H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-927-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-L61-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4980
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	4679	4853	5011
55	3956	4359	4651
65	3024	3782	4205
75	2102	3354	4146
85	1197	2736	3420

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1903.123	1903.123	1903.123	1903.123	1903.123
5	1909.523	1898.004	1895.444	1889.045	1889.045
10	1883.926	1872.407	1871.127	1864.728	1863.448
15	1839.131	1826.333	1825.053	1822.494	1821.214
20	1775.139	1763.621	1762.341	1763.621	1763.621
25	1685.551	1674.032	1681.711	1686.830	1681.711
30	1575.484	1570.365	1578.044	1587.003	1580.604
35	1448.780	1447.500	1464.138	1470.537	1476.936
40	1302.878	1302.878	1331.035	1342.553	1352.792
45	1136.499	1136.499	1178.734	1205.610	1217.129
50	961.161	962.440	1018.753	1054.589	1071.227
55	779.423	793.501	858.773	897.169	916.366
60	601.525	629.682	694.954	737.188	757.666
65	438.985	476.101	549.052	595.126	610.484
70	295.643	341.718	414.668	462.023	479.940
75	186.857	231.651	298.203	345.557	368.594
80	101.107	139.503	198.375	231.651	254.688
85	35.836	62.712	81.910	81.910	102.387
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	695.33	N.A.	14.00
0-30	1469.33	N.A.	29.50
0-40	2381.98	N.A.	47.80
0-60	4046.64	N.A.	81.30
0-80	4888.52	N.A.	98.20
0-90	4979.61	N.A.	100.00
10-90	4799.48	N.A.	96.40
20-40	1686.65	N.A.	33.90
20-50	2591.63	N.A.	52.00
40-70	2199.09	N.A.	44.20
60-80	841.88	N.A.	16.90
70-80	307.45	N.A.	6.20
80-90	91.09	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	4979.61	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	180.13
10-20	515.20
20-30	774.00
30-40	912.65
40-50	904.98
50-60	759.67
60-70	534.43
70-80	307.45
80-90	91.09
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	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	16.4	18.0	16.7	18.3	18.6	17.4	19.0	17.8	19.3	19.6
	3H	17.7	19.1	18.0	19.4	19.8	19.2	20.7	19.6	21.0	21.4
	4H	18.1	19.4	18.5	19.8	20.2	20.0	21.4	20.4	21.7	22.1
	6H	18.3	19.6	18.8	20.0	20.4	20.7	22.0	21.1	22.3	22.7
	8H	18.4	19.6	18.8	20.0	20.4	20.9	22.1	21.4	22.5	22.9
	12H	18.4	19.6	18.9	20.0	20.4	21.1	22.2	21.5	22.6	23.1
4H	2H	17.1	18.4	17.5	18.8	19.2	17.9	19.3	18.3	19.6	20.0
	3H	18.6	19.7	19.0	20.1	20.5	20.0	21.1	20.4	21.5	21.9
	4H	19.2	20.2	19.6	20.6	21.0	20.9	21.9	21.3	22.3	22.8
	6H	19.5	20.4	20.0	20.9	21.3	21.8	22.7	22.2	23.1	23.6
	8H	19.6	20.5	20.1	20.9	21.4	22.1	22.9	22.5	23.3	23.8
	12H	19.7	20.5	20.2	20.9	21.4	22.3	23.0	22.7	23.5	24.0
8H	4H	19.6	20.4	20.1	20.9	21.3	21.2	22.0	21.6	22.4	22.9
	6H	20.1	20.8	20.6	21.3	21.8	22.1	22.8	22.6	23.3	23.8
	8H	20.3	20.9	20.8	21.5	21.9	22.5	23.2	23.1	23.7	24.2
	12H	20.4	21.0	20.9	21.5	22.0	22.8	23.4	23.3	23.8	24.4
12H	4H	19.7	20.4	20.2	20.9	21.4	21.2	21.9	21.6	22.4	22.9
	6H	20.3	20.9	20.8	21.4	21.9	22.2	22.8	22.7	23.3	23.8
	8H	20.5	21.1	21.0	21.6	22.1	22.6	23.2	23.1	23.7	24.2

Maximum UGR = 24.4

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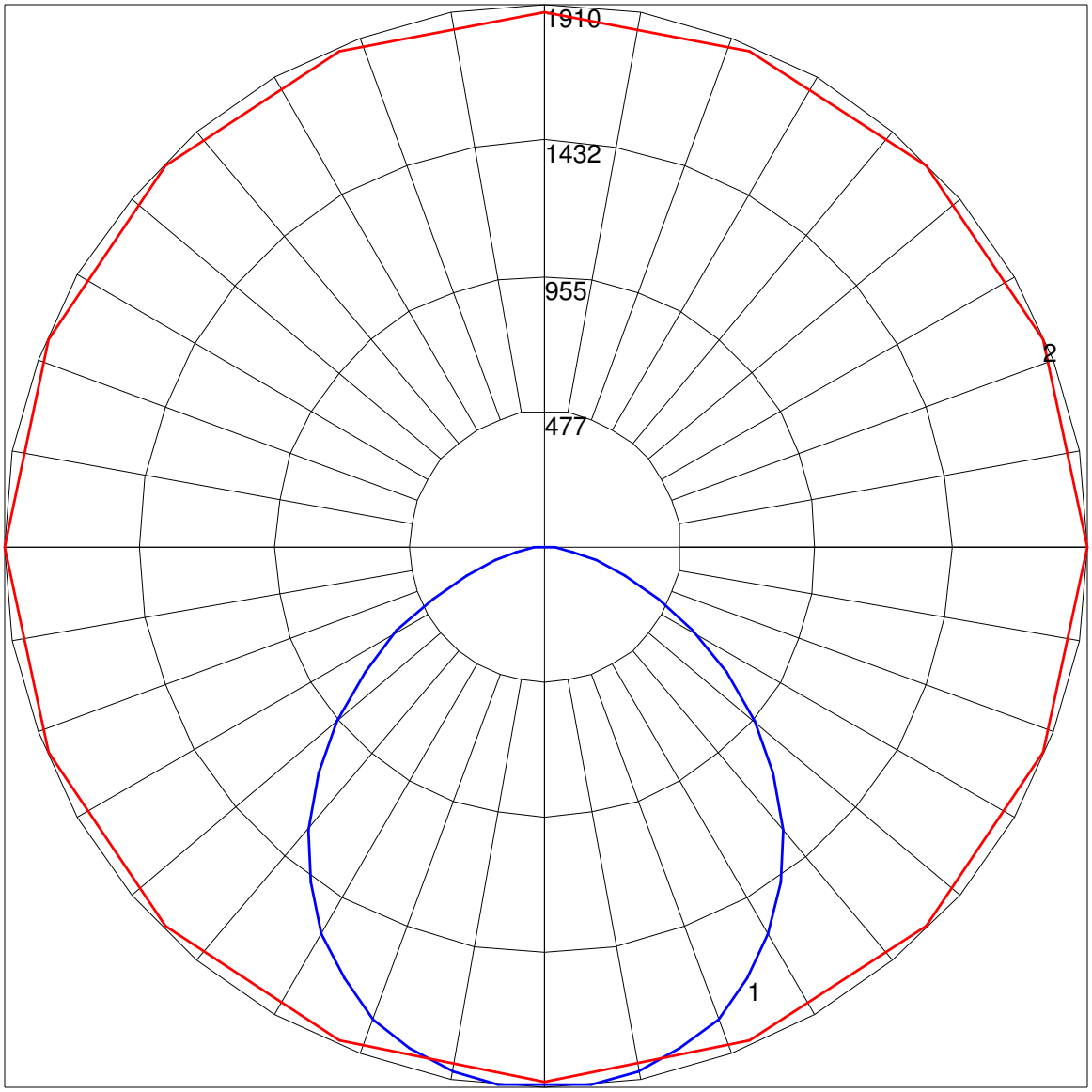
POLAR GRAPH



Maximum Candela = 1909.523 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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