H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L61-935-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-L61-935-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5348
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
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	4778	4630	4596
55	4300	4325	4421
65	3757	4158	4554
75	3033	4198	5238
85	1406	4532	5475

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2082.670	2082.670	2082.670	2082.670	2082.670
5	2093.018	2070.024	2058.527	2029.784	2056.227
10	2052.778	2028.060	2013.114	2010.240	2014.264
15	1984.946	1960.803	1947.581	1942.983	1939.534
20	1894.695	1871.127	1849.283	1838.360	1840.085
25	1782.025	1762.481	1753.283	1724.541	1713.619
30	1650.386	1630.266	1609.571	1594.051	1585.428
35	1513.572	1495.177	1470.458	1449.189	1437.117
40	1356.639	1341.693	1315.825	1299.154	1289.382
45	1204.879	1187.634	1167.514	1158.317	1158.891
50	1044.497	1039.323	1017.479	1021.503	1026.677
55	879.516	879.516	884.689	898.486	904.234
60	726.032	729.481	753.049	776.618	790.989
65	566.224	586.919	626.583	667.397	686.367
70	412.740	447.231	504.141	558.751	581.170
75	279.950	315.591	387.447	458.153	483.446
80	146.586	207.520	282.250	356.980	380.549
85	43.688	98.299	140.837	159.807	170.155
90	0.000	1.725	2.299	4.024	2.299

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	745.20	N.A.	13.90
0-30	1548.36	N.A.	29.00
0-40	2468.62	N.A.	46.20
0-60	4172.00	N.A.	78.00
0-80	5203.00	N.A.	97.30
0-90	5348.04	N.A.	100.00
10-90	5152.6	N.A.	96.30
20-40	1723.42	N.A.	32.20
20-50	2630.17	N.A.	49.20
40-70	2324.92	N.A.	43.50
60-80	1030.99	N.A.	19.30
70-80	409.46	N.A.	7.70
80-90	145.05	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	5348.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	195.44
10-20	549.77
20-30	803.16
30-40	920.26
40-50	906.75
50-60	796.63
60-70	621.54
70-80	409.46
80-90	145.05
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	16.8	18.4	17.2	18.8	19.1	17.1	18.7	17.5	19.1	19.4
	3H	18.5	19.9	18.8	20.3	20.6	19.4	20.9	19.8	21.2	21.5
	4H	19.1	20.4	19.5	20.8	21.2	20.5	21.9	20.9	22.2	22.6
	6H	19.4	20.7	19.9	21.1	21.5	21.5	22.8	21.9	23.2	23.6
	8H	19.5	20.8	20.0	21.2	21.6	21.9	23.2	22.3	23.6	24.0
	12H	19.6	20.8	20.0	21.2	21.6	22.2	23.4	22.6	23.8	24.2
4H	2H	17.5	18.9	17.9	19.3	19.6	17.8	19.1	18.2	19.5	19.9
	3H	19.4	20.6	19.8	21.0	21.4	20.3	21.4	20.7	21.8	22.2
	4H	20.2	21.2	20.6	21.6	22.1	21.5	22.6	22.0	23.0	23.4
	6H	20.7	21.6	21.2	22.1	22.5	22.8	23.7	23.2	24.2	24.6
	8H	20.9	21.7	21.3	22.2	22.6	23.3	24.2	23.7	24.6	25.1
	12H	20.9	21.7	21.4	22.2	22.7	23.6	24.4	24.1	24.9	25.4
8H	4H	20.7	21.6	21.1	22.0	22.5	21.9	22.7	22.3	23.2	23.6
	6H	21.4	22.1	21.9	22.6	23.1	23.3	24.1	23.8	24.5	25.0
	8H	21.7	22.3	22.2	22.8	23.3	23.9	24.6	24.4	25.1	25.6
	12H	21.8	22.4	22.3	22.9	23.5	24.4	25.0	24.9	25.5	26.0
12H	4H	20.8	21.6	21.3	22.1	22.5	21.9	22.7	22.4	23.2	23.6
	6H	21.6	22.3	22.1	22.7	23.3	23.4	24.1	23.9	24.5	25.1
	8H	21.9	22.5	22.5	23.0	23.6	24.1	24.6	24.6	25.1	25.7

Maximum UGR = 26.0

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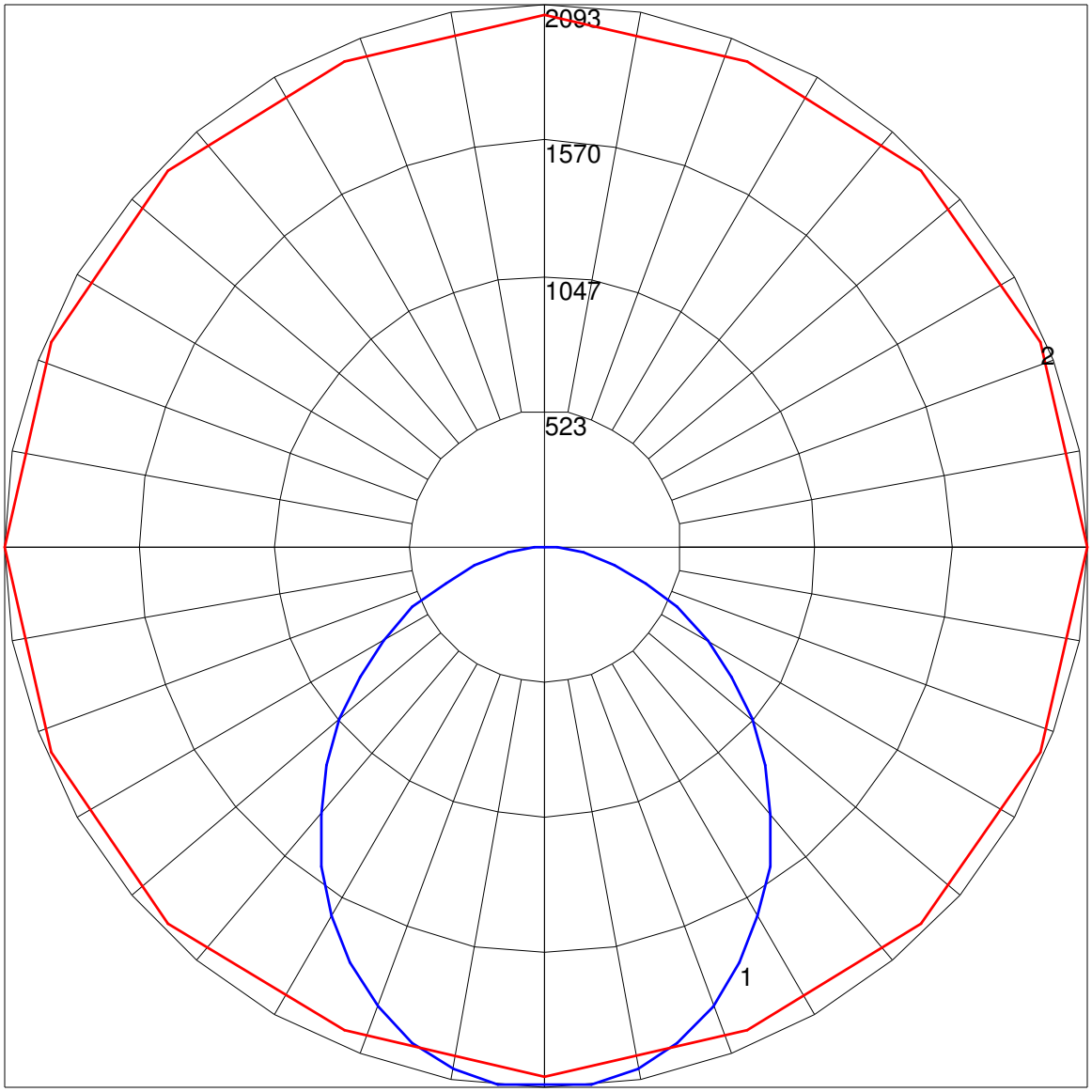
POLAR GRAPH



Maximum Candela = 2093.018 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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