H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L80-835-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-L80-835-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8218
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	61.9
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	7342	7115	7062
55	6607	6646	6793
65	5773	6389	6998
75	4661	6451	8049
85	2160	6963	8413

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3200.196	3200.196	3200.196	3200.196	3200.196
5	3216.095	3180.763	3163.097	3118.932	3159.564
10	3154.264	3116.282	3093.317	3088.900	3095.083
15	3050.035	3012.936	2992.620	2985.554	2980.254
20	2911.357	2875.142	2841.576	2824.793	2827.443
25	2738.230	2708.198	2694.065	2649.900	2633.117
30	2535.954	2505.039	2473.240	2449.391	2436.141
35	2325.729	2297.463	2259.481	2226.799	2208.250
40	2084.588	2061.622	2021.874	1996.258	1981.242
45	1851.397	1824.898	1793.982	1779.850	1780.733
50	1604.956	1597.006	1563.441	1569.624	1577.574
55	1351.449	1351.449	1359.399	1380.598	1389.431
60	1115.608	1120.908	1157.123	1193.338	1215.421
65	870.051	901.849	962.797	1025.511	1054.660
70	634.209	687.207	774.654	858.568	893.016
75	430.167	484.932	595.344	703.990	742.855
80	225.242	318.871	433.700	548.529	584.745
85	67.131	151.044	216.409	245.557	261.457
90	0.000	2.650	3.533	6.183	3.533

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1145.07	N.A.	13.90
0-30	2379.18	N.A.	29.00
0-40	3793.24	N.A.	46.20
0-60	6410.63	N.A.	78.00
0-80	7994.84	N.A.	97.30
0-90	8217.71	N.A.	100.00
10-90	7917.4	N.A.	96.30
20-40	2648.17	N.A.	32.20
20-50	4041.47	N.A.	49.20
40-70	3572.43	N.A.	43.50
60-80	1584.21	N.A.	19.30
70-80	629.16	N.A.	7.70
80-90	222.88	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	8217.71	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	300.31
10-20	844.76
20-30	1234.12
30-40	1414.06
40-50	1393.29
50-60	1224.09
60-70	955.04
70-80	629.16
80-90	222.88
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	103	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	82	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	36	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	18.3	19.9	18.7	20.3	20.6	18.6	20.2	19.0	20.6	20.9
	3H	20.0	21.4	20.3	21.8	22.1	20.9	22.4	21.3	22.7	23.0
	4H	20.6	21.9	21.0	22.3	22.7	22.0	23.4	22.4	23.7	24.1
	6H	20.9	22.2	21.4	22.6	23.0	23.0	24.3	23.4	24.7	25.1
	8H	21.0	22.3	21.5	22.7	23.1	23.4	24.7	23.8	25.1	25.5
	12H	21.1	22.3	21.5	22.7	23.1	23.7	24.9	24.1	25.3	25.7
4H	2H	19.0	20.4	19.4	20.8	21.1	19.3	20.6	19.7	21.0	21.4
	3H	20.9	22.1	21.3	22.5	22.9	21.8	22.9	22.2	23.3	23.7
	4H	21.7	22.7	22.1	23.1	23.6	23.0	24.1	23.5	24.5	24.9
	6H	22.2	23.1	22.7	23.6	24.0	24.3	25.2	24.7	25.7	26.1
	8H	22.4	23.2	22.8	23.7	24.1	24.8	25.6	25.2	26.1	26.6
	12H	22.4	23.2	22.9	23.7	24.2	25.1	25.9	25.6	26.4	26.9
8H	4H	22.2	23.1	22.6	23.5	24.0	23.4	24.2	23.8	24.7	25.1
	6H	22.9	23.6	23.4	24.1	24.6	24.8	25.6	25.3	26.0	26.5
	8H	23.2	23.8	23.7	24.3	24.8	25.4	26.1	25.9	26.6	27.1
	12H	23.3	23.9	23.8	24.4	25.0	25.9	26.5	26.4	27.0	27.5
12H	4H	22.3	23.1	22.8	23.6	24.0	23.4	24.2	23.9	24.7	25.1
	6H	23.1	23.8	23.6	24.2	24.8	24.9	25.6	25.4	26.0	26.6
	8H	23.4	24.0	24.0	24.5	25.1	25.6	26.1	26.1	26.6	27.2

Maximum UGR = 27.5

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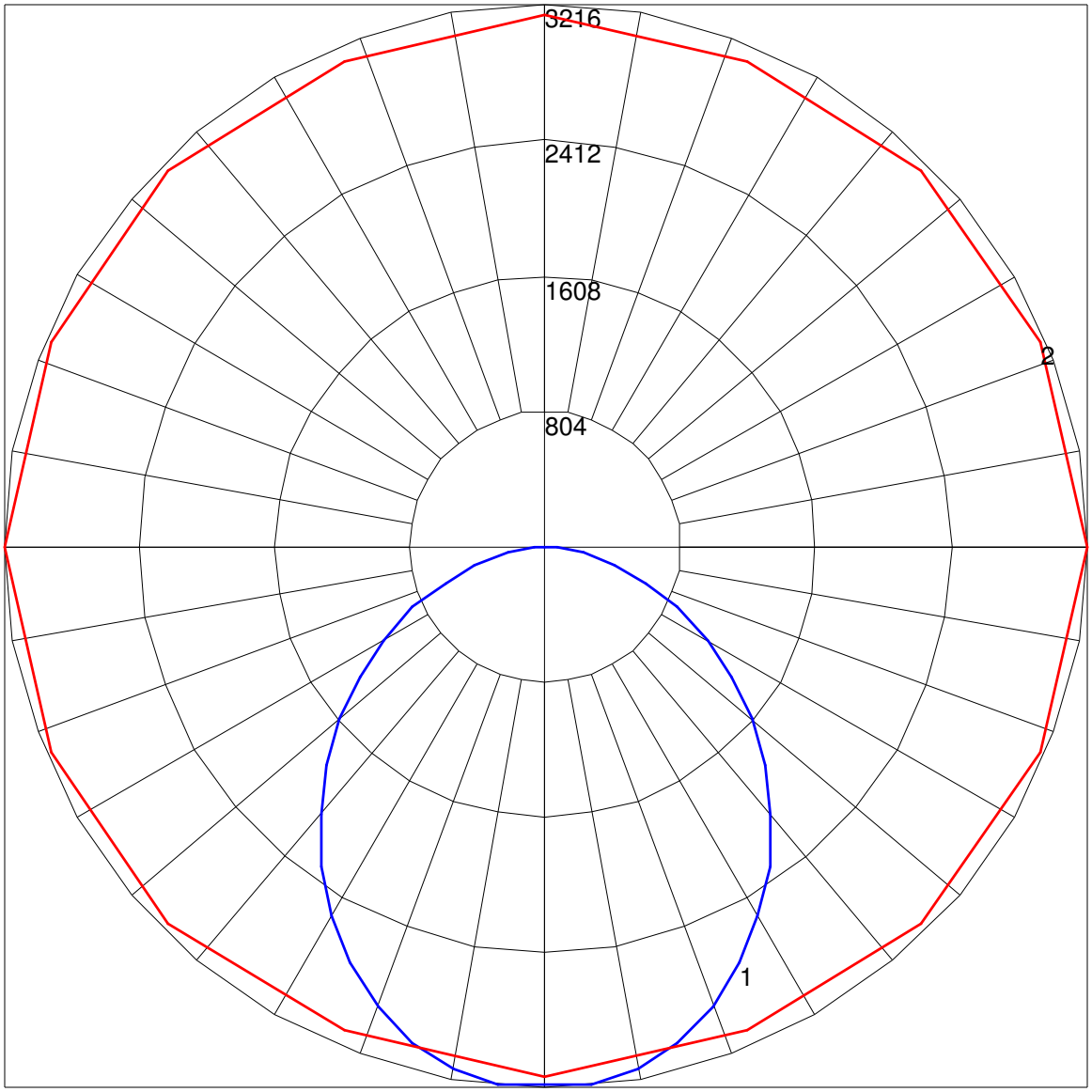
POLAR GRAPH



Maximum Candela = 3216.095 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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