H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-935-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L38-935-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM 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	3177
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1362	1438	1511
55	1221	1337	1444
65	1073	1272	1445
75	831	1276	1579
85	501	1674	1918

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1215.405	1215.405	1215.405	1215.405	1215.405
5	1196.846	1195.196	1195.196	1191.072	1189.010
10	1193.134	1193.134	1195.196	1196.846	1196.846
15	1161.790	1163.440	1165.502	1168.389	1170.451
20	1085.080	1089.204	1094.153	1100.752	1102.814
25	1023.629	1027.341	1037.239	1045.900	1050.024
30	897.016	869.384	982.387	949.806	944.857
35	827.317	835.153	853.712	869.384	875.570
40	736.172	746.070	766.691	787.312	795.148
45	672.659	681.320	709.777	736.172	746.070
50	584.401	598.011	629.355	656.987	666.473
55	489.131	503.979	535.323	566.667	578.214
60	398.811	414.483	449.951	482.120	494.080
65	316.739	337.360	375.303	412.834	426.443
70	233.430	257.763	302.717	342.310	355.919
75	150.121	180.228	230.543	270.548	285.395
80	82.484	121.664	179.403	218.583	230.543
85	30.519	69.699	101.868	114.653	116.715
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	440.58	N.A.	13.90
0-30	913.10	N.A.	28.70
0-40	1445.76	N.A.	45.50
0-60	2469.05	N.A.	77.70
0-80	3081.95	N.A.	97.00
0-90	3176.96	N.A.	100.00
10-90	3062.71	N.A.	96.40
20-40	1005.18	N.A.	31.60
20-50	1548.48	N.A.	48.70
40-70	1393.81	N.A.	43.90
60-80	612.90	N.A.	19.30
70-80	242.37	N.A.	7.60
80-90	95.01	N.A.	3.00
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	3176.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	114.25
10-20	326.33
20-30	472.52
30-40	532.66
40-50	543.30
50-60	479.99
60-70	370.53
70-80	242.37
80-90	95.01
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	12.4	14.0	12.7	14.3	14.6	13.4	15.0	13.7	15.3	15.6
	3H	14.0	15.5	14.4	15.8	16.2	15.5	17.0	15.9	17.4	17.7
	4H	14.6	16.0	15.0	16.3	16.7	16.5	17.9	16.9	18.3	18.7
	6H	14.9	16.3	15.4	16.6	17.0	17.6	18.9	18.0	19.2	19.6
	8H	15.1	16.3	15.5	16.7	17.1	18.0	19.2	18.4	19.6	20.0
	12H	15.1	16.3	15.6	16.7	17.1	18.3	19.5	18.8	19.9	20.3
4H	2H	13.1	14.5	13.5	14.9	15.3	13.9	15.3	14.3	15.7	16.0
	3H	15.0	16.2	15.5	16.6	17.0	16.4	17.6	16.8	18.0	18.4
	4H	15.7	16.8	16.2	17.2	17.7	17.5	18.6	18.0	19.0	19.5
	6H	16.3	17.2	16.7	17.7	18.1	18.8	19.7	19.2	20.2	20.6
	8H	16.4	17.3	16.9	17.8	18.2	19.3	20.2	19.8	20.6	21.1
	12H	16.6	17.4	17.1	17.8	18.3	19.7	20.5	20.2	21.0	21.5
8H	4H	16.3	17.2	16.8	17.7	18.1	17.9	18.8	18.3	19.2	19.7
	6H	17.1	17.8	17.6	18.3	18.8	19.3	20.1	19.8	20.6	21.0
	8H	17.4	18.0	17.9	18.5	19.0	20.0	20.7	20.5	21.2	21.6
	12H	17.6	18.2	18.1	18.7	19.2	20.6	21.1	21.1	21.6	22.2
12H	4H	16.5	17.3	17.0	17.8	18.2	17.9	18.7	18.4	19.2	19.7
	6H	17.3	18.0	17.9	18.5	19.0	19.4	20.1	20.0	20.6	21.1
	8H	17.7	18.3	18.2	18.8	19.4	20.2	20.7	20.7	21.2	21.8

Maximum UGR = 22.2

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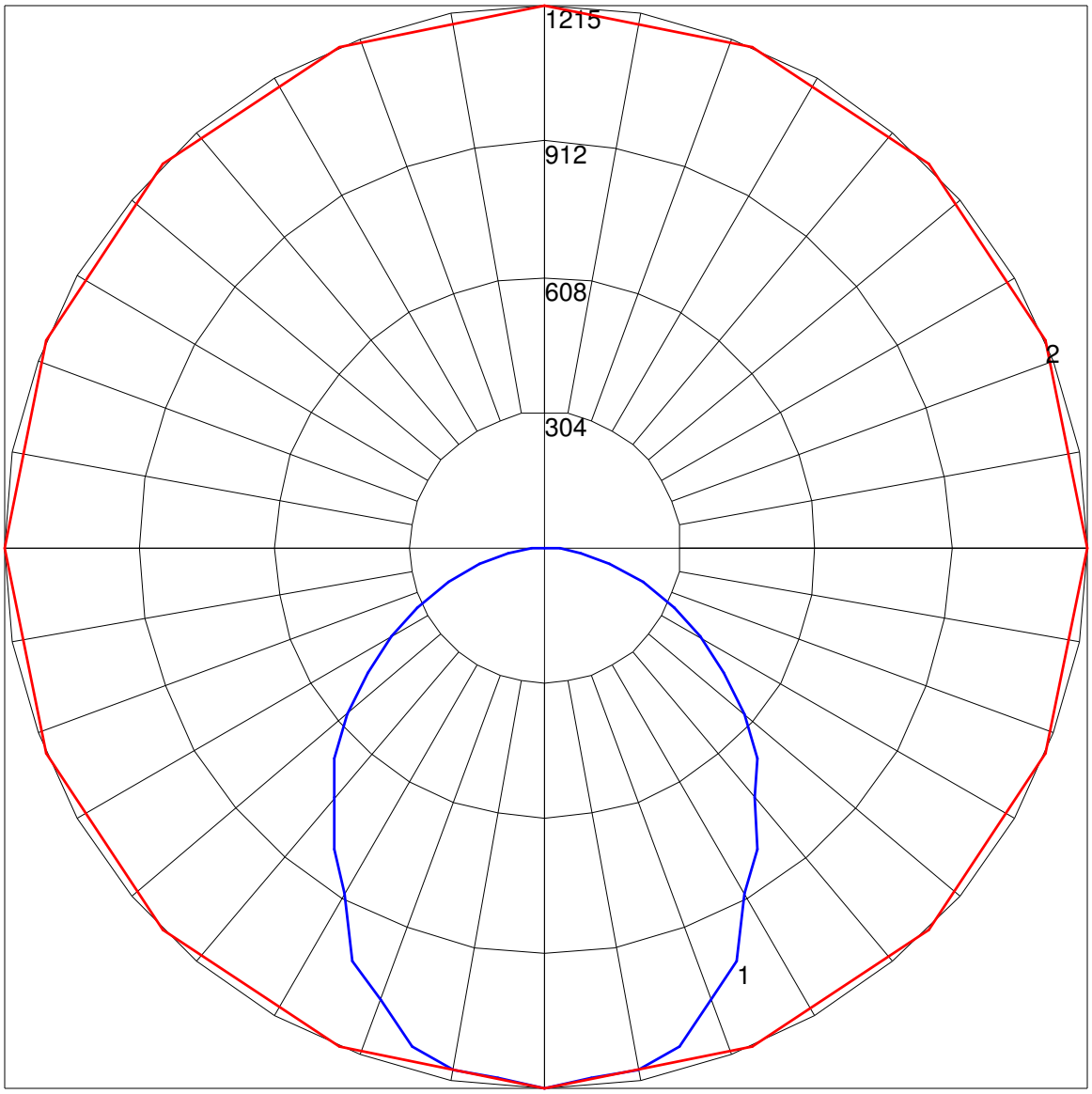
POLAR GRAPH



Maximum Candela = 1215.405 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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