H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-835-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19323.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-835-RA-DIM-UNV
[LAMPCAT] 22" LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4316
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	30.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.94 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4039	4219	4280
55	3565	3917	4084
65	3103	3677	3772
75	2254	3158	3292
85	1027	1690	1988

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1572.863	1572.863	1572.863	1572.863	1572.863
5	1608.386	1596.545	1590.625	1575.823	1566.943
10	1580.757	1571.877	1568.916	1553.128	1545.235
15	1537.341	1529.447	1533.394	1514.646	1514.646
20	1475.176	1472.216	1479.123	1461.362	1467.282
25	1406.104	1399.197	1413.011	1400.184	1396.237
30	1325.192	1312.364	1332.099	1325.192	1323.218
35	1223.557	1213.690	1239.345	1234.412	1240.332
40	1105.149	1103.175	1130.804	1134.751	1129.817
45	975.886	978.846	1019.302	1028.183	1034.103
50	838.729	853.530	895.960	917.668	917.668
55	698.612	726.241	767.684	810.113	800.246
60	572.309	595.991	645.328	679.864	674.930
65	447.980	468.701	530.866	555.535	544.680
70	319.704	358.187	409.497	421.338	416.404
75	199.321	250.632	279.247	291.088	291.088
80	101.634	148.998	159.852	168.733	161.825
85	30.589	58.218	50.324	55.257	59.204
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	580.82	N.A.	13.50
0-30	1227.38	N.A.	28.40
0-40	1995.68	N.A.	46.20
0-60	3454.91	N.A.	80.00
0-80	4246.17	N.A.	98.40
0-90	4316.02	N.A.	100.00
10-90	4165.48	N.A.	96.50
20-40	1414.86	N.A.	32.80
20-50	2191.88	N.A.	50.80
40-70	1966.99	N.A.	45.60
60-80	791.26	N.A.	18.30
70-80	283.50	N.A.	6.60
80-90	69.85	N.A.	1.60
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	4316.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	150.54
10-20	430.29
20-30	646.55
30-40	768.31
40-50	777.02
50-60	682.21
60-70	507.76
70-80	283.50
80-90	69.85
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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	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	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
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	16.4	18.0	16.7	18.3	18.6	17.2	18.8	17.6	19.2	19.5
	3H	17.9	19.4	18.3	19.7	20.1	19.0	20.5	19.4	20.8	21.2
	4H	18.4	19.8	18.8	20.2	20.5	19.7	21.0	20.1	21.4	21.8
	6H	18.7	20.0	19.2	20.4	20.8	20.1	21.4	20.5	21.7	22.1
	8H	18.8	20.0	19.2	20.4	20.8	20.2	21.4	20.6	21.8	22.2
	12H	18.8	20.0	19.3	20.4	20.8	20.3	21.5	20.7	21.8	22.3
4H	2H	17.1	18.5	17.5	18.8	19.2	17.8	19.2	18.2	19.5	19.9
	3H	18.9	20.1	19.3	20.5	20.9	19.8	21.0	20.2	21.4	21.8
	4H	19.6	20.6	20.0	21.0	21.5	20.6	21.6	21.0	22.1	22.5
	6H	20.0	20.9	20.5	21.4	21.8	21.2	22.1	21.6	22.5	23.0
	8H	20.1	21.0	20.6	21.4	21.9	21.3	22.2	21.8	22.6	23.1
	12H	20.2	21.0	20.7	21.4	21.9	21.4	22.2	21.9	22.7	23.2
8H	4H	20.0	20.8	20.4	21.3	21.7	20.9	21.7	21.3	22.2	22.6
	6H	20.6	21.3	21.0	21.7	22.2	21.6	22.3	22.1	22.8	23.2
	8H	20.7	21.4	21.2	21.9	22.4	21.8	22.4	22.3	22.9	23.4
	12H	20.9	21.4	21.4	21.9	22.5	21.9	22.5	22.4	23.0	23.6
12H	4H	20.0	20.8	20.5	21.3	21.7	20.9	21.7	21.4	22.1	22.6
	6H	20.6	21.3	21.1	21.7	22.3	21.6	22.2	22.1	22.7	23.2
	8H	20.9	21.4	21.4	21.9	22.5	21.9	22.4	22.4	22.9	23.5

Maximum UGR = 23.6

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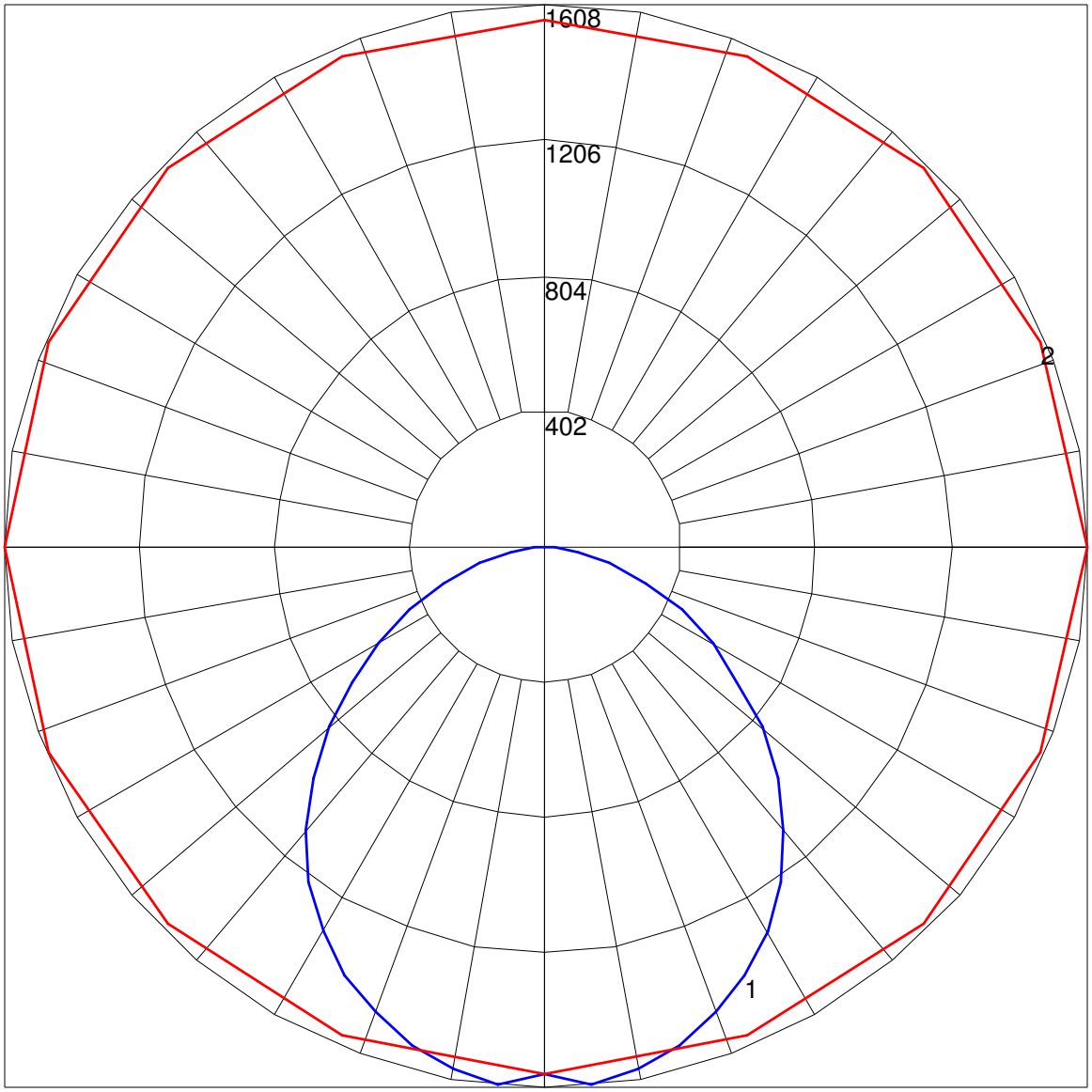
POLAR GRAPH



Maximum Candela = 1608.386 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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