H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-930-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-L45-930-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3690
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
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	3297	3195	3171
55	2967	2984	3050
65	2592	2869	3142
75	2093	2896	3614
85	970	3127	3777

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1436.951	1436.951	1436.951	1436.951	1436.951
5	1444.091	1428.226	1420.293	1400.462	1418.707
10	1416.327	1399.273	1388.960	1386.977	1389.754
15	1369.526	1352.868	1343.746	1340.573	1338.193
20	1307.257	1290.995	1275.924	1268.388	1269.578
25	1229.520	1216.034	1209.689	1189.858	1182.322
30	1138.694	1124.812	1110.534	1099.825	1093.876
35	1044.298	1031.607	1014.552	999.877	991.548
40	936.021	925.709	907.861	896.359	889.617
45	831.314	819.415	805.534	799.188	799.584
50	720.657	717.088	702.016	704.792	708.362
55	606.827	606.827	610.397	619.916	623.882
60	500.930	503.310	519.571	535.833	545.748
65	390.670	404.948	432.315	460.475	473.563
70	284.773	308.570	347.835	385.514	400.982
75	193.154	217.744	267.321	316.106	333.557
80	101.138	143.180	194.740	246.301	262.562
85	30.143	67.822	97.172	110.260	117.399
90	0.000	1.190	1.586	2.776	1.586

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	514.16	N.A.	13.90
0-30	1068.3	N.A.	29.00
0-40	1703.24	N.A.	46.20
0-60	2878.5	N.A.	78.00
0-80	3589.84	N.A.	97.30
0-90	3689.92	N.A.	100.00
10-90	3555.07	N.A.	96.30
20-40	1189.08	N.A.	32.20
20-50	1814.7	N.A.	49.20
40-70	1604.09	N.A.	43.50
60-80	711.34	N.A.	19.30
70-80	282.51	N.A.	7.70
80-90	100.08	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	3689.92	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	134.84
10-20	379.31
20-30	554.14
30-40	634.94
40-50	625.62
50-60	549.64
60-70	428.83
70-80	282.51
80-90	100.08
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	82	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	15.5	17.1	15.9	17.5	17.8	15.8	17.4	16.2	17.8	18.1
	3H	17.2	18.6	17.5	19.0	19.3	18.1	19.6	18.5	19.9	20.2
	4H	17.8	19.1	18.2	19.5	19.9	19.2	20.6	19.6	20.9	21.3
	6H	18.1	19.4	18.6	19.8	20.2	20.2	21.5	20.6	21.9	22.3
	8H	18.2	19.5	18.7	19.9	20.3	20.6	21.9	21.0	22.3	22.7
	12H	18.3	19.5	18.7	19.9	20.3	20.9	22.1	21.3	22.5	22.9
4H	2H	16.2	17.6	16.6	18.0	18.3	16.5	17.8	16.9	18.2	18.6
	3H	18.1	19.3	18.5	19.7	20.1	19.0	20.1	19.4	20.5	20.9
	4H	18.9	19.9	19.3	20.3	20.8	20.2	21.3	20.7	21.7	22.1
	6H	19.4	20.3	19.9	20.8	21.2	21.5	22.4	21.9	22.9	23.3
	8H	19.6	20.4	20.0	20.9	21.3	22.0	22.8	22.4	23.3	23.8
	12H	19.6	20.4	20.1	20.9	21.4	22.3	23.1	22.8	23.6	24.1
8H	4H	19.4	20.3	19.8	20.7	21.2	20.6	21.4	21.0	21.9	22.3
	6H	20.1	20.8	20.6	21.3	21.8	22.0	22.8	22.5	23.2	23.7
	8H	20.4	21.0	20.9	21.5	22.0	22.6	23.3	23.1	23.8	24.3
	12H	20.5	21.1	21.0	21.6	22.2	23.1	23.7	23.6	24.2	24.7
12H	4H	19.5	20.3	20.0	20.8	21.2	20.6	21.4	21.1	21.9	22.3
	6H	20.3	21.0	20.8	21.4	22.0	22.1	22.8	22.6	23.2	23.8
	8H	20.6	21.2	21.2	21.7	22.3	22.8	23.3	23.3	23.8	24.4

Maximum UGR = 24.7

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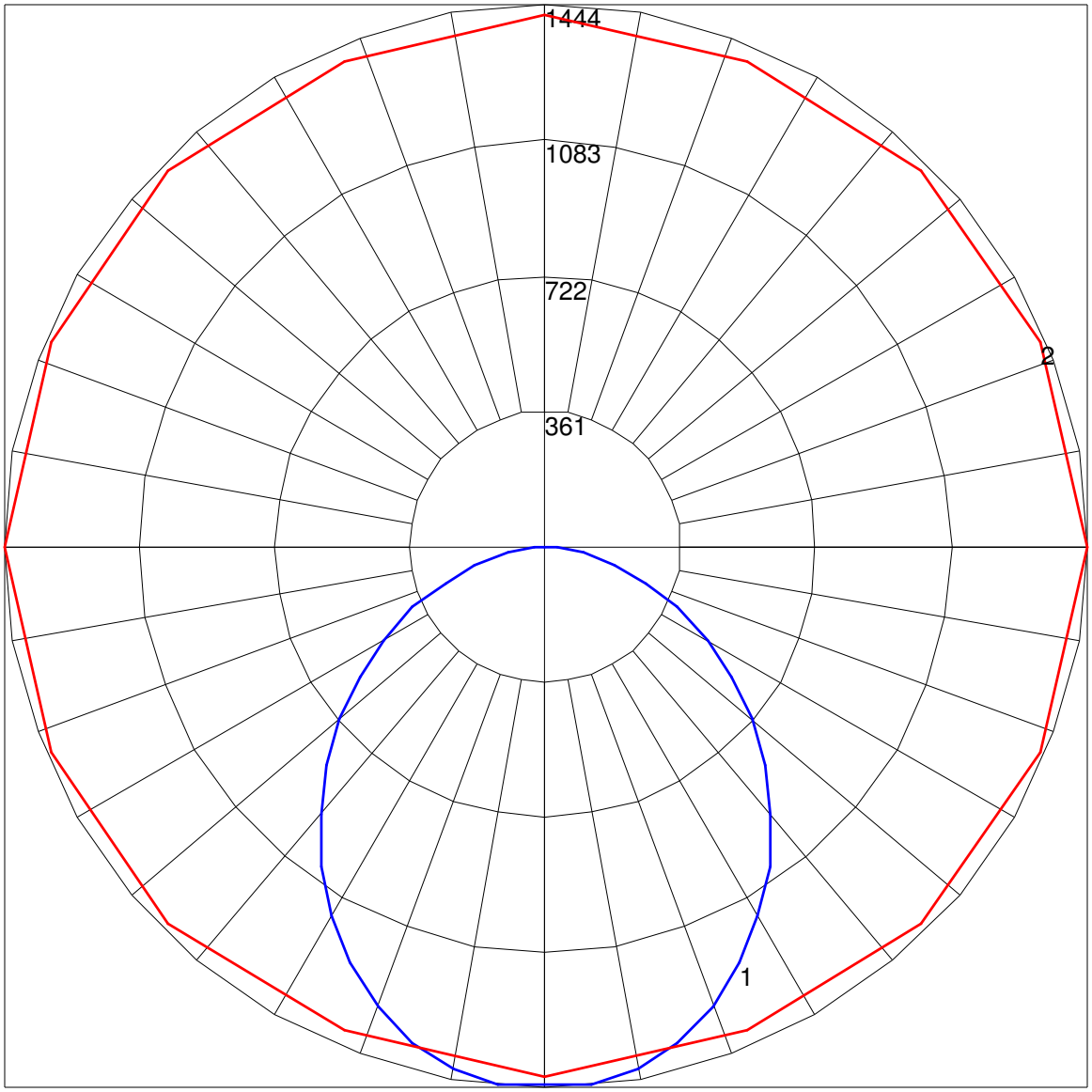
POLAR GRAPH



Maximum Candela = 1444.091 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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