H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-827-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L61-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5891
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5535	5740	5927
55	4679	5156	5502
65	3577	4474	4974
75	2486	3968	4904
85	1416	3236	4045

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2251.256	2251.256	2251.256	2251.256	2251.256
5	2258.825	2245.200	2242.172	2234.602	2234.602
10	2228.546	2214.921	2213.407	2205.837	2204.323
15	2175.558	2160.418	2158.904	2155.876	2154.362
20	2099.860	2086.234	2084.720	2086.234	2086.234
25	1993.883	1980.257	1989.341	1995.397	1989.341
30	1863.682	1857.626	1866.710	1877.308	1869.738
35	1713.800	1712.286	1731.968	1739.538	1747.108
40	1541.209	1541.209	1574.516	1588.142	1600.254
45	1344.395	1344.395	1394.355	1426.148	1439.774
50	1136.982	1138.496	1205.111	1247.501	1267.183
55	922.000	938.654	1015.866	1061.285	1083.994
60	711.560	744.867	822.079	872.040	896.263
65	519.288	563.192	649.488	703.990	722.158
70	349.724	404.227	490.522	546.539	567.734
75	221.038	274.026	352.752	408.769	436.020
80	119.603	165.021	234.663	274.026	301.278
85	42.391	74.184	96.893	96.893	121.117
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	822.53	N.A.	14.00
0-30	1738.11	N.A.	29.50
0-40	2817.71	N.A.	47.80
0-60	4786.87	N.A.	81.30
0-80	5782.75	N.A.	98.20
0-90	5890.51	N.A.	100.00
10-90	5677.43	N.A.	96.40
20-40	1995.18	N.A.	33.90
20-50	3065.71	N.A.	52.00
40-70	2601.36	N.A.	44.20
60-80	995.88	N.A.	16.90
70-80	363.69	N.A.	6.20
80-90	107.76	N.A.	1.80
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	5890.51	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	213.08
10-20	609.45
20-30	915.58
30-40	1079.6
40-50	1070.53
50-60	898.64
60-70	632.20
70-80	363.69
80-90	107.76
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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	17.0	18.6	17.3	18.9	19.2	18.0	19.6	18.4	19.9	20.2
	3H	18.3	19.7	18.6	20.0	20.4	19.8	21.3	20.2	21.6	22.0
	4H	18.7	20.0	19.1	20.4	20.8	20.6	22.0	21.0	22.3	22.7
	6H	18.9	20.2	19.4	20.6	21.0	21.3	22.6	21.7	22.9	23.3
	8H	19.0	20.2	19.4	20.6	21.0	21.5	22.7	22.0	23.1	23.5
	12H	19.0	20.2	19.5	20.6	21.0	21.7	22.8	22.1	23.2	23.7
4H	2H	17.7	19.0	18.1	19.4	19.8	18.5	19.9	18.9	20.2	20.6
	3H	19.2	20.3	19.6	20.7	21.1	20.6	21.7	21.0	22.1	22.5
	4H	19.8	20.8	20.2	21.2	21.6	21.5	22.5	21.9	22.9	23.4
	6H	20.1	21.0	20.6	21.5	21.9	22.4	23.3	22.8	23.7	24.2
	8H	20.2	21.1	20.7	21.5	22.0	22.7	23.5	23.1	23.9	24.4
	12H	20.3	21.1	20.8	21.5	22.0	22.9	23.6	23.3	24.1	24.6
8H	4H	20.2	21.0	20.7	21.5	21.9	21.8	22.6	22.2	23.0	23.5
	6H	20.7	21.4	21.2	21.9	22.4	22.7	23.4	23.2	23.9	24.4
	8H	20.9	21.5	21.4	22.1	22.5	23.1	23.8	23.7	24.3	24.8
	12H	21.0	21.6	21.5	22.1	22.6	23.4	24.0	23.9	24.4	25.0
12H	4H	20.3	21.0	20.8	21.5	22.0	21.8	22.5	22.2	23.0	23.5
	6H	20.9	21.5	21.4	22.0	22.5	22.8	23.4	23.3	23.9	24.4
	8H	21.1	21.7	21.6	22.2	22.7	23.2	23.8	23.7	24.3	24.8

Maximum UGR = 25.0

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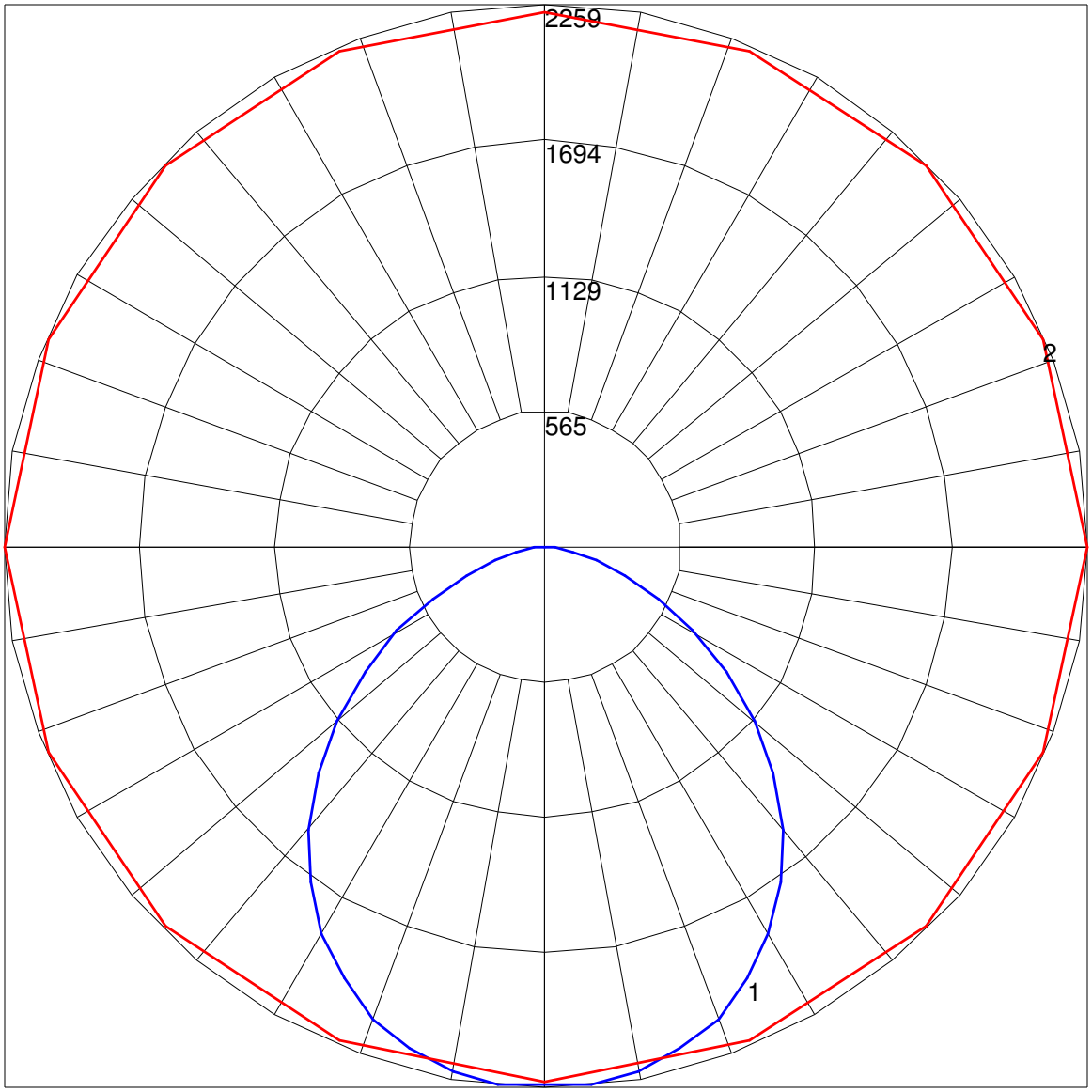
POLAR GRAPH



Maximum Candela = 2258.825 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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