H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-840-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-L52-840-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5491
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
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	5159	5351	5525
55	4362	4806	5128
65	3334	4170	4637
75	2317	3698	4571
85	1320	3017	3771

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2098.435	2098.435	2098.435	2098.435	2098.435
5	2105.491	2092.790	2089.968	2082.912	2082.912
10	2077.267	2064.567	2063.155	2056.100	2054.688
15	2027.876	2013.764	2012.353	2009.530	2008.119
20	1957.316	1944.616	1943.205	1944.616	1944.616
25	1858.533	1845.833	1854.300	1859.945	1854.300
30	1737.171	1731.527	1739.994	1749.872	1742.816
35	1597.464	1596.053	1614.398	1621.454	1628.510
40	1436.588	1436.588	1467.635	1480.335	1491.625
45	1253.134	1253.134	1299.703	1329.338	1342.039
50	1059.801	1061.213	1123.305	1162.818	1181.164
55	859.413	874.936	946.907	989.242	1010.410
60	663.258	694.304	766.275	812.844	835.423
65	484.037	524.962	605.399	656.202	673.136
70	325.984	376.787	457.225	509.439	529.195
75	206.033	255.425	328.807	381.021	406.422
80	111.484	153.819	218.734	255.425	280.826
85	39.513	69.148	90.316	90.316	112.895
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	766.69	N.A.	14.00
0-30	1620.12	N.A.	29.50
0-40	2626.44	N.A.	47.80
0-60	4461.93	N.A.	81.30
0-80	5390.21	N.A.	98.20
0-90	5490.65	N.A.	100.00
10-90	5292.04	N.A.	96.40
20-40	1859.74	N.A.	33.90
20-50	2857.6	N.A.	52.00
40-70	2424.77	N.A.	44.20
60-80	928.28	N.A.	16.90
70-80	339.00	N.A.	6.20
80-90	100.44	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	5490.65	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	198.62
10-20	568.08
20-30	853.43
30-40	1006.31
40-50	997.86
50-60	837.63
60-70	589.28
70-80	339.00
80-90	100.44
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	16.7	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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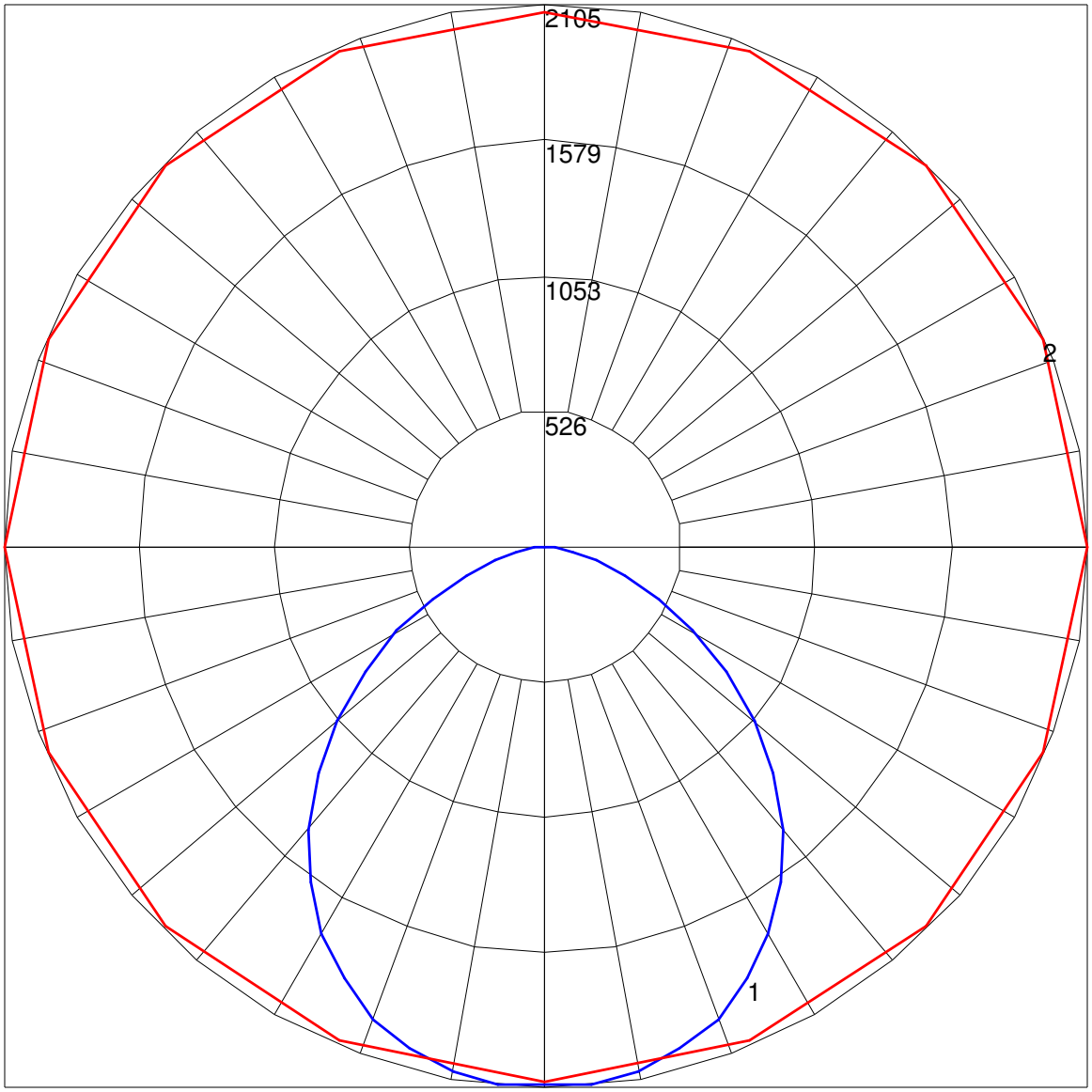
POLAR GRAPH



Maximum Candela = 2105.491 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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