H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-935-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-L61-935-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5101
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	4793	4971	5133
55	4052	4465	4764
65	3098	3874	4308
75	2153	3436	4247
85	1226	2803	3503

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1949.540	1949.540	1949.540	1949.540	1949.540
5	1956.096	1944.296	1941.674	1935.119	1935.119
10	1929.874	1918.075	1916.764	1910.209	1908.898
15	1883.987	1870.877	1869.566	1866.944	1865.633
20	1818.435	1806.635	1805.324	1806.635	1806.635
25	1726.661	1714.861	1722.728	1727.972	1722.728
30	1613.910	1608.666	1616.532	1625.709	1619.154
35	1484.115	1482.804	1499.848	1506.403	1512.959
40	1334.655	1334.655	1363.498	1375.298	1385.786
45	1164.218	1164.218	1207.483	1235.015	1246.814
50	984.603	985.914	1043.601	1080.310	1097.354
55	798.433	812.855	879.719	919.050	938.716
60	616.196	645.040	711.903	755.168	776.145
65	449.692	487.713	562.443	609.641	625.374
70	302.854	350.052	424.782	473.291	491.646
75	191.414	237.301	305.476	353.985	377.584
80	103.573	142.905	203.214	237.301	260.900
85	36.710	64.242	83.908	83.908	104.884
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	712.29	N.A.	14.00
0-30	1505.17	N.A.	29.50
0-40	2440.08	N.A.	47.80
0-60	4145.33	N.A.	81.30
0-80	5007.75	N.A.	98.20
0-90	5101.06	N.A.	100.00
10-90	4916.54	N.A.	96.40
20-40	1727.79	N.A.	33.90
20-50	2654.84	N.A.	52.00
40-70	2252.72	N.A.	44.20
60-80	862.41	N.A.	16.90
70-80	314.94	N.A.	6.20
80-90	93.32	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	5101.06	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	184.52
10-20	527.77
20-30	792.88
30-40	934.91
40-50	927.06
50-60	778.20
60-70	547.47
70-80	314.94
80-90	93.32
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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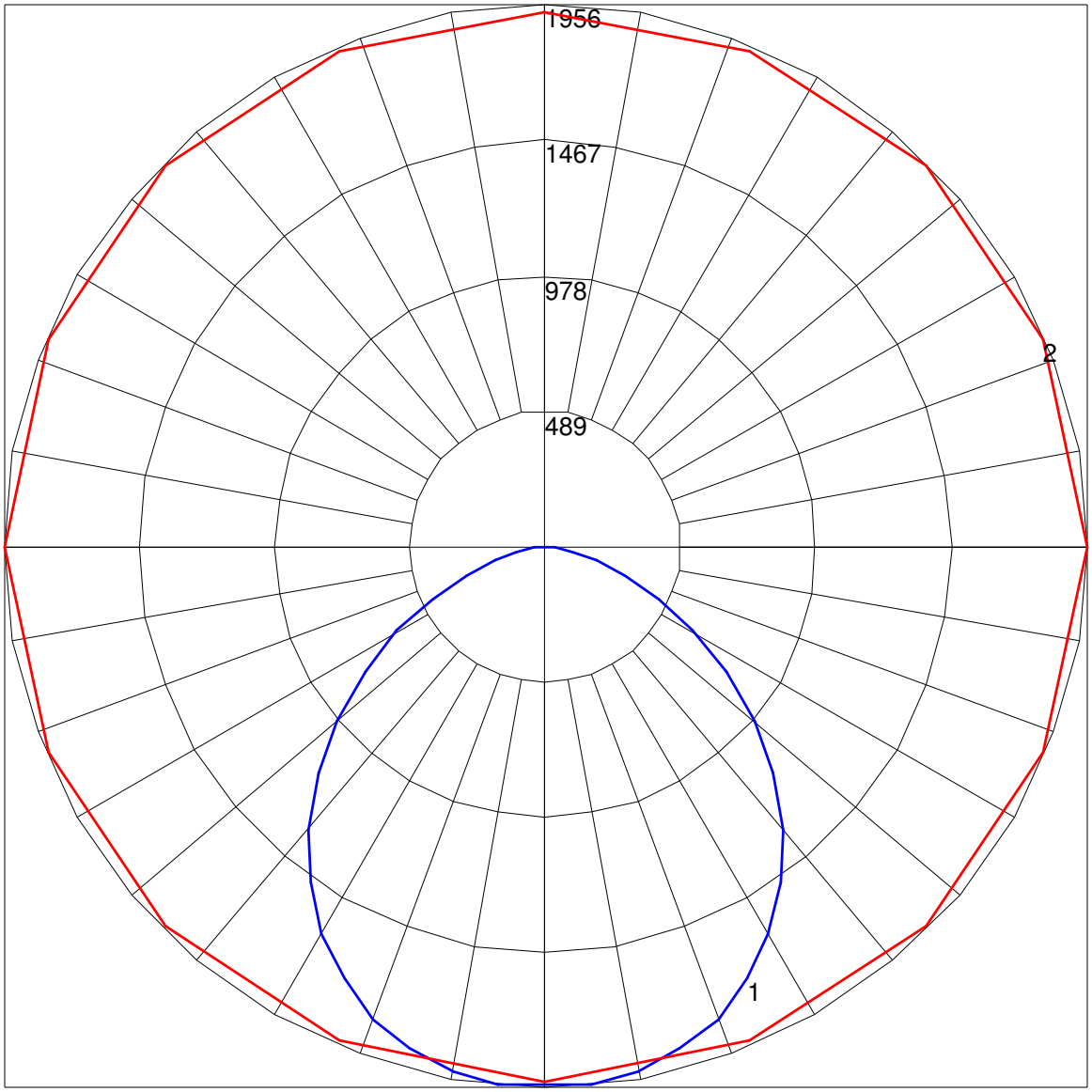
POLAR GRAPH



Maximum Candela = 1956.096 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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