H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-950-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-L61-950-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5465
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
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	5135	5326	5500
55	4342	4784	5105
65	3319	4151	4615
75	2307	3681	4550
85	1314	3003	3754

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2088.793	2088.793	2088.793	2088.793	2088.793
5	2095.817	2083.175	2080.365	2073.342	2073.342
10	2067.723	2055.081	2053.676	2046.652	2045.248
15	2018.558	2004.511	2003.107	2000.297	1998.892
20	1948.323	1935.681	1934.276	1935.681	1935.681
25	1849.994	1837.352	1845.780	1851.399	1845.780
30	1729.189	1723.571	1731.999	1741.832	1734.808
35	1590.124	1588.719	1606.980	1614.004	1621.027
40	1429.988	1429.988	1460.891	1473.533	1484.771
45	1247.376	1247.376	1293.731	1323.230	1335.873
50	1054.932	1056.337	1118.144	1157.475	1175.736
55	855.464	870.916	942.556	984.697	1005.767
60	660.210	691.114	762.754	809.109	831.584
65	481.813	522.550	602.618	653.187	670.043
70	324.486	375.056	455.124	507.098	526.764
75	205.087	254.251	327.296	379.270	404.554
80	110.972	153.113	217.729	254.251	279.536
85	39.332	68.830	89.901	89.901	112.376
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	763.17	N.A.	14.00
0-30	1612.68	N.A.	29.50
0-40	2614.37	N.A.	47.80
0-60	4441.43	N.A.	81.30
0-80	5365.44	N.A.	98.20
0-90	5465.42	N.A.	100.00
10-90	5267.72	N.A.	96.40
20-40	1851.2	N.A.	33.90
20-50	2844.47	N.A.	52.00
40-70	2413.63	N.A.	44.20
60-80	924.01	N.A.	16.90
70-80	337.44	N.A.	6.20
80-90	99.98	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	5465.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	197.70
10-20	565.47
20-30	849.51
30-40	1001.69
40-50	993.27
50-60	833.79
60-70	586.57
70-80	337.44
80-90	99.98
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	34	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	16.7	18.3	17.0	18.6	18.9	17.7	19.3	18.1	19.6	19.9
	3H	18.0	19.4	18.3	19.7	20.1	19.5	21.0	19.9	21.3	21.7
	4H	18.4	19.7	18.8	20.1	20.5	20.3	21.7	20.7	22.0	22.4
	6H	18.6	19.9	19.1	20.3	20.7	21.0	22.3	21.4	22.6	23.0
	8H	18.7	19.9	19.1	20.3	20.7	21.2	22.4	21.7	22.8	23.2
	12H	18.7	19.9	19.2	20.3	20.7	21.4	22.5	21.8	22.9	23.4
4H	2H	17.4	18.7	17.8	19.1	19.5	18.2	19.6	18.6	19.9	20.3
	3H	18.9	20.0	19.3	20.4	20.8	20.3	21.4	20.7	21.8	22.2
	4H	19.5	20.5	19.9	20.9	21.3	21.2	22.2	21.6	22.6	23.1
	6H	19.8	20.7	20.3	21.2	21.6	22.1	23.0	22.5	23.4	23.9
	8H	19.9	20.8	20.4	21.2	21.7	22.4	23.2	22.8	23.6	24.1
	12H	20.0	20.8	20.5	21.2	21.7	22.6	23.3	23.0	23.8	24.3
8H	4H	19.9	20.7	20.4	21.2	21.6	21.5	22.3	21.9	22.7	23.2
	6H	20.4	21.1	20.9	21.6	22.1	22.4	23.1	22.9	23.6	24.1
	8H	20.6	21.2	21.1	21.8	22.2	22.8	23.5	23.4	24.0	24.5
	12H	20.7	21.3	21.2	21.8	22.3	23.1	23.7	23.6	24.1	24.7
12H	4H	20.0	20.7	20.5	21.2	21.7	21.5	22.2	21.9	22.7	23.2
	6H	20.6	21.2	21.1	21.7	22.2	22.5	23.1	23.0	23.6	24.1
	8H	20.8	21.4	21.3	21.9	22.4	22.9	23.5	23.4	24.0	24.5

Maximum UGR = 24.7

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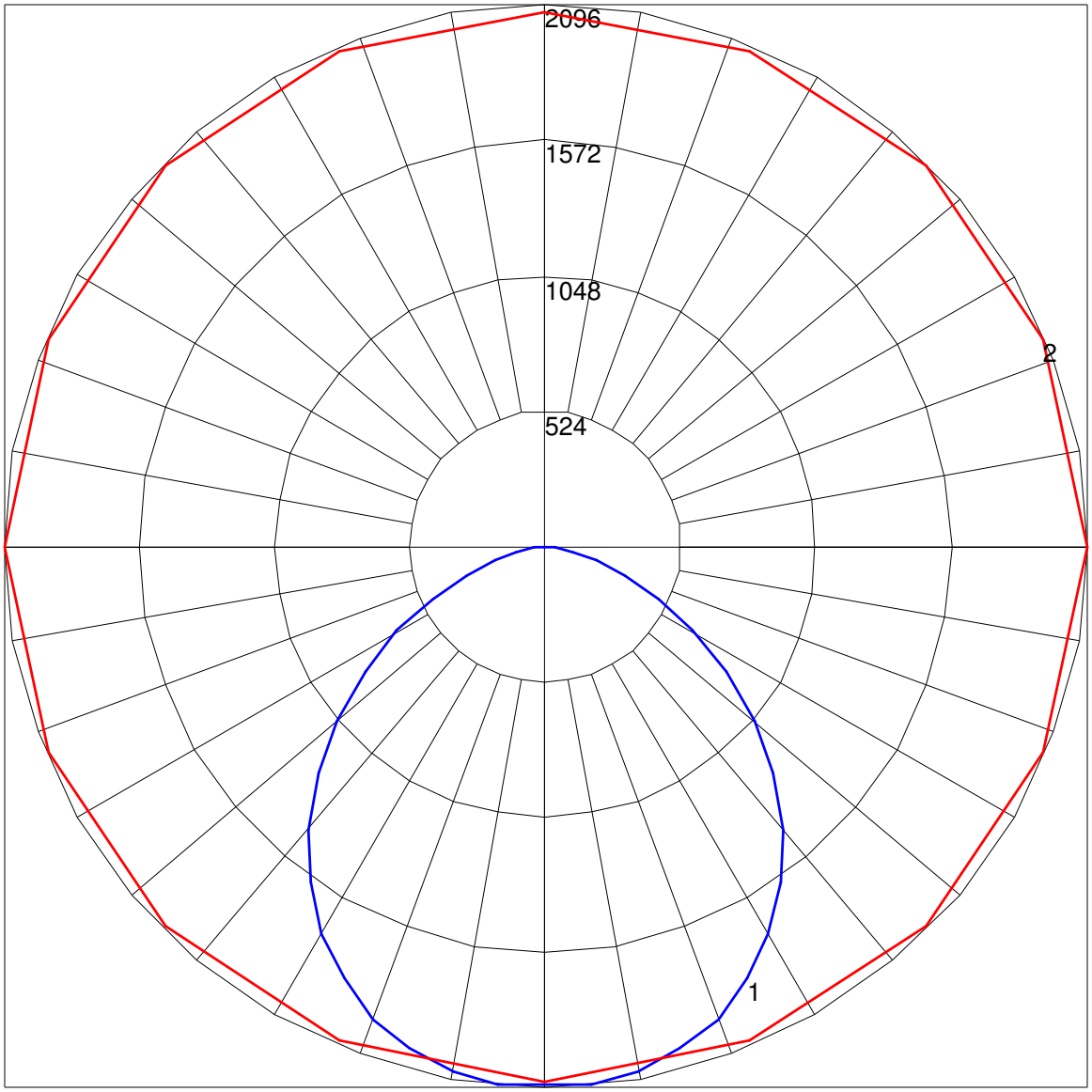
POLAR GRAPH



Maximum Candela = 2095.817 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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