H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-840-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-L27-840-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2786
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	18.8
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	2489	2412	2394
55	2240	2253	2303
65	1957	2166	2373
75	1580	2187	2729
85	732	2361	2852

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1084.962	1084.962	1084.962	1084.962	1084.962
5	1090.352	1078.374	1072.384	1057.411	1071.187
10	1069.390	1056.513	1048.727	1047.229	1049.326
15	1034.053	1021.475	1014.588	1012.192	1010.395
20	987.037	974.759	963.379	957.689	958.588
25	928.342	918.160	913.369	898.395	892.705
30	859.764	849.283	838.502	830.417	825.925
35	788.492	778.909	766.032	754.951	748.663
40	706.738	698.952	685.476	676.791	671.700
45	627.679	618.695	608.214	603.422	603.722
50	544.128	541.433	530.053	532.149	534.845
55	458.182	458.182	460.877	468.064	471.059
60	378.224	380.021	392.299	404.577	412.064
65	294.973	305.754	326.417	347.679	357.561
70	215.016	232.984	262.631	291.080	302.759
75	145.839	164.406	201.839	238.674	251.850
80	76.364	108.107	147.037	185.968	198.246
85	22.759	51.209	73.369	83.251	88.642
90	0.000	0.898	1.198	2.096	1.198

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	388.21	N.A.	13.90
0-30	806.61	N.A.	29.00
0-40	1286.02	N.A.	46.20
0-60	2173.4	N.A.	78.00
0-80	2710.49	N.A.	97.30
0-90	2786.05	N.A.	100.00
10-90	2684.24	N.A.	96.30
20-40	897.81	N.A.	32.20
20-50	1370.18	N.A.	49.20
40-70	1211.16	N.A.	43.50
60-80	537.09	N.A.	19.30
70-80	213.31	N.A.	7.70
80-90	75.56	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	2786.05	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	101.81
10-20	286.40
20-30	418.40
30-40	479.41
40-50	472.37
50-60	415.00
60-70	323.79
70-80	213.31
80-90	75.56
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	14.6	16.2	15.0	16.6	16.9	14.9	16.5	15.3	16.9	17.2
	3H	16.3	17.7	16.6	18.1	18.4	17.2	18.7	17.6	19.0	19.3
	4H	16.9	18.2	17.3	18.6	19.0	18.3	19.7	18.7	20.0	20.4
	6H	17.2	18.5	17.7	18.9	19.3	19.3	20.6	19.7	21.0	21.4
	8H	17.3	18.6	17.8	19.0	19.4	19.7	21.0	20.1	21.4	21.8
	12H	17.4	18.6	17.8	19.0	19.4	20.0	21.2	20.4	21.6	22.0
4H	2H	15.3	16.7	15.7	17.1	17.4	15.6	16.9	16.0	17.3	17.7
	3H	17.2	18.4	17.6	18.8	19.2	18.1	19.2	18.5	19.6	20.0
	4H	18.0	19.0	18.4	19.4	19.9	19.3	20.4	19.8	20.8	21.2
	6H	18.5	19.4	19.0	19.9	20.3	20.6	21.5	21.0	22.0	22.4
	8H	18.7	19.5	19.1	20.0	20.4	21.1	22.0	21.5	22.4	22.9
	12H	18.7	19.5	19.2	20.0	20.5	21.4	22.2	21.9	22.7	23.2
8H	4H	18.5	19.4	18.9	19.8	20.3	19.7	20.5	20.1	21.0	21.4
	6H	19.2	19.9	19.7	20.4	20.9	21.1	21.9	21.6	22.3	22.8
	8H	19.5	20.1	20.0	20.6	21.1	21.7	22.4	22.2	22.9	23.4
	12H	19.6	20.2	20.1	20.7	21.3	22.2	22.8	22.7	23.3	23.8
12H	4H	18.6	19.4	19.1	19.9	20.3	19.7	20.5	20.2	21.0	21.4
	6H	19.4	20.1	19.9	20.5	21.1	21.2	21.9	21.7	22.3	22.9
	8H	19.7	20.3	20.3	20.8	21.4	21.9	22.4	22.4	22.9	23.5

Maximum UGR = 23.8

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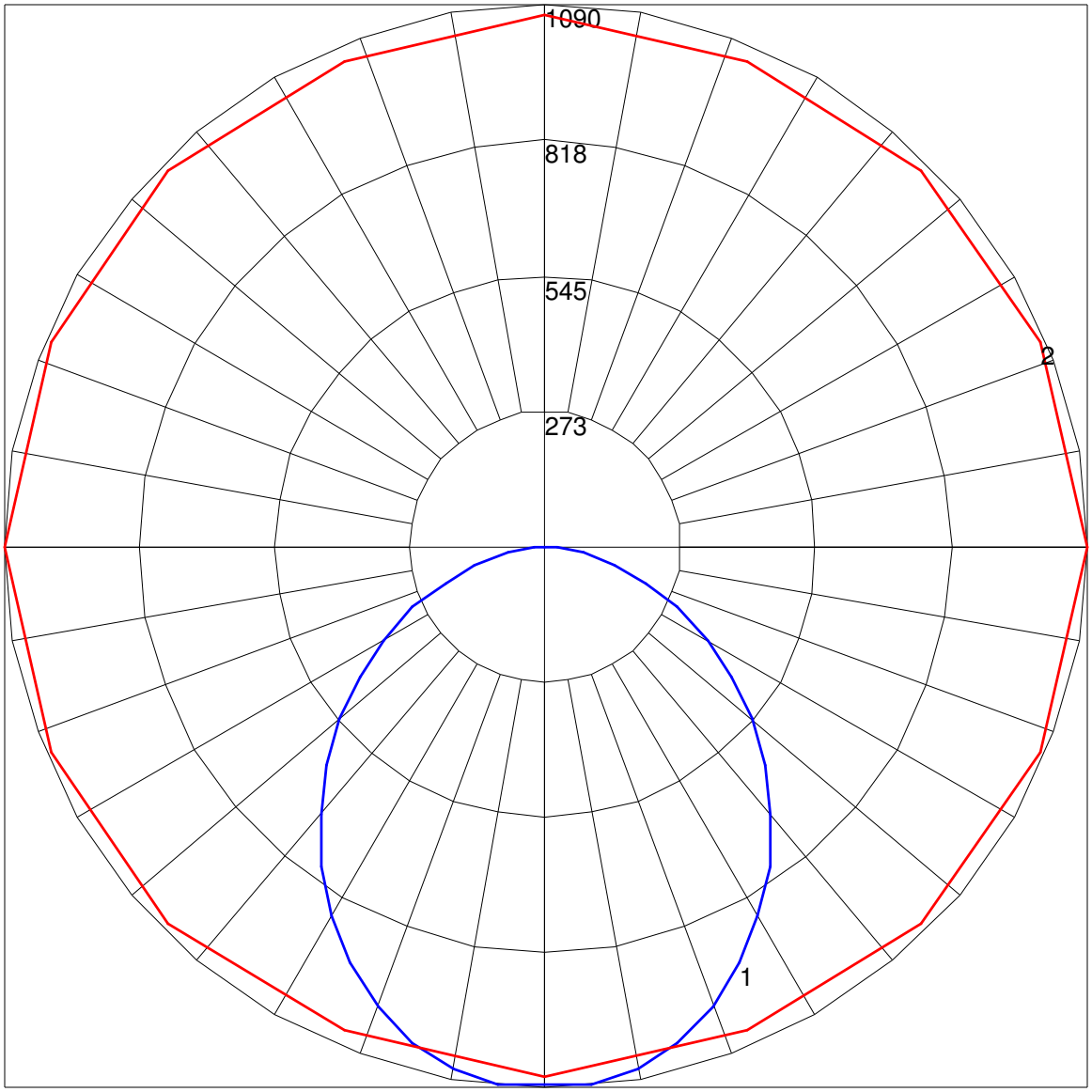
POLAR GRAPH



Maximum Candela = 1090.352 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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