H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-930-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L61-930-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5192
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4642	4573	4508
55	4171	4208	4326
65	3651	3982	4471
75	2846	4009	5182
85	1480	3732	5027

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2057.758	2057.758	2057.758	2057.758	2057.758
5	2057.758	2044.482	2035.947	2036.896	2034.999
10	2014.137	2003.706	1995.171	1991.378	1988.533
15	1943.016	1935.430	1925.947	1918.361	1916.465
20	1862.413	1850.085	1827.327	1822.585	1817.844
25	1744.827	1740.085	1713.534	1700.258	1691.723
30	1611.120	1603.534	1585.516	1564.654	1550.430
35	1460.344	1462.241	1439.482	1418.620	1410.086
40	1305.775	1310.517	1287.758	1273.534	1267.844
45	1157.844	1154.999	1140.775	1136.034	1124.655
50	1000.431	1003.275	990.000	1001.379	991.896
55	843.965	852.500	851.551	875.258	875.258
60	690.344	696.034	720.689	752.931	767.155
65	544.310	558.534	593.620	640.086	666.638
70	396.379	421.034	479.827	539.569	571.810
75	259.827	303.448	366.034	435.258	473.189
80	137.500	186.810	256.983	325.258	360.345
85	45.517	75.862	114.741	140.345	154.569
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	736.40	N.A.	14.20
0-30	1526.88	N.A.	29.40
0-40	2427.2	N.A.	46.70
0-60	4080.37	N.A.	78.60
0-80	5064.26	N.A.	97.50
0-90	5192.19	N.A.	100.00
10-90	4998.71	N.A.	96.30
20-40	1690.8	N.A.	32.60
20-50	2573.89	N.A.	49.60
40-70	2248.65	N.A.	43.30
60-80	983.89	N.A.	18.90
70-80	388.41	N.A.	7.50
80-90	127.93	N.A.	2.50
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	5192.19	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	193.48
10-20	542.92
20-30	790.48
30-40	900.32
40-50	883.09
50-60	770.08
60-70	595.48
70-80	388.41
80-90	127.93
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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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	17.1	18.6	18.9	17.1	18.7	17.4	19.0	19.3
	3H	18.3	19.8	18.7	20.1	20.5	19.3	20.8	19.7	21.1	21.5
	4H	18.9	20.3	19.3	20.6	21.0	20.4	21.8	20.8	22.1	22.5
	6H	19.3	20.5	19.7	20.9	21.3	21.4	22.7	21.8	23.1	23.5
	8H	19.4	20.6	19.8	21.0	21.4	21.8	23.0	22.2	23.4	23.8
	12H	19.4	20.6	19.8	21.0	21.4	22.1	23.2	22.5	23.6	24.1
4H	2H	17.4	18.7	17.8	19.1	19.5	17.7	19.1	18.1	19.4	19.8
	3H	19.2	20.4	19.7	20.8	21.2	20.2	21.4	20.6	21.7	22.1
	4H	20.0	21.0	20.4	21.4	21.9	21.4	22.5	21.9	22.9	23.3
	6H	20.5	21.4	20.9	21.9	22.3	22.6	23.6	23.1	24.0	24.5
	8H	20.6	21.5	21.1	21.9	22.4	23.1	24.0	23.6	24.4	24.9
	12H	20.7	21.5	21.2	22.0	22.4	23.4	24.2	23.9	24.7	25.1
8H	4H	20.5	21.4	20.9	21.8	22.3	21.7	22.6	22.2	23.1	23.5
	6H	21.2	21.9	21.7	22.4	22.9	23.1	23.9	23.6	24.3	24.8
	8H	21.4	22.0	21.9	22.5	23.0	23.7	24.3	24.2	24.9	25.3
	12H	21.5	22.1	22.0	22.6	23.2	24.1	24.7	24.6	25.2	25.7
12H	4H	20.6	21.4	21.1	21.9	22.3	21.8	22.6	22.2	23.0	23.5
	6H	21.3	22.0	21.9	22.5	23.0	23.2	23.9	23.7	24.3	24.8
	8H	21.6	22.2	22.1	22.7	23.3	23.8	24.4	24.3	24.9	25.4

Maximum UGR = 25.7

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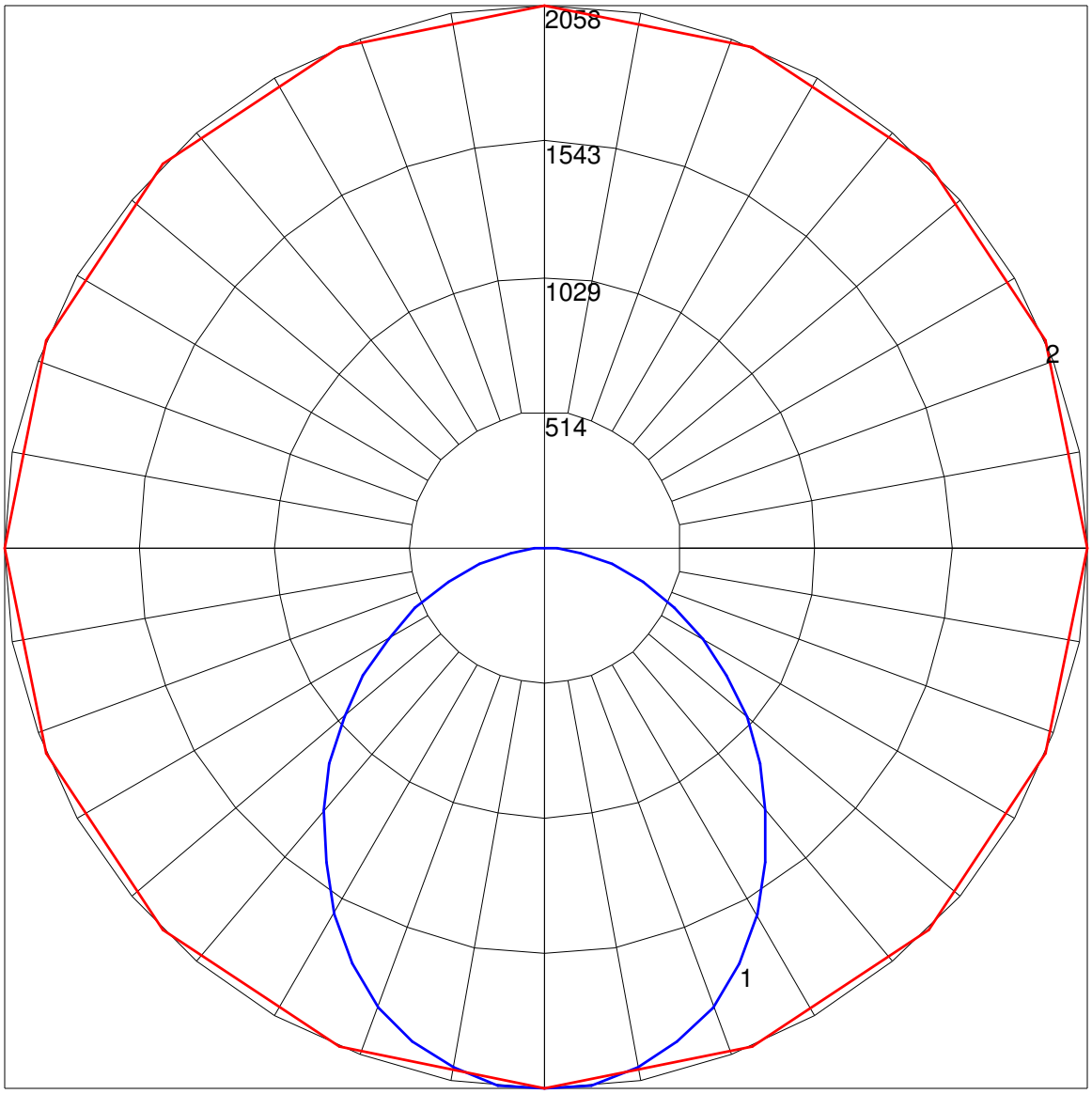
POLAR GRAPH



Maximum Candela = 2057.758 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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