H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-935-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-L27-935-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2272
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
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	2030	1967	1953
55	1827	1838	1878
65	1596	1766	1935
75	1289	1784	2225
85	597	1925	2326

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	884.823	884.823	884.823	884.823	884.823
5	889.219	879.450	874.566	862.355	873.589
10	872.124	861.622	855.272	854.051	855.761
15	843.305	833.048	827.431	825.477	824.011
20	804.962	794.949	785.668	781.028	781.761
25	757.094	748.790	744.883	732.672	728.031
30	701.167	692.619	683.827	677.233	673.569
35	643.042	635.226	624.725	615.688	610.560
40	576.368	570.019	559.028	551.946	547.794
45	511.893	504.567	496.019	492.111	492.355
50	443.755	441.557	432.276	433.986	436.184
55	373.663	373.663	375.861	381.722	384.164
60	308.455	309.920	319.933	329.946	336.052
65	240.561	249.353	266.204	283.544	291.603
70	175.353	190.006	214.184	237.386	246.910
75	118.937	134.079	164.607	194.646	205.392
80	62.277	88.165	119.914	151.663	161.676
85	18.561	41.762	59.835	67.894	72.290
90	0.000	0.733	0.977	1.710	0.977

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	316.60	N.A.	13.90
0-30	657.82	N.A.	29.00
0-40	1048.79	N.A.	46.20
0-60	1772.48	N.A.	78.00
0-80	2210.49	N.A.	97.30
0-90	2272.12	N.A.	100.00
10-90	2189.09	N.A.	96.30
20-40	732.19	N.A.	32.20
20-50	1117.43	N.A.	49.20
40-70	987.74	N.A.	43.50
60-80	438.02	N.A.	19.30
70-80	173.96	N.A.	7.70
80-90	61.62	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	2272.12	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	83.03
10-20	233.57
20-30	341.22
30-40	390.97
40-50	385.23
50-60	338.45
60-70	264.06
70-80	173.96
80-90	61.62
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	13.9	15.5	14.3	15.9	16.2	14.2	15.8	14.6	16.2	16.5
	3H	15.6	17.0	15.9	17.4	17.7	16.5	18.0	16.9	18.3	18.6
	4H	16.2	17.5	16.6	17.9	18.3	17.6	19.0	18.0	19.3	19.7
	6H	16.5	17.8	17.0	18.2	18.6	18.6	19.9	19.0	20.3	20.7
	8H	16.6	17.9	17.1	18.3	18.7	19.0	20.3	19.4	20.7	21.1
	12H	16.7	17.9	17.1	18.3	18.7	19.3	20.5	19.7	20.9	21.3
4H	2H	14.6	16.0	15.0	16.4	16.7	14.9	16.2	15.3	16.6	17.0
	3H	16.5	17.7	16.9	18.1	18.5	17.4	18.5	17.8	18.9	19.3
	4H	17.3	18.3	17.7	18.7	19.2	18.6	19.7	19.1	20.1	20.5
	6H	17.8	18.7	18.3	19.2	19.6	19.9	20.8	20.3	21.3	21.7
	8H	18.0	18.8	18.4	19.3	19.7	20.4	21.3	20.8	21.7	22.2
	12H	18.0	18.8	18.5	19.3	19.8	20.7	21.5	21.2	22.0	22.5
8H	4H	17.8	18.7	18.2	19.1	19.6	19.0	19.8	19.4	20.3	20.7
	6H	18.5	19.2	19.0	19.7	20.2	20.4	21.2	20.9	21.6	22.1
	8H	18.8	19.4	19.3	19.9	20.4	21.0	21.7	21.5	22.2	22.7
	12H	18.9	19.5	19.4	20.0	20.6	21.5	22.1	22.0	22.6	23.1
12H	4H	17.9	18.7	18.4	19.2	19.6	19.0	19.8	19.5	20.3	20.7
	6H	18.7	19.4	19.2	19.8	20.4	20.5	21.2	21.0	21.6	22.2
	8H	19.0	19.6	19.6	20.1	20.7	21.2	21.7	21.7	22.2	22.8

Maximum UGR = 23.1

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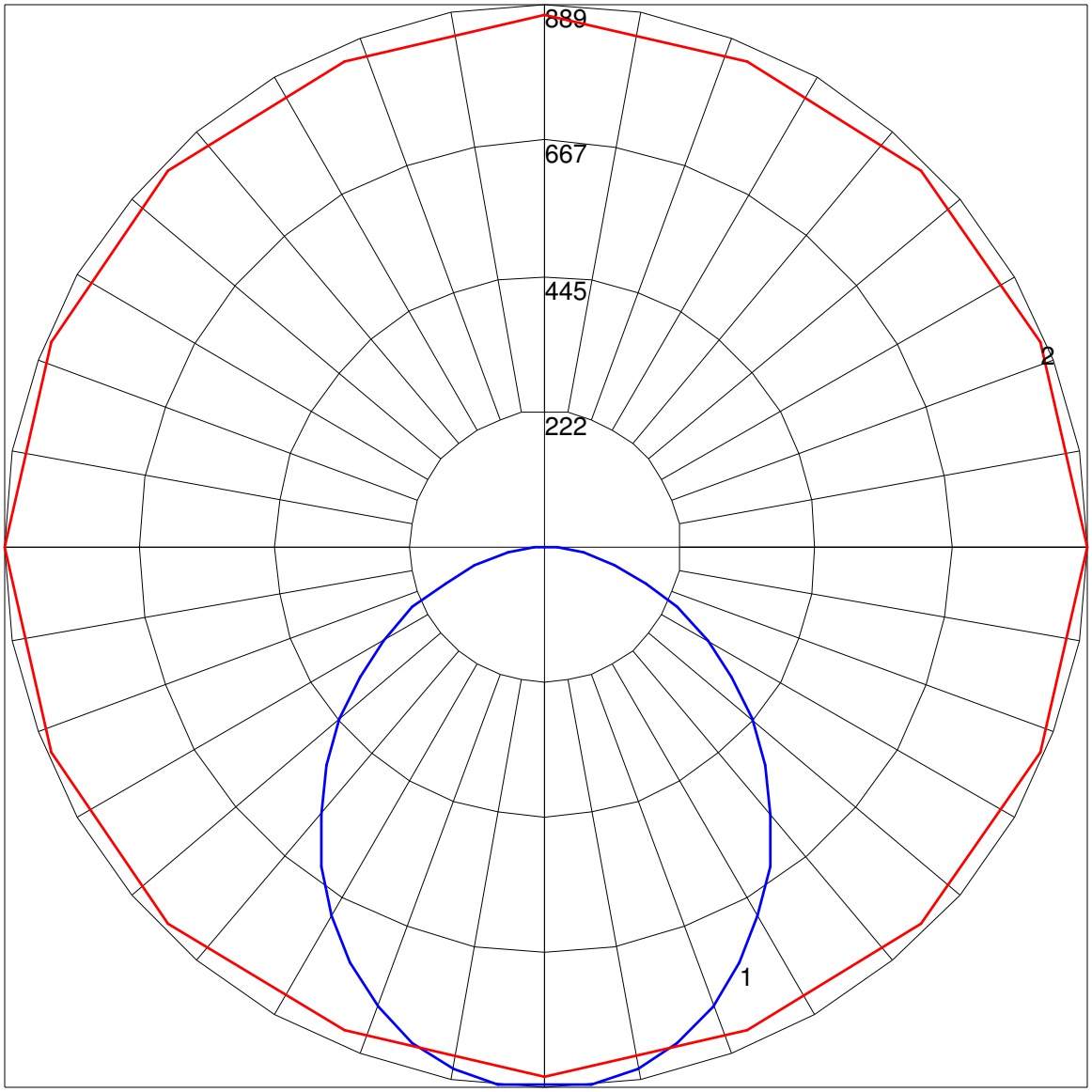
POLAR GRAPH



Maximum Candela = 889.219 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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