	19.4	18.2	19.7	18.6	20.0	20.3
	4H	17.9	19.2	18.3	19.6	20.0	19.3	20.7	19.7	21.0	21.4
	6H	18.2	19.5	18.7	19.9	20.3	20.3	21.6	20.7	22.0	22.4
	8H	18.3	19.6	18.8	20.0	20.4	20.7	22.0	21.1	22.4	22.8
	12H	18.4	19.6	18.8	20.0	20.4	21.0	22.2	21.4	22.6	23.0
4H	2H	16.3	17.7	16.7	18.1	18.4	16.6	17.9	17.0	18.3	18.7
	3H	18.2	19.4	18.6	19.8	20.2	19.1	20.2	19.5	20.6	21.0
	4H	19.0	20.0	19.4	20.4	20.9	20.3	21.4	20.8	21.8	22.2
	6H	19.5	20.4	20.0	20.9	21.3	21.6	22.5	22.0	23.0	23.4
	8H	19.7	20.5	20.1	21.0	21.4	22.1	22.9	22.5	23.4	23.9
	12H	19.7	20.5	20.2	21.0	21.5	22.4	23.2	22.9	23.7	24.1
8H	4H	19.5	20.4	19.9	20.8	21.3	20.7	21.5	21.1	22.0	22.4
	6H	20.2	20.9	20.7	21.4	21.9	22.1	22.9	22.6	23.3	23.8
	8H	20.5	21.1	21.0	21.6	22.1	22.7	23.4	23.2	23.9	24.4
	12H	20.6	21.2	21.1	21.7	22.3	23.2	23.8	23.7	24.3	24.8
12H	4H	19.6	20.4	20.1	20.9	21.3	20.7	21.5	21.2	22.0	22.4
	6H	20.4	21.1	20.9	21.5	22.1	22.2	22.9	22.7	23.3	23.9
	8H	20.7	21.3	21.3	21.8	22.4	22.9	23.4	23.4	23.9	24.5

Maximum UGR = 24.8

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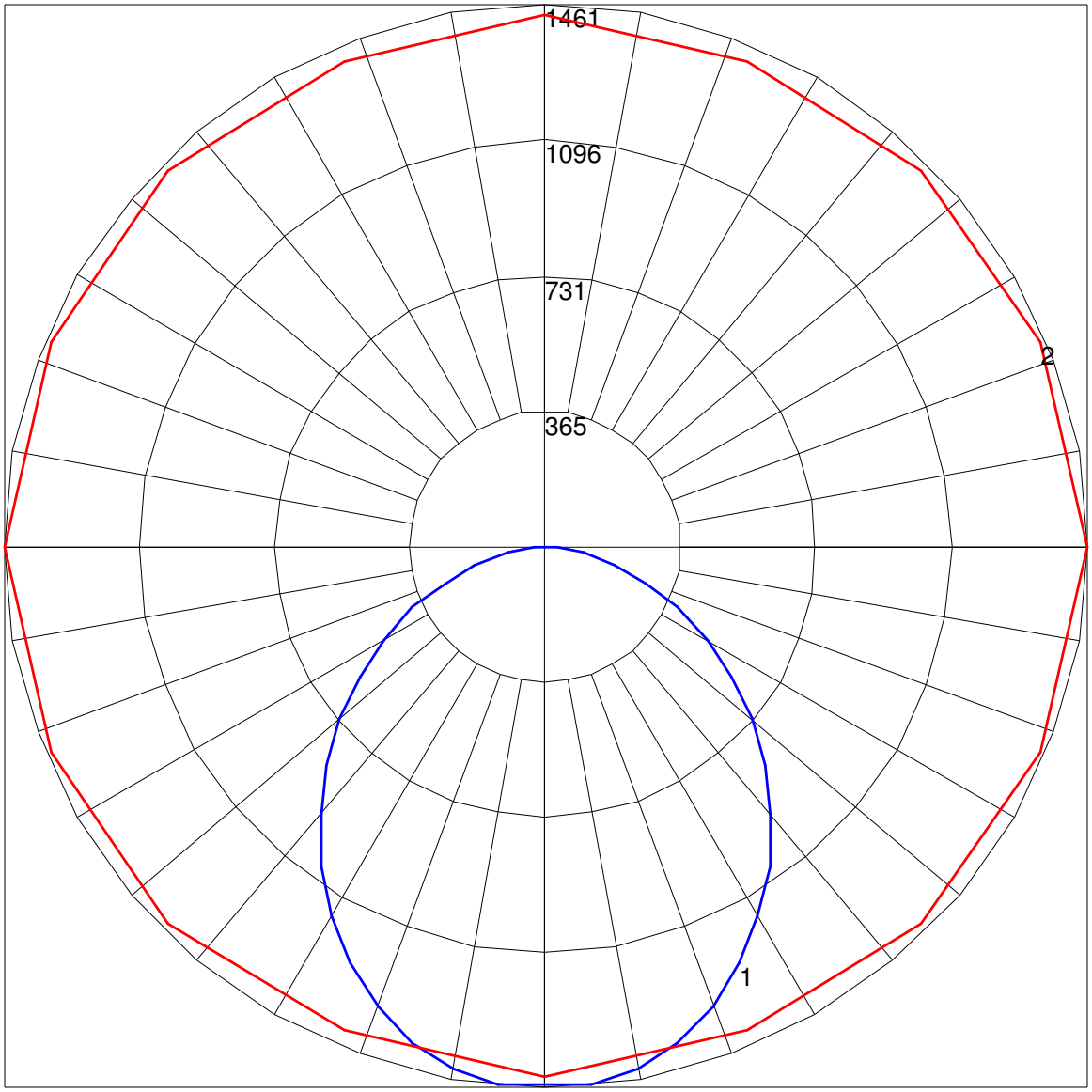
POLAR GRAPH



Maximum Candela = 1461.489 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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