H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PTDC-24-L38-930-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-L38-930-RA-DIM-UNV
[LAMPCAT] HLM 90 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	3123
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	1339	1413	1486
55	1201	1314	1419
65	1055	1250	1421
75	817	1254	1553
85	493	1646	1886

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1194.903	1194.903	1194.903	1194.903	1194.903
5	1176.657	1175.035	1175.035	1170.980	1168.953
10	1173.008	1173.008	1175.035	1176.657	1176.657
15	1142.192	1143.814	1145.842	1148.680	1150.707
20	1066.776	1070.831	1075.696	1082.184	1084.211
25	1006.362	1010.011	1019.742	1028.257	1032.312
30	881.884	854.718	965.816	933.784	928.918
35	813.361	821.065	839.311	854.718	860.800
40	723.753	733.485	753.758	774.031	781.735
45	661.312	669.827	697.804	723.753	733.485
50	574.543	587.923	618.738	645.904	655.230
55	480.880	495.477	526.292	557.108	568.461
60	392.084	407.491	442.361	473.988	485.746
65	311.396	331.670	368.972	405.870	419.250
70	229.493	253.415	297.611	336.535	349.916
75	147.589	177.188	226.654	265.984	280.581
80	81.093	119.612	176.377	214.896	226.654
85	30.004	68.523	100.150	112.719	114.746
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	433.15	N.A.	13.90
0-30	897.70	N.A.	28.70
0-40	1421.38	N.A.	45.50
0-60	2427.4	N.A.	77.70
0-80	3029.96	N.A.	97.00
0-90	3123.37	N.A.	100.00
10-90	3011.05	N.A.	96.40
20-40	988.23	N.A.	31.60
20-50	1522.36	N.A.	48.70
40-70	1370.3	N.A.	43.90
60-80	602.56	N.A.	19.30
70-80	238.28	N.A.	7.60
80-90	93.41	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	3123.37	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	112.32
10-20	320.83
20-30	464.55
30-40	523.68
40-50	534.13
50-60	471.89
60-70	364.28
70-80	238.28
80-90	93.41
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	12.3	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	17.9	18.3
	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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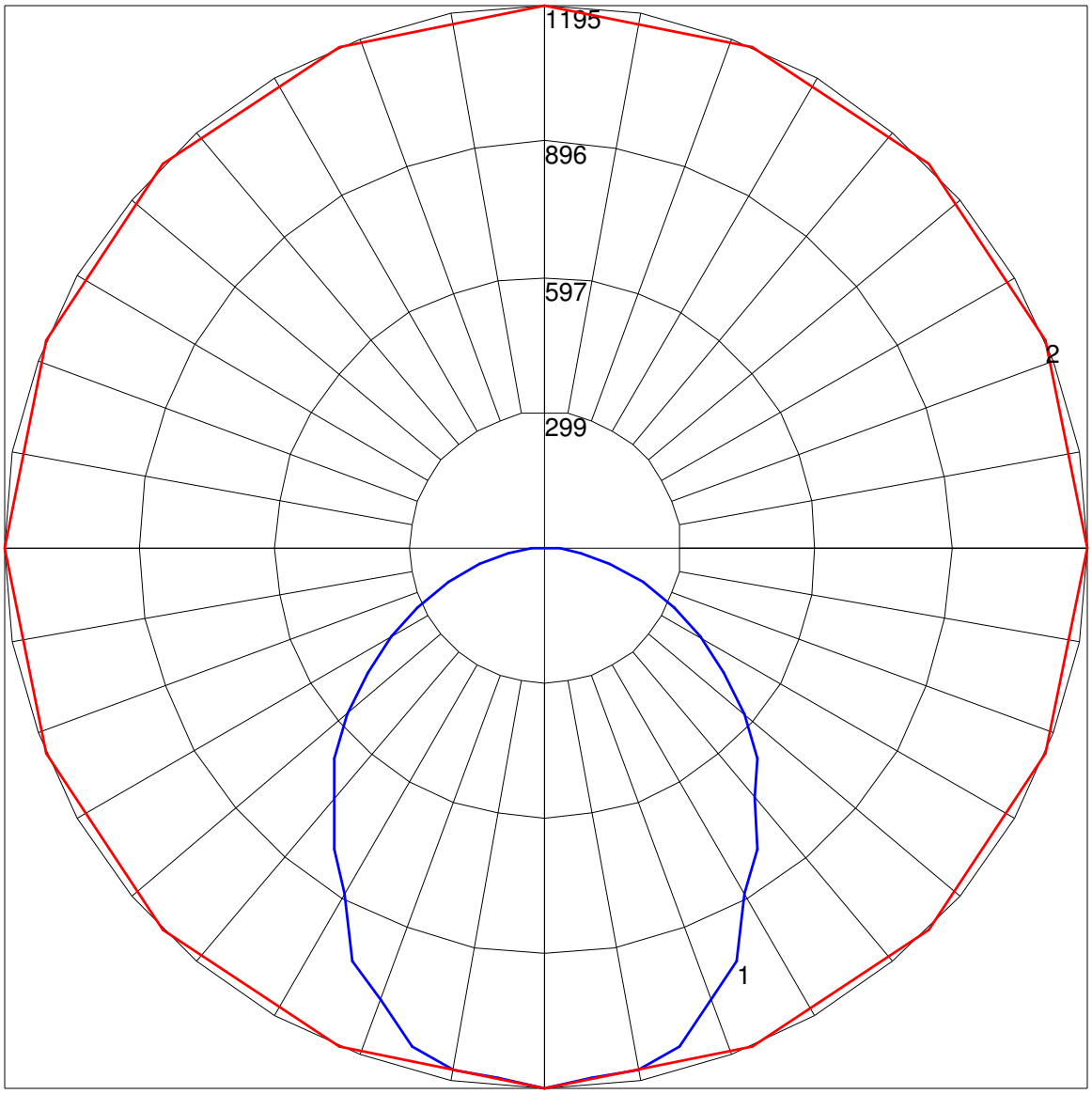
POLAR GRAPH



Maximum Candela = 1194.903 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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