H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-950-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-L27-950-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2434
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
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	2175	2108	2092
55	1957	1969	2012
65	1710	1893	2073
75	1381	1911	2384
85	640	2063	2492

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	948.025	948.025	948.025	948.025	948.025
5	952.735	942.268	937.035	923.951	935.988
10	934.418	923.166	916.363	915.055	916.886
15	903.541	892.551	886.533	884.440	882.870
20	862.459	851.731	841.788	836.816	837.601
25	811.172	802.276	798.089	785.006	780.034
30	751.250	742.092	732.672	725.607	721.682
35	688.973	680.600	669.348	659.666	654.171
40	617.538	610.734	598.959	591.371	586.922
45	548.457	540.607	531.449	527.262	527.524
50	475.452	473.097	463.153	464.985	467.340
55	400.353	400.353	402.708	408.988	411.605
60	330.487	332.057	342.786	353.514	360.056
65	257.743	267.164	285.219	303.797	312.432
70	187.878	203.578	229.483	254.342	264.547
75	127.433	143.656	176.365	208.550	220.063
80	66.725	94.462	128.479	162.496	173.225
85	19.887	44.745	64.109	72.744	77.454
90	0.000	0.785	1.047	1.832	1.047

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	339.21	N.A.	13.90
0-30	704.81	N.A.	29.00
0-40	1123.71	N.A.	46.20
0-60	1899.08	N.A.	78.00
0-80	2368.39	N.A.	97.30
0-90	2434.41	N.A.	100.00
10-90	2345.45	N.A.	96.30
20-40	784.49	N.A.	32.20
20-50	1197.24	N.A.	49.20
40-70	1058.3	N.A.	43.50
60-80	469.31	N.A.	19.30
70-80	186.38	N.A.	7.70
80-90	66.02	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	2434.41	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.96
10-20	250.25
20-30	365.59
30-40	418.90
40-50	412.75
50-60	362.62
60-70	282.92
70-80	186.38
80-90	66.02
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	14.1	15.7	14.5	16.1	16.4	14.4	16.0	14.8	16.4	16.7
	3H	15.8	17.2	16.1	17.6	17.9	16.7	18.2	17.1	18.5	18.8
	4H	16.4	17.7	16.8	18.1	18.5	17.8	19.2	18.2	19.5	19.9
	6H	16.7	18.0	17.2	18.4	18.8	18.8	20.1	19.2	20.5	20.9
	8H	16.8	18.1	17.3	18.5	18.9	19.2	20.5	19.6	20.9	21.3
	12H	16.9	18.1	17.3	18.5	18.9	19.5	20.7	19.9	21.1	21.5
4H	2H	14.8	16.2	15.2	16.6	16.9	15.1	16.4	15.5	16.8	17.2
	3H	16.7	17.9	17.1	18.3	18.7	17.6	18.7	18.0	19.1	19.5
	4H	17.5	18.5	17.9	18.9	19.4	18.8	19.9	19.3	20.3	20.7
	6H	18.0	18.9	18.5	19.4	19.8	20.1	21.0	20.5	21.5	21.9
	8H	18.1	19.0	18.6	19.5	19.9	20.6	21.4	21.0	21.9	22.4
	12H	18.2	19.0	18.7	19.5	20.0	20.9	21.7	21.4	22.2	22.6
8H	4H	18.0	18.9	18.4	19.3	19.8	19.2	20.0	19.6	20.5	20.9
	6H	18.7	19.4	19.2	19.9	20.4	20.6	21.4	21.1	21.8	22.3
	8H	19.0	19.6	19.5	20.1	20.6	21.2	21.9	21.7	22.4	22.9
	12H	19.1	19.7	19.6	20.2	20.8	21.7	22.3	22.2	22.8	23.3
12H	4H	18.1	18.9	18.6	19.4	19.8	19.2	20.0	19.7	20.5	20.9
	6H	18.9	19.6	19.4	20.0	20.6	20.7	21.4	21.2	21.8	22.4
	8H	19.2	19.8	19.7	20.3	20.9	21.4	21.9	21.9	22.4	23.0

Maximum UGR = 23.3

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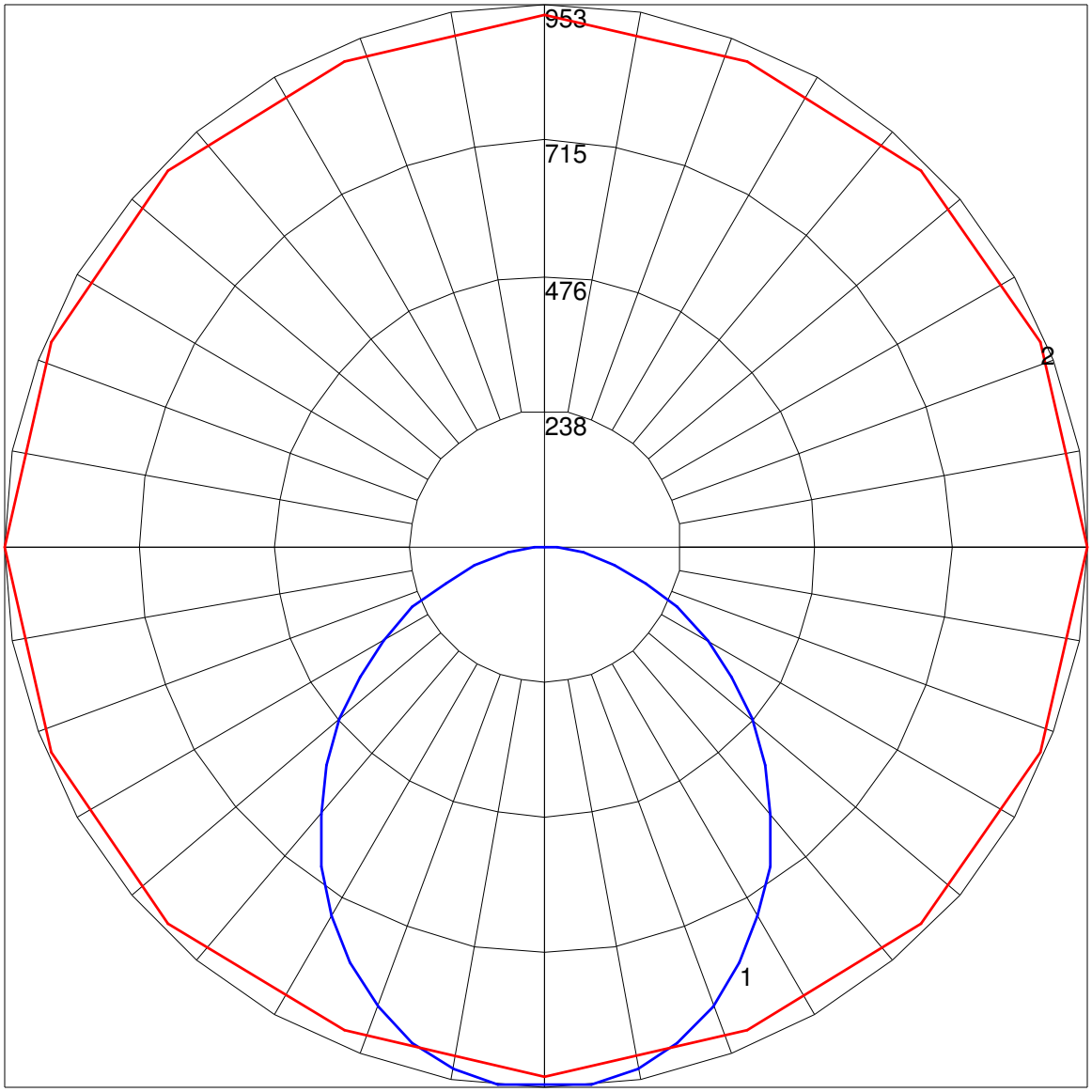
POLAR GRAPH



Maximum Candela = 952.735 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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