H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PTDC-24-L38-830-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] 2022-05-06
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[LUMCAT] PTDC-24-L38-830-RA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3000K CCT
[_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	3725
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	31.4
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	1598	1686	1772
55	1432	1567	1693
65	1259	1491	1695
75	974	1496	1852
85	588	1963	2249

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1425.245	1425.245	1425.245	1425.245	1425.245
5	1403.482	1401.548	1401.548	1396.712	1394.293
10	1399.130	1399.130	1401.548	1403.482	1403.482
15	1362.374	1364.309	1366.727	1370.112	1372.530
20	1272.420	1277.256	1283.059	1290.797	1293.216
25	1200.359	1204.712	1216.319	1226.475	1231.312
30	1051.886	1019.483	1151.997	1113.790	1107.987
35	970.154	979.342	1001.106	1019.483	1026.738
40	863.272	874.879	899.061	923.242	932.431
45	788.794	798.950	832.320	863.272	874.879
50	685.298	701.258	738.013	770.416	781.539
55	573.580	590.991	627.746	664.502	678.043
60	467.666	486.044	527.636	565.359	579.384
65	371.425	395.606	440.100	484.110	500.069
70	273.732	302.266	354.981	401.409	417.369
75	176.040	211.345	270.347	317.259	334.669
80	96.725	142.670	210.377	256.322	270.347
85	35.788	81.733	119.456	134.448	136.866
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	516.65	N.A.	13.90
0-30	1070.75	N.A.	28.70
0-40	1695.38	N.A.	45.50
0-60	2895.34	N.A.	77.70
0-80	3614.05	N.A.	97.00
0-90	3725.46	N.A.	100.00
10-90	3591.49	N.A.	96.40
20-40	1178.73	N.A.	31.60
20-50	1815.83	N.A.	48.70
40-70	1634.46	N.A.	43.90
60-80	718.72	N.A.	19.30
70-80	284.22	N.A.	7.60
80-90	111.41	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	3725.46	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.97
10-20	382.68
20-30	554.10
30-40	624.62
40-50	637.10
50-60	562.86
60-70	434.50
70-80	284.22
80-90	111.41
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	33	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	12.9	14.6	13.3	14.9	15.2	14.0	15.6	14.3	15.9	16.2
	3H	14.6	16.1	15.0	16.4	16.8	16.1	17.6	16.5	18.0	18.3
	4H	15.2	16.6	15.6	16.9	17.3	17.1	18.5	17.5	18.9	19.3
	6H	15.5	16.9	16.0	17.2	17.6	18.2	19.5	18.6	19.8	20.2
	8H	15.7	16.9	16.1	17.3	17.7	18.6	19.8	19.0	20.2	20.6
	12H	15.7	16.9	16.2	17.3	17.7	18.9	20.1	19.4	20.5	20.9
4H	2H	13.7	15.1	14.1	15.5	15.9	14.5	15.9	14.9	16.3	16.6
	3H	15.6	16.8	16.1	17.2	17.6	17.0	18.2	17.4	18.6	18.9
	4H	16.3	17.4	16.8	17.8	18.3	18.1	19.2	18.6	19.6	20.1
	6H	16.9	17.8	17.3	18.3	18.7	19.4	20.3	19.8	20.8	21.2
	8H	17.0	17.9	17.5	18.4	18.8	19.9	20.8	20.4	21.2	21.7
	12H	17.2	18.0	17.7	18.4	18.9	20.3	21.1	20.8	21.6	22.1
8H	4H	16.9	17.8	17.4	18.3	18.7	18.5	19.4	18.9	19.8	20.3
	6H	17.7	18.4	18.2	18.9	19.4	19.9	20.7	20.4	21.2	21.6
	8H	18.0	18.6	18.5	19.1	19.6	20.6	21.3	21.1	21.8	22.2
	12H	18.2	18.8	18.7	19.3	19.8	21.2	21.7	21.7	22.2	22.8
12H	4H	17.1	17.9	17.6	18.4	18.8	18.5	19.3	19.0	19.8	20.3
	6H	17.9	18.6	18.5	19.1	19.6	20.0	20.7	20.6	21.2	21.7
	8H	18.3	18.9	18.8	19.4	20.0	20.8	21.3	21.3	21.8	22.4

Maximum UGR = 22.8

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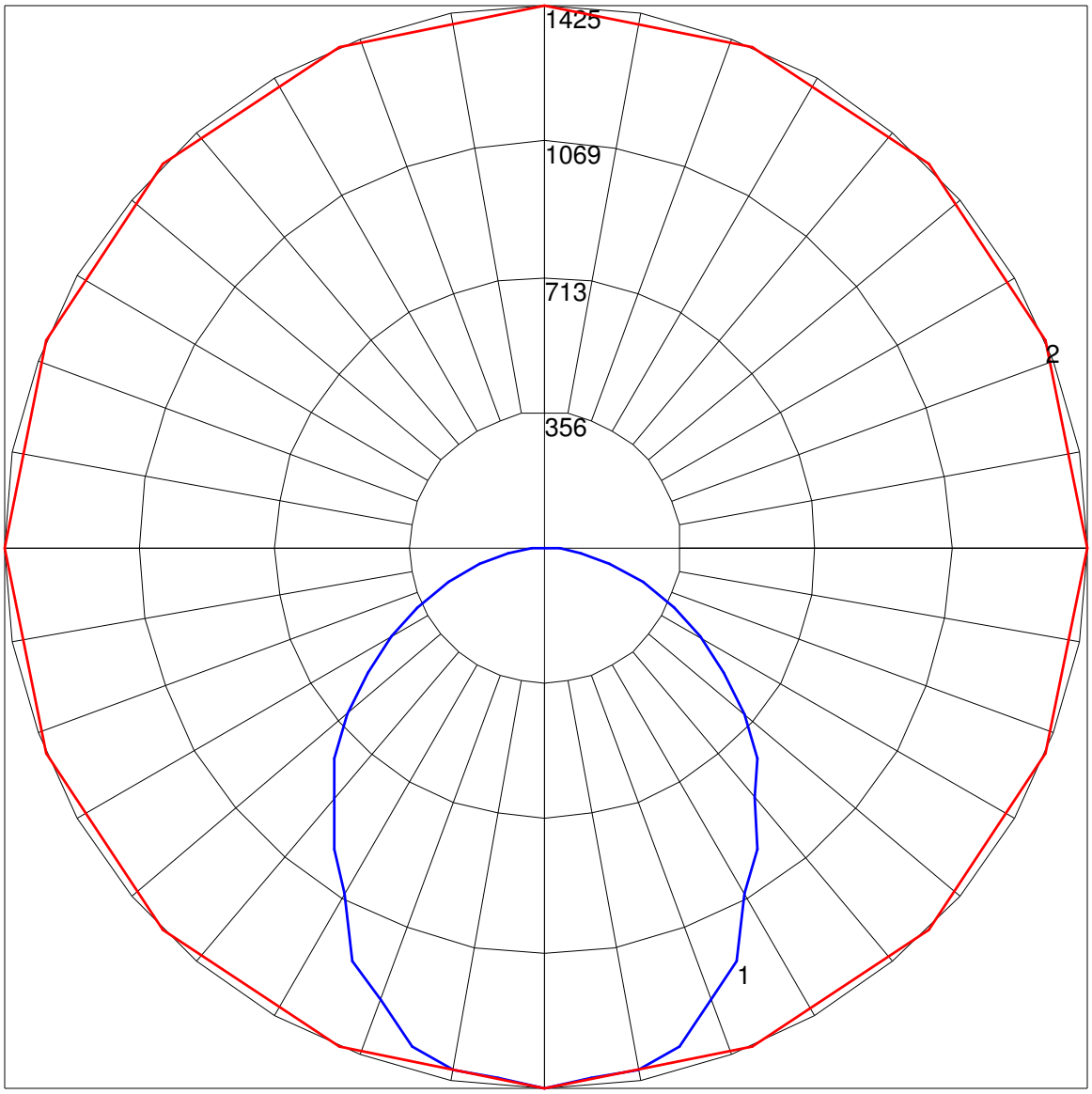
POLAR GRAPH



Maximum Candela = 1425.245 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.)