H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L61-927-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-L61-927-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5221
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	45.5
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	4665	4520	4487
55	4198	4222	4316
65	3668	4059	4446
75	2961	4098	5113
85	1372	4424	5345

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2033.083	2033.083	2033.083	2033.083	2033.083
5	2043.184	2020.737	2009.514	1981.456	2007.270
10	2003.903	1979.773	1965.183	1962.377	1966.305
15	1937.686	1914.117	1901.210	1896.721	1893.354
20	1849.584	1826.576	1805.252	1794.590	1796.273
25	1739.596	1720.517	1711.538	1683.480	1672.818
30	1611.091	1591.450	1571.248	1556.097	1547.680
35	1477.535	1459.577	1435.448	1414.685	1402.900
40	1324.338	1309.748	1284.495	1268.222	1258.682
45	1176.192	1159.357	1139.716	1130.738	1131.299
50	1019.628	1014.577	993.253	997.181	1002.232
55	858.575	858.575	863.625	877.093	882.705
60	708.745	712.112	735.120	758.127	772.156
65	552.743	572.944	611.664	651.507	670.025
70	402.913	436.583	492.137	545.448	567.333
75	273.285	308.077	378.222	447.245	471.936
80	143.096	202.579	275.530	348.480	371.488
85	42.648	95.958	137.484	156.003	166.103
90	0.000	1.683	2.245	3.928	2.245

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	727.46	N.A.	13.90
0-30	1511.5	N.A.	29.00
0-40	2409.85	N.A.	46.20
0-60	4072.67	N.A.	78.00
0-80	5079.12	N.A.	97.30
0-90	5220.71	N.A.	100.00
10-90	5029.92	N.A.	96.30
20-40	1682.38	N.A.	32.20
20-50	2567.54	N.A.	49.20
40-70	2269.56	N.A.	43.50
60-80	1006.45	N.A.	19.30
70-80	399.71	N.A.	7.70
80-90	141.59	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	5220.71	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	190.79
10-20	536.68
20-30	784.03
30-40	898.35
40-50	885.16
50-60	777.66
60-70	606.74
70-80	399.71
80-90	141.59
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	16.7	18.3	17.1	18.7	19.0	17.0	18.6	17.4	19.0	19.3
	3H	18.4	19.8	18.7	20.2	20.5	19.3	20.8	19.7	21.1	21.4
	4H	19.0	20.3	19.4	20.7	21.1	20.4	21.8	20.8	22.1	22.5
	6H	19.3	20.6	19.8	21.0	21.4	21.4	22.7	21.8	23.1	23.5
	8H	19.4	20.7	19.9	21.1	21.5	21.8	23.1	22.2	23.5	23.9
	12H	19.5	20.7	19.9	21.1	21.5	22.1	23.3	22.5	23.7	24.1
4H	2H	17.4	18.8	17.8	19.2	19.5	17.7	19.0	18.1	19.4	19.8
	3H	19.3	20.5	19.7	20.9	21.3	20.2	21.3	20.6	21.7	22.1
	4H	20.1	21.1	20.5	21.5	22.0	21.4	22.5	21.9	22.9	23.3
	6H	20.6	21.5	21.1	22.0	22.4	22.7	23.6	23.1	24.1	24.5
	8H	20.8	21.6	21.2	22.1	22.5	23.2	24.0	23.6	24.5	25.0
	12H	20.8	21.6	21.3	22.1	22.6	23.5	24.3	24.0	24.8	25.3
8H	4H	20.6	21.5	21.0	21.9	22.4	21.8	22.6	22.2	23.1	23.5
	6H	21.3	22.0	21.8	22.5	23.0	23.2	24.0	23.7	24.4	24.9
	8H	21.6	22.2	22.1	22.7	23.2	23.8	24.5	24.3	25.0	25.5
	12H	21.7	22.3	22.2	22.8	23.4	24.3	24.9	24.8	25.4	25.9
12H	4H	20.7	21.5	21.2	22.0	22.4	21.8	22.6	22.3	23.1	23.5
	6H	21.5	22.2	22.0	22.6	23.2	23.3	24.0	23.8	24.4	25.0
	8H	21.8	22.4	22.4	22.9	23.5	24.0	24.5	24.5	25.0	25.6

Maximum UGR = 25.9

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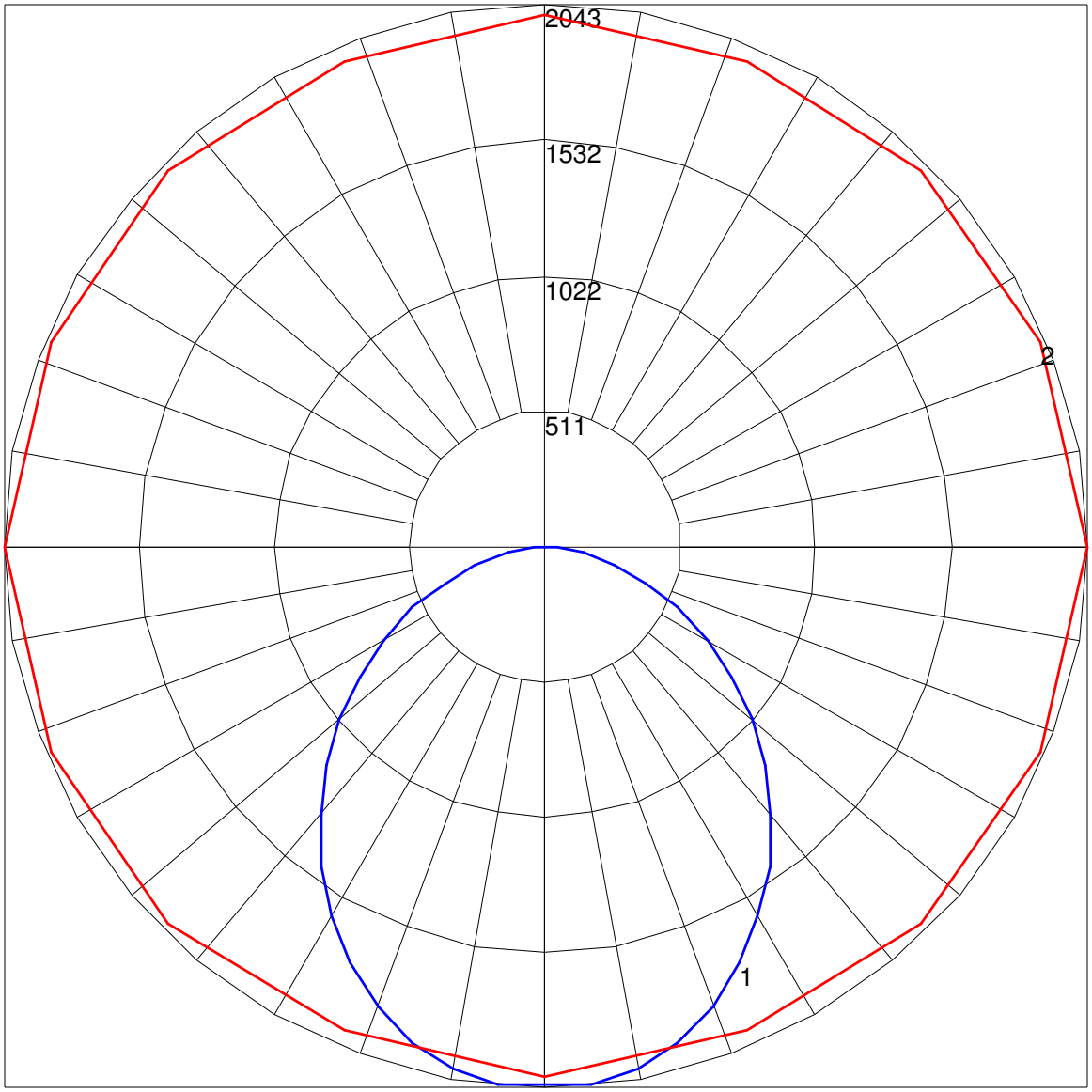
POLAR GRAPH



Maximum Candela = 2043.184 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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