H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-930-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-L45-930-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	3582
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
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	3353	3502	3553
55	2959	3251	3389
65	2575	3052	3131
75	1871	2621	2732
85	853	1403	1650

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1305.476	1305.476	1305.476	1305.476	1305.476
5	1334.960	1325.132	1320.218	1307.933	1300.562
10	1312.028	1304.657	1302.200	1289.097	1282.545
15	1275.993	1269.441	1272.717	1257.156	1257.156
20	1224.396	1221.939	1227.672	1212.930	1217.844
25	1167.066	1161.333	1172.799	1162.152	1158.876
30	1099.909	1089.262	1105.642	1099.909	1098.271
35	1015.553	1007.363	1028.656	1024.561	1029.475
40	917.273	915.635	938.567	941.843	937.748
45	809.985	812.442	846.021	853.392	858.306
50	696.145	708.430	743.647	761.664	761.664
55	579.848	602.780	637.177	672.394	664.204
60	475.017	494.672	535.622	564.287	560.192
65	371.823	389.022	440.619	461.094	452.085
70	265.354	297.295	339.883	349.710	345.615
75	165.437	208.024	231.775	241.603	241.603
80	84.356	123.668	132.677	140.048	134.315
85	25.389	48.321	41.769	45.864	49.140
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	482.08	N.A.	13.50
0-30	1018.72	N.A.	28.40
0-40	1656.42	N.A.	46.20
0-60	2867.57	N.A.	80.00
0-80	3524.32	N.A.	98.40
0-90	3582.3	N.A.	100.00
10-90	3457.35	N.A.	96.50
20-40	1174.33	N.A.	32.80
20-50	1819.26	N.A.	50.80
40-70	1632.6	N.A.	45.60
60-80	656.75	N.A.	18.30
70-80	235.30	N.A.	6.60
80-90	57.98	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	3582.3	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	124.95
10-20	357.14
20-30	536.64
30-40	637.69
40-50	644.92
50-60	566.23
60-70	421.44
70-80	235.30
80-90	57.98
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	79	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	55	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	15.7	17.3	16.0	17.6	17.9	16.5	18.1	16.9	18.5	18.8
	3H	17.2	18.7	17.6	19.0	19.4	18.3	19.8	18.7	20.1	20.5
	4H	17.7	19.1	18.1	19.5	19.8	19.0	20.3	19.4	20.7	21.1
	6H	18.0	19.3	18.5	19.7	20.1	19.4	20.7	19.8	21.0	21.4
	8H	18.1	19.3	18.5	19.7	20.1	19.5	20.7	19.9	21.1	21.5
	12H	18.1	19.3	18.6	19.7	20.1	19.6	20.8	20.0	21.1	21.6
4H	2H	16.4	17.8	16.8	18.1	18.5	17.1	18.5	17.5	18.8	19.2
	3H	18.2	19.4	18.6	19.8	20.2	19.1	20.3	19.5	20.7	21.1
	4H	18.9	19.9	19.3	20.3	20.8	19.9	20.9	20.3	21.4	21.8
	6H	19.3	20.2	19.8	20.7	21.1	20.5	21.4	20.9	21.8	22.3
	8H	19.4	20.3	19.9	20.7	21.2	20.6	21.5	21.1	21.9	22.4
	12H	19.5	20.3	20.0	20.7	21.2	20.7	21.5	21.2	22.0	22.5
8H	4H	19.3	20.1	19.7	20.6	21.0	20.2	21.0	20.6	21.5	21.9
	6H	19.9	20.6	20.3	21.0	21.5	20.9	21.6	21.4	22.1	22.5
	8H	20.0	20.7	20.5	21.2	21.7	21.1	21.7	21.6	22.2	22.7
	12H	20.2	20.7	20.7	21.2	21.8	21.2	21.8	21.7	22.3	22.9
12H	4H	19.3	20.1	19.8	20.6	21.0	20.2	21.0	20.7	21.4	21.9
	6H	19.9	20.6	20.4	21.0	21.6	20.9	21.5	21.4	22.0	22.5
	8H	20.2	20.7	20.7	21.2	21.8	21.2	21.7	21.7	22.2	22.8

Maximum UGR = 22.9

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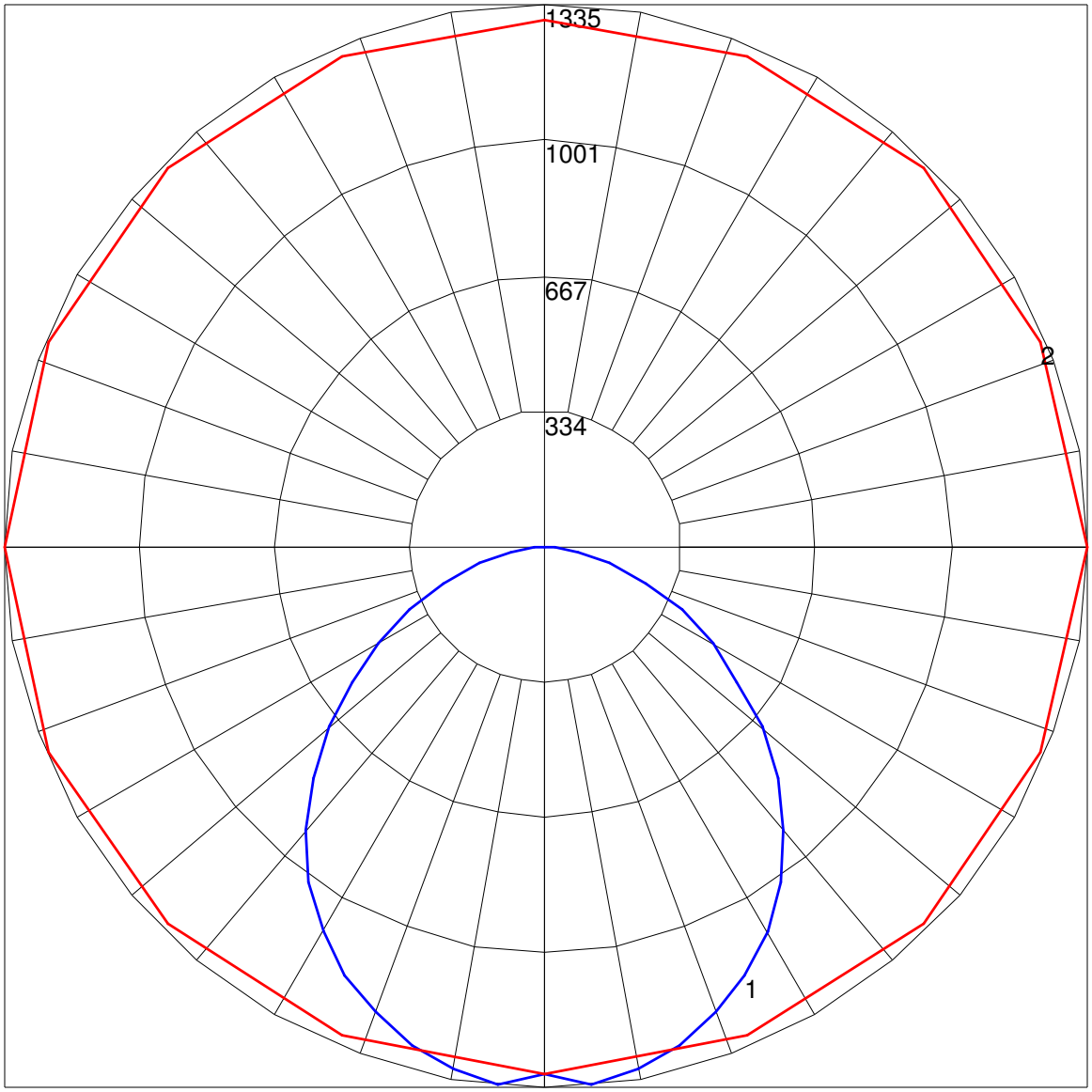
POLAR GRAPH



Maximum Candela = 1334.96 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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