H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L80-940-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-L80-940-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7067
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	61.9
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	6315	6119	6074
55	5682	5716	5842
65	4965	5494	6019
75	4008	5548	6922
85	1858	5988	7235

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2752.169	2752.169	2752.169	2752.169	2752.169
5	2765.842	2735.456	2720.264	2682.282	2717.225
10	2712.667	2680.003	2660.252	2656.454	2661.772
15	2623.030	2591.125	2573.654	2567.576	2563.019
20	2503.767	2472.622	2443.755	2429.322	2431.601
25	2354.878	2329.050	2316.896	2278.914	2264.481
30	2180.921	2154.333	2126.986	2106.476	2095.082
35	2000.127	1975.818	1943.154	1915.047	1899.095
40	1792.746	1772.995	1738.811	1716.782	1703.868
45	1592.201	1569.412	1542.825	1530.671	1531.430
50	1380.262	1373.426	1344.559	1349.877	1356.713
55	1162.246	1162.246	1169.083	1187.314	1194.911
60	959.423	963.981	995.126	1026.271	1045.262
65	748.243	775.590	828.005	881.940	907.008
70	545.420	590.998	666.203	738.368	767.994
75	369.944	417.041	511.996	605.431	638.856
80	193.708	274.229	372.982	471.735	502.880
85	57.732	129.898	186.111	211.179	224.853
90	0.000	2.279	3.039	5.317	3.039

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	984.76	N.A.	13.90
0-30	2046.1	N.A.	29.00
0-40	3262.19	N.A.	46.20
0-60	5513.14	N.A.	78.00
0-80	6875.56	N.A.	97.30
0-90	7067.23	N.A.	100.00
10-90	6808.97	N.A.	96.30
20-40	2277.43	N.A.	32.20
20-50	3475.66	N.A.	49.20
40-70	3072.29	N.A.	43.50
60-80	1362.42	N.A.	19.30
70-80	541.08	N.A.	7.70
80-90	191.67	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	7067.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	258.27
10-20	726.49
20-30	1061.34
30-40	1216.09
40-50	1198.23
50-60	1052.72
60-70	821.34
70-80	541.08
80-90	191.67
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	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	17.8	19.4	18.2	19.8	20.1	18.1	19.7	18.5	20.1	20.4
	3H	19.5	20.9	19.8	21.3	21.6	20.4	21.9	20.8	22.2	22.5
	4H	20.1	21.4	20.5	21.8	22.2	21.5	22.9	21.9	23.2	23.6
	6H	20.4	21.7	20.9	22.1	22.5	22.5	23.8	22.9	24.2	24.6
	8H	20.5	21.8	21.0	22.2	22.6	22.9	24.2	23.3	24.6	25.0
	12H	20.6	21.8	21.0	22.2	22.6	23.2	24.4	23.6	24.8	25.2
4H	2H	18.5	19.9	18.9	20.3	20.6	18.8	20.1	19.2	20.5	20.9
	3H	20.4	21.6	20.8	22.0	22.4	21.3	22.4	21.7	22.8	23.2
	4H	21.2	22.2	21.6	22.6	23.1	22.5	23.6	23.0	24.0	24.4
	6H	21.7	22.6	22.2	23.1	23.5	23.8	24.7	24.2	25.2	25.6
	8H	21.9	22.7	22.3	23.2	23.6	24.3	25.1	24.7	25.6	26.1
	12H	21.9	22.7	22.4	23.2	23.7	24.6	25.4	25.1	25.9	26.3
8H	4H	21.7	22.6	22.1	23.0	23.5	22.9	23.7	23.3	24.2	24.6
	6H	22.4	23.1	22.9	23.6	24.1	24.3	25.1	24.8	25.5	26.0
	8H	22.7	23.3	23.2	23.8	24.3	24.9	25.6	25.4	26.1	26.6
	12H	22.8	23.4	23.3	23.9	24.5	25.4	26.0	25.9	26.5	27.0
12H	4H	21.8	22.6	22.3	23.1	23.5	22.9	23.7	23.4	24.2	24.6
	6H	22.6	23.3	23.1	23.7	24.3	24.4	25.1	24.9	25.5	26.1
	8H	22.9	23.5	23.5	24.0	24.6	25.1	25.6	25.6	26.1	26.7

Maximum UGR = 27.0

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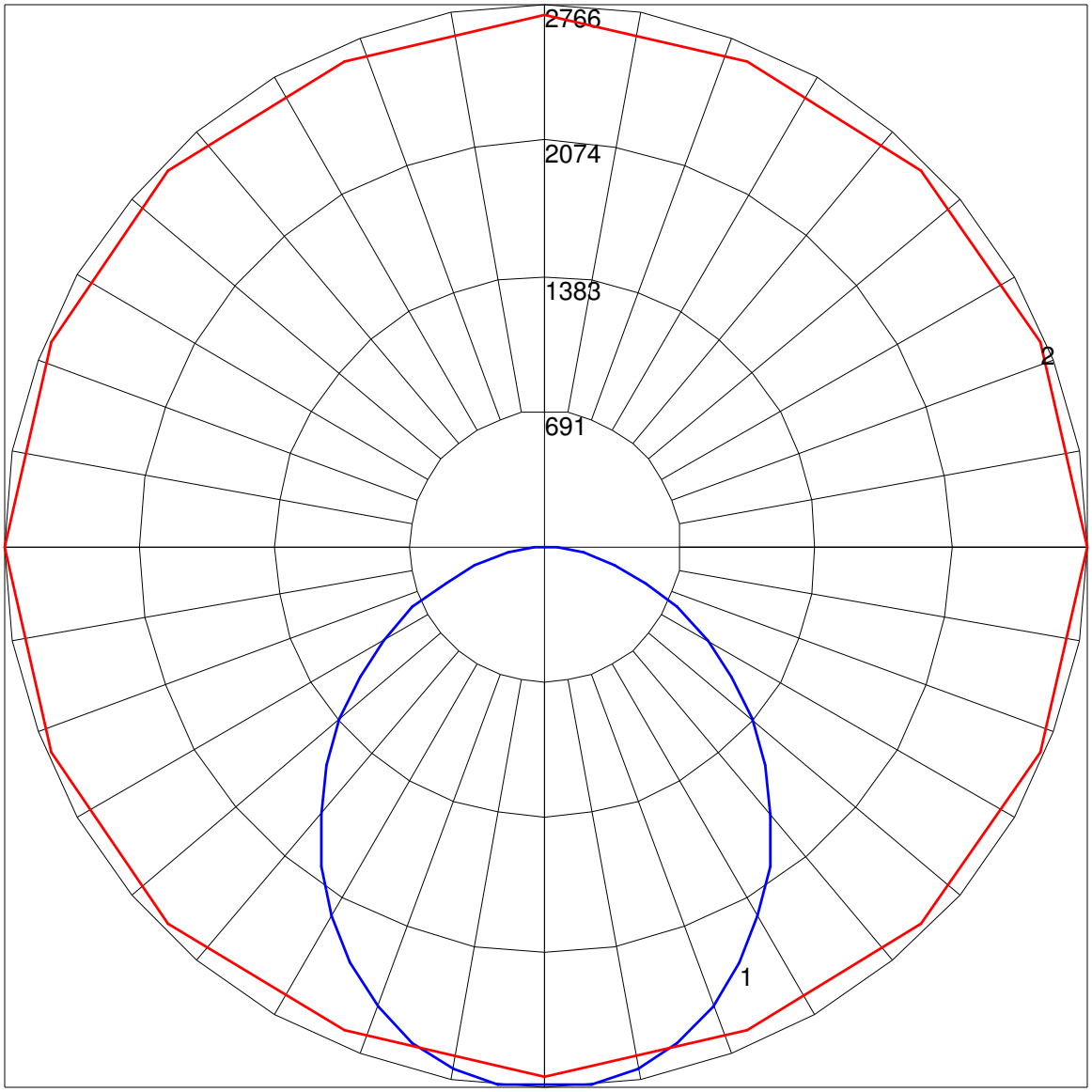
POLAR GRAPH



Maximum Candela = 2765.842 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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