H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : AVX-4-L36-840-CPC-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 20624.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 06-24-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 4'SURFACE MNT LUMINAIRE
[MORE] WHITE FROST INTERIOR LENS w/CLEAR POLYCARB LENS
[LUMCAT] AVX-4-L36-840-CPC-DIM-UNV
[LAMPCAT] HLM 80 CRI, 4000K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR
[_SEARCH_MOUNTING] SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3831
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.64
Spacing Criterion (Diagonal)	1.50
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.90 ft
Luminous Width (90-270)	0.58 ft
Luminous Height	0.06 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3944	5657	6981
55	3474	5392	6744
65	2851	4967	6124
75	1530	4118	5229
85	355	3106	4375

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1160.721	1160.721	1160.721	1160.721	1160.721
5	1163.819	1158.011	1161.108	1169.626	1171.949
10	1132.845	1139.814	1165.367	1190.533	1201.761
15	1084.450	1109.615	1166.142	1207.568	1226.539
20	1017.857	1060.445	1152.204	1223.829	1248.608
25	946.619	1002.758	1136.330	1234.283	1274.548
30	864.153	931.907	1103.421	1240.477	1293.906
35	775.105	858.732	1056.187	1224.991	1273.386
40	685.670	761.167	996.950	1181.241	1229.637
45	598.557	663.214	919.130	1116.584	1155.301
50	510.284	564.874	830.856	1026.762	1056.574
55	430.528	469.244	735.227	914.871	943.134
60	350.384	380.971	632.628	804.529	814.983
65	263.272	294.246	526.932	655.471	673.280
70	174.224	214.490	410.395	521.512	540.870
75	88.661	134.346	298.892	389.101	401.103
80	33.296	70.851	196.680	263.659	280.695
85	7.743	24.391	114.601	165.707	180.032
90	0.000	5.807	52.654	88.661	99.114
95	0.000	0.000	15.487	38.329	45.298
100	0.000	0.000	1.936	9.679	12.776
105	0.000	0.000	0.000	1.936	2.710
110	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	438.81	N.A.	11.50
0-30	955.84	N.A.	24.90
0-40	1605.7	N.A.	41.90
0-60	2921.91	N.A.	76.30
0-80	3689.78	N.A.	96.30
0-90	3804.35	N.A.	99.30
10-90	3693.21	N.A.	96.40
20-40	1166.89	N.A.	30.50
20-50	1855.39	N.A.	48.40
40-70	1798.64	N.A.	46.90
60-80	767.87	N.A.	20.00
70-80	285.44	N.A.	7.50
80-90	114.57	N.A.	3.00
90-110	26.75	N.A.	0.70
90-120	26.75	N.A.	0.70
90-130	26.75	N.A.	0.70
90-150	26.75	N.A.	0.70
90-180	26.75	N.A.	0.70
110-180	0.00	N.A.	0.00
0-180	3831.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.14
10-20	327.67
20-30	517.03
30-40	649.86
40-50	688.50
50-60	627.70
60-70	482.43
70-80	285.44
80-90	114.57
90-100	25.11
100-110	1.64
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	101	101	101	99
1	108	103	98	94	105	100	96	93	96	93	90	92	89	87	88	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	75	71	77	73	70	67
3	89	78	70	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	55	50	48
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	31	43	36	30	42	35	30	41	34	30	28
9	55	42	33	27	54	41	33	27	40	32	27	39	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	25	36	29	24	35	29	24	22

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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	14.7	16.3	15.0	16.6	17.0	20.0	21.6	20.4	22.0	22.3
	3H	15.9	17.4	16.3	17.8	18.1	22.0	23.5	22.4	23.8	24.2
	4H	16.2	17.6	16.6	18.0	18.4	22.8	24.2	23.2	24.5	24.9
	6H	16.3	17.6	16.7	18.0	18.4	23.5	24.8	23.9	25.2	25.6
	8H	16.3	17.5	16.7	17.9	18.4	23.8	25.0	24.2	25.4	25.8
	12H	16.3	17.5	16.7	17.9	18.3	24.1	25.3	24.5	25.7	26.1
4H	2H	16.4	17.9	16.9	18.2	18.6	20.3	21.7	20.7	22.1	22.5
	3H	17.8	19.0	18.2	19.4	19.8	22.6	23.7	23.0	24.2	24.6
	4H	18.1	19.2	18.5	19.6	20.1	23.5	24.6	24.0	25.1	25.5
	6H	18.2	19.2	18.7	19.6	20.1	24.4	25.4	24.9	25.8	26.3
	8H	18.2	19.1	18.7	19.6	20.1	24.8	25.7	25.3	26.1	26.6
	12H	18.2	19.0	18.7	19.5	20.0	25.2	26.0	25.7	26.5	27.0
8H	4H	19.1	20.0	19.6	20.4	20.9	23.7	24.6	24.2	25.0	25.5
	6H	19.3	20.1	19.9	20.6	21.1	24.7	25.4	25.2	25.9	26.4
	8H	19.4	20.0	19.9	20.6	21.1	25.2	25.9	25.7	26.4	26.9
	12H	19.4	20.0	19.9	20.5	21.1	25.7	26.3	26.2	26.8	27.4
12H	4H	19.3	20.1	19.8	20.6	21.1	23.7	24.5	24.2	25.0	25.5
	6H	19.7	20.3	20.2	20.8	21.4	24.7	25.4	25.2	25.9	26.4
	8H	19.8	20.4	20.3	20.9	21.5	25.3	25.9	25.8	26.4	26.9

Maximum UGR = 27.4

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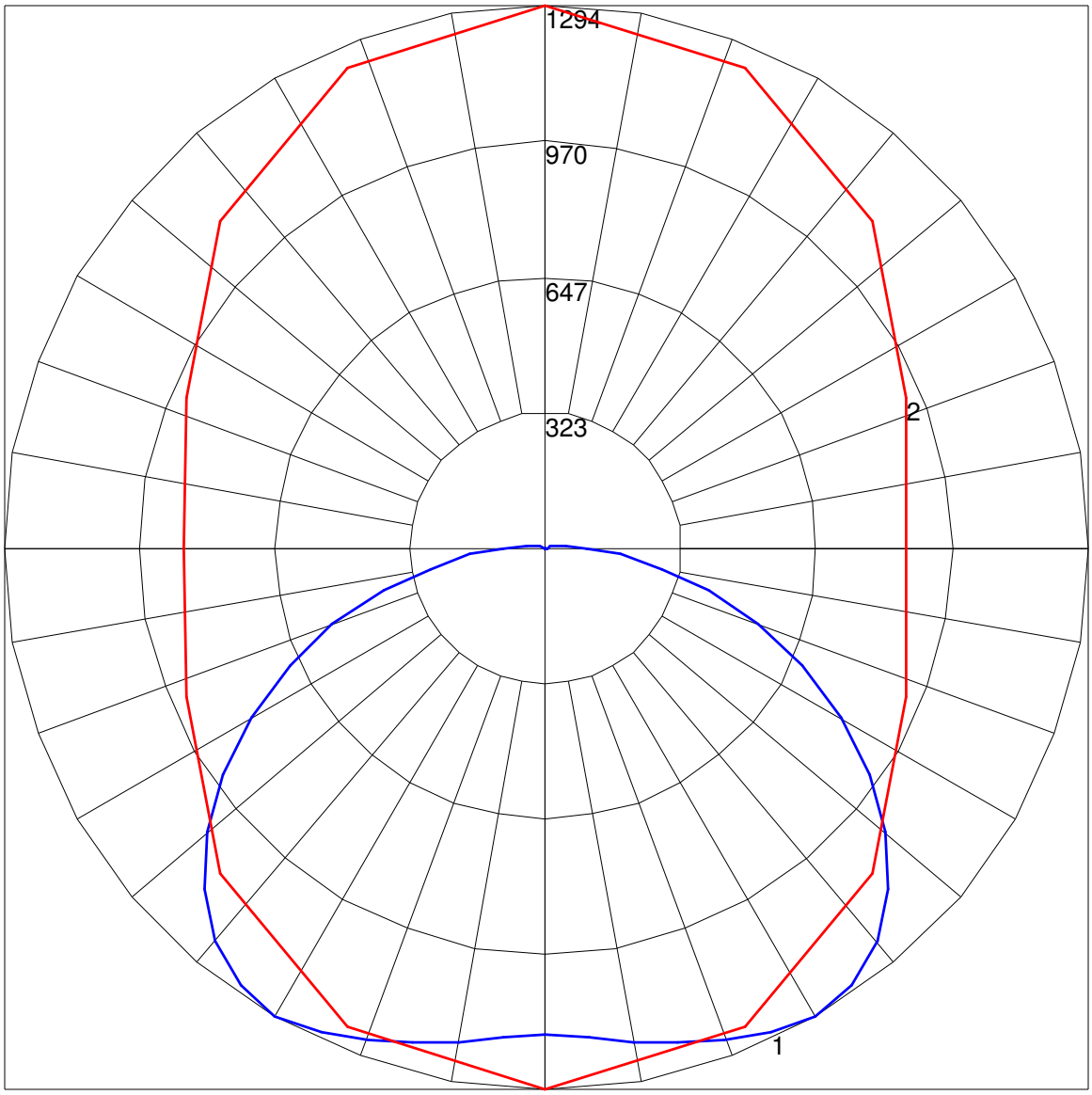
POLAR GRAPH



Maximum Candela = 1293.906 Located At Horizontal Angle = 90, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (30) (Through Max. Cd.)

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