H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-827-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-L52-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5171
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	41.6
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	4859	5039	5203
55	4108	4526	4829
65	3140	3927	4367
75	2182	3483	4305
85	1243	2841	3551

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1976.196	1976.196	1976.196	1976.196	1976.196
5	1982.841	1970.880	1968.222	1961.577	1961.577
10	1956.261	1944.301	1942.972	1936.327	1934.998
15	1909.747	1896.457	1895.128	1892.470	1891.141
20	1843.298	1831.337	1830.008	1831.337	1831.337
25	1750.269	1738.308	1746.282	1751.598	1746.282
30	1635.977	1630.661	1638.635	1647.938	1641.293
35	1504.408	1503.079	1520.355	1527.000	1533.645
40	1352.904	1352.904	1382.141	1394.102	1404.734
45	1180.136	1180.136	1223.992	1251.901	1263.862
50	998.065	999.394	1057.870	1095.081	1112.358
55	809.350	823.969	891.747	931.616	951.551
60	624.622	653.859	721.637	765.494	786.757
65	455.841	494.381	570.133	617.977	633.924
70	306.995	354.838	430.590	479.763	498.368
75	194.031	240.546	309.653	358.825	382.747
80	104.990	144.859	205.992	240.546	264.467
85	37.211	65.120	85.055	85.055	106.319
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	722.03	N.A.	14.00
0-30	1525.75	N.A.	29.50
0-40	2473.44	N.A.	47.80
0-60	4202.01	N.A.	81.30
0-80	5076.22	N.A.	98.20
0-90	5170.81	N.A.	100.00
10-90	4983.76	N.A.	96.40
20-40	1751.41	N.A.	33.90
20-50	2691.14	N.A.	52.00
40-70	2283.52	N.A.	44.20
60-80	874.20	N.A.	16.90
70-80	319.25	N.A.	6.20
80-90	94.59	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	5170.81	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	187.05
10-20	534.98
20-30	803.72
30-40	947.69
40-50	939.73
50-60	788.84
60-70	554.95
70-80	319.25
80-90	94.59
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	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	16.5	18.1	16.8	18.4	18.7	17.5	19.1	17.9	19.4	19.7
	3H	17.8	19.2	18.1	19.5	19.9	19.3	20.8	19.7	21.1	21.5
	4H	18.2	19.5	18.6	19.9	20.3	20.1	21.5	20.5	21.8	22.2
	6H	18.4	19.7	18.9	20.1	20.5	20.8	22.1	21.2	22.4	22.8
	8H	18.5	19.7	18.9	20.1	20.5	21.0	22.2	21.5	22.6	23.0
	12H	18.5	19.7	19.0	20.1	20.5	21.2	22.3	21.6	22.7	23.2
4H	2H	17.2	18.5	17.6	18.9	19.3	18.0	19.4	18.4	19.7	20.1
	3H	18.7	19.8	19.1	20.2	20.6	20.1	21.2	20.5	21.6	22.0
	4H	19.3	20.3	19.7	20.7	21.1	21.0	22.0	21.4	22.4	22.9
	6H	19.6	20.5	20.1	21.0	21.4	21.9	22.8	22.3	23.2	23.7
	8H	19.7	20.6	20.2	21.0	21.5	22.2	23.0	22.6	23.4	23.9
	12H	19.8	20.6	20.3	21.0	21.5	22.4	23.1	22.8	23.6	24.1
8H	4H	19.7	20.5	20.2	21.0	21.5	21.3	22.1	21.7	22.5	23.0
	6H	20.2	20.9	20.7	21.4	21.9	22.2	22.9	22.7	23.4	23.9
	8H	20.4	21.0	20.9	21.6	22.0	22.6	23.3	23.2	23.8	24.3
	12H	20.5	21.1	21.0	21.6	22.1	22.9	23.5	23.4	23.9	24.5
12H	4H	19.8	20.5	20.3	21.0	21.5	21.3	22.0	21.7	22.5	23.0
	6H	20.4	21.0	20.9	21.5	22.0	22.3	22.9	22.8	23.4	23.9
	8H	20.6	21.2	21.1	21.7	22.2	22.7	23.3	23.2	23.8	24.3

Maximum UGR = 24.5

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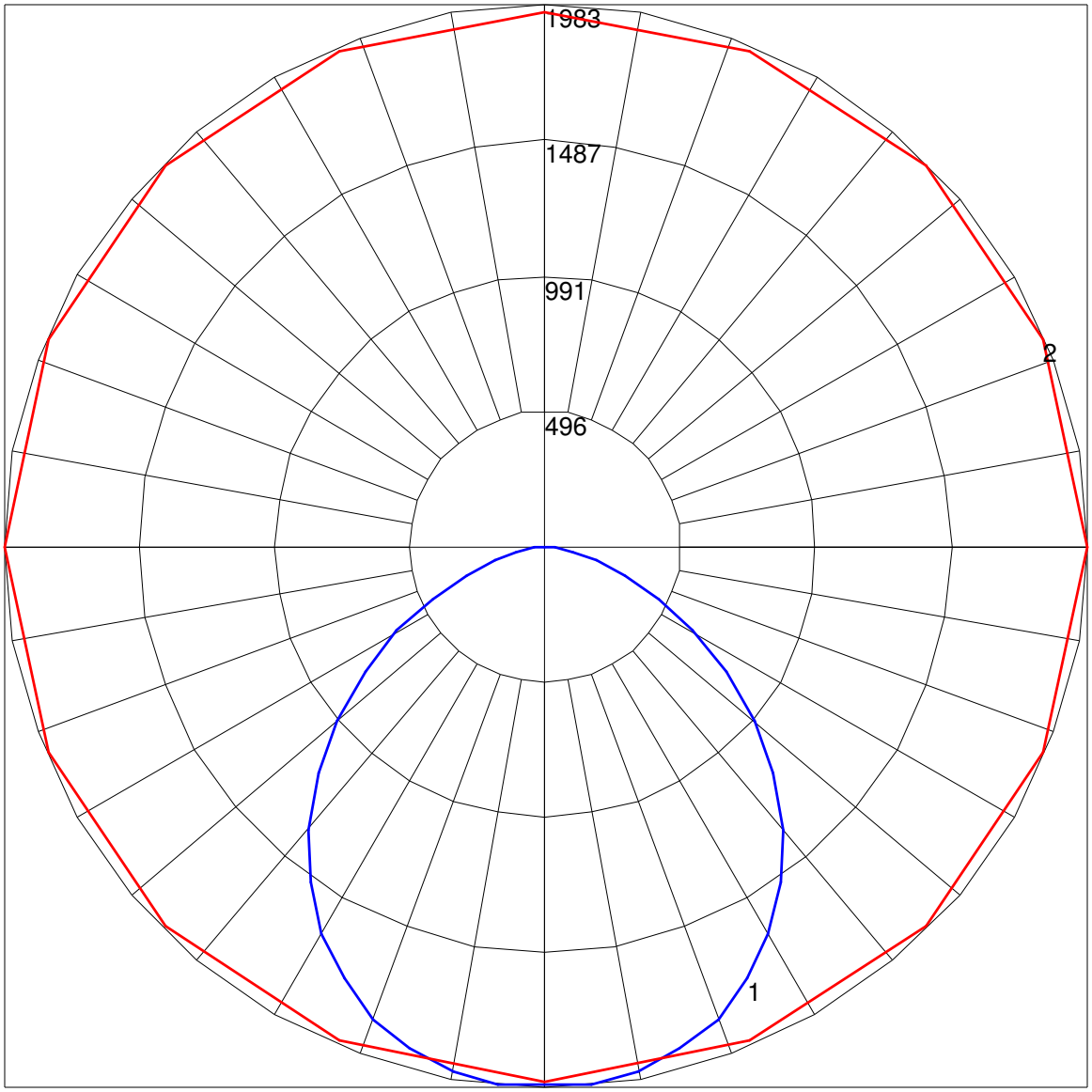
POLAR GRAPH



Maximum Candela = 1982.841 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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