H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L61-930-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L61-930-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5284
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	45.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4722	4575	4541
55	4249	4274	4368
65	3712	4108	4500
75	2997	4148	5176
85	1389	4478	5410

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2057.877	2057.877	2057.877	2057.877	2057.877
5	2068.101	2045.381	2034.020	2005.620	2031.748
10	2028.340	2003.916	1989.148	1986.308	1990.284
15	1961.316	1937.460	1924.396	1919.852	1916.444
20	1872.139	1848.851	1827.267	1816.475	1818.179
25	1760.811	1741.499	1732.411	1704.010	1693.218
30	1630.738	1610.858	1590.410	1575.074	1566.554
35	1495.553	1477.377	1452.953	1431.937	1420.009
40	1340.488	1325.720	1300.160	1283.688	1274.032
45	1190.535	1173.495	1153.615	1144.527	1145.095
50	1032.062	1026.950	1005.366	1009.342	1014.454
55	869.045	869.045	874.157	887.789	893.469
60	717.388	720.796	744.085	767.373	781.573
65	559.483	579.932	619.124	659.452	678.196
70	407.826	441.907	498.139	552.099	574.252
75	276.618	311.834	382.834	452.699	477.691
80	144.841	205.049	278.890	352.730	376.018
85	43.168	97.129	139.161	157.905	168.129
90	0.000	1.704	2.272	3.976	2.272

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	736.33	N.A.	13.90
0-30	1529.93	N.A.	29.00
0-40	2439.23	N.A.	46.20
0-60	4122.34	N.A.	78.00
0-80	5141.06	N.A.	97.30
0-90	5284.38	N.A.	100.00
10-90	5091.26	N.A.	96.30
20-40	1702.9	N.A.	32.20
20-50	2598.85	N.A.	49.20
40-70	2297.24	N.A.	43.50
60-80	1018.72	N.A.	19.30
70-80	404.58	N.A.	7.70
80-90	143.32	N.A.	2.70
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	5284.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	193.11
10-20	543.22
20-30	793.60
30-40	909.31
40-50	895.95
50-60	787.15
60-70	614.14
70-80	404.58
80-90	143.32
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	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	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	16.8	18.4	17.2	18.8	19.1	17.1	18.7	17.5	19.1	19.4
	3H	18.5	19.9	18.8	20.3	20.6	19.4	20.9	19.8	21.2	21.5
	4H	19.1	20.4	19.5	20.8	21.2	20.5	21.9	20.9	22.2	22.6
	6H	19.4	20.7	19.9	21.1	21.5	21.5	22.8	21.9	23.2	23.6
	8H	19.5	20.8	20.0	21.2	21.6	21.9	23.2	22.3	23.6	24.0
	12H	19.6	20.8	20.0	21.2	21.6	22.2	23.4	22.6	23.8	24.2
4H	2H	17.5	18.9	17.9	19.3	19.6	17.8	19.1	18.2	19.5	19.9
	3H	19.4	20.6	19.8	21.0	21.4	20.3	21.4	20.7	21.8	22.2
	4H	20.2	21.2	20.6	21.6	22.1	21.5	22.6	22.0	23.0	23.4
	6H	20.7	21.6	21.2	22.1	22.5	22.8	23.7	23.2	24.2	24.6
	8H	20.9	21.7	21.3	22.2	22.6	23.3	24.1	23.7	24.6	25.1
	12H	20.9	21.7	21.4	22.2	22.7	23.6	24.4	24.1	24.9	25.3
8H	4H	20.7	21.6	21.1	22.0	22.5	21.9	22.7	22.3	23.2	23.6
	6H	21.4	22.1	21.9	22.6	23.1	23.3	24.1	23.8	24.5	25.0
	8H	21.7	22.3	22.2	22.8	23.3	23.9	24.6	24.4	25.1	25.6
	12H	21.8	22.4	22.3	22.9	23.5	24.4	25.0	24.9	25.5	26.0
12H	4H	20.8	21.6	21.3	22.1	22.5	21.9	22.7	22.4	23.2	23.6
	6H	21.6	22.3	22.1	22.7	23.3	23.4	24.1	23.9	24.5	25.1
	8H	21.9	22.5	22.5	23.0	23.6	24.1	24.6	24.6	25.1	25.7

Maximum UGR = 26.0

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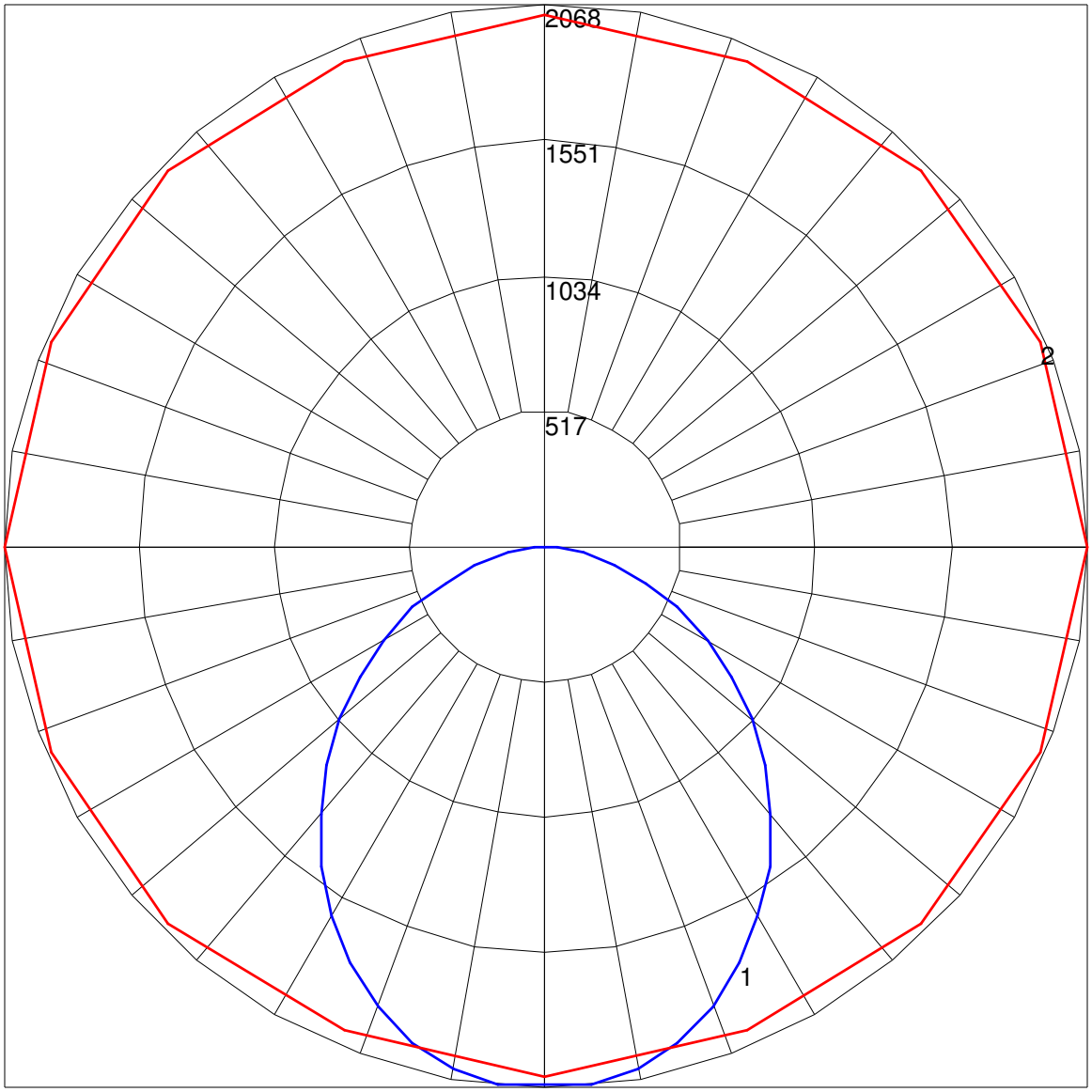
POLAR GRAPH



Maximum Candela = 2068.101 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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