H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-835-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-L61-835-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6073
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
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	5706	5918	6111
55	4824	5315	5672
65	3688	4612	5128
75	2563	4090	5056
85	1460	3336	4171

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2320.881	2320.881	2320.881	2320.881	2320.881
5	2328.685	2314.638	2311.517	2303.713	2303.713
10	2297.470	2283.423	2281.862	2274.058	2272.497
15	2242.842	2227.234	2225.674	2222.552	2220.991
20	2164.803	2150.756	2149.195	2150.756	2150.756
25	2055.549	2041.502	2050.866	2057.109	2050.866
30	1921.321	1915.078	1924.443	1935.368	1927.565
35	1766.804	1765.243	1785.533	1793.337	1801.141
40	1588.875	1588.875	1623.212	1637.259	1649.746
45	1385.974	1385.974	1437.479	1470.256	1484.303
50	1172.147	1173.707	1242.382	1286.084	1306.374
55	950.516	967.684	1047.284	1094.107	1117.519
60	733.567	767.904	847.504	899.010	923.982
65	535.348	580.611	669.575	725.763	744.493
70	360.540	416.729	505.693	563.442	585.293
75	227.874	282.501	363.662	421.411	449.505
80	123.302	170.125	241.921	282.501	310.595
85	43.702	76.478	99.890	99.890	124.862
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	847.97	N.A.	14.00
0-30	1791.86	N.A.	29.50
0-40	2904.85	N.A.	47.80
0-60	4934.92	N.A.	81.30
0-80	5961.6	N.A.	98.20
0-90	6072.69	N.A.	100.00
10-90	5853.02	N.A.	96.40
20-40	2056.89	N.A.	33.90
20-50	3160.53	N.A.	52.00
40-70	2681.81	N.A.	44.20
60-80	1026.68	N.A.	16.90
70-80	374.93	N.A.	6.20
80-90	111.09	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	6072.69	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	219.67
10-20	628.30
20-30	943.90
30-40	1112.99
40-50	1103.64
50-60	926.43
60-70	651.75
70-80	374.93
80-90	111.09
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	100	91	85	79	97	90	83	78	86	81	76	83	79	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	17.1	18.7	17.4	19.0	19.3	18.1	19.7	18.5	20.0	20.3
	3H	18.4	19.8	18.7	20.1	20.5	19.9	21.4	20.3	21.7	22.1
	4H	18.8	20.1	19.2	20.5	20.9	20.7	22.1	21.1	22.4	22.8
	6H	19.0	20.3	19.5	20.7	21.1	21.4	22.7	21.8	23.0	23.4
	8H	19.1	20.3	19.5	20.7	21.1	21.6	22.8	22.1	23.2	23.6
	12H	19.1	20.3	19.6	20.7	21.1	21.8	22.9	22.2	23.3	23.8
4H	2H	17.8	19.1	18.2	19.5	19.9	18.6	20.0	19.0	20.3	20.7
	3H	19.3	20.4	19.7	20.8	21.2	20.7	21.8	21.1	22.2	22.6
	4H	19.9	20.9	20.3	21.3	21.7	21.6	22.6	22.0	23.0	23.5
	6H	20.2	21.1	20.7	21.6	22.0	22.5	23.4	22.9	23.8	24.3
	8H	20.3	21.2	20.8	21.6	22.1	22.8	23.6	23.2	24.0	24.5
	12H	20.4	21.2	20.9	21.6	22.1	23.0	23.7	23.4	24.2	24.7
8H	4H	20.3	21.1	20.8	21.6	22.1	21.9	22.7	22.3	23.1	23.6
	6H	20.8	21.5	21.3	22.0	22.5	22.8	23.5	23.3	24.0	24.5
	8H	21.0	21.6	21.5	22.2	22.6	23.2	23.9	23.8	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.7	23.5	24.1	24.0	24.5	25.1
12H	4H	20.4	21.1	20.9	21.6	22.1	21.9	22.6	22.3	23.1	23.6
	6H	21.0	21.6	21.5	22.1	22.6	22.9	23.5	23.4	24.0	24.5
	8H	21.2	21.8	21.7	22.3	22.8	23.3	23.9	23.8	24.4	24.9

Maximum UGR = 25.1

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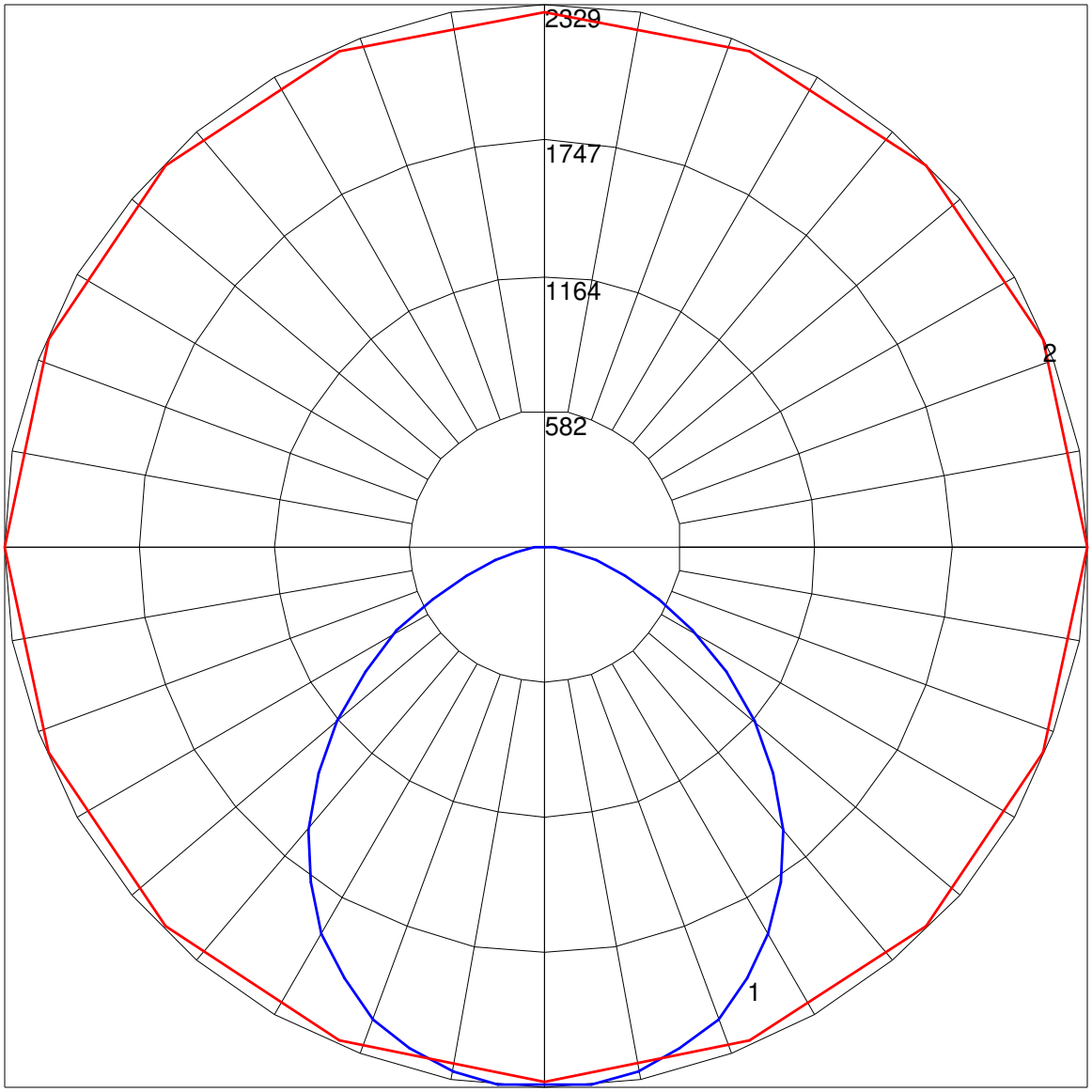
POLAR GRAPH



Maximum Candela = 2328.685 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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