H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L62-835-HIAFR-EM10W-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19227.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 02-21-2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' SUSPENDED ENCLOSED & GASKETED LUMINAIRE
[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED DIFFUSER
[LUMCAT] 96-4-L62-835-HIAFR-EM10W-DIM-UNV (EMER MODE)
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1340
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.23 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.18 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2019	1592	1550
55	1718	1355	1338
65	1259	1101	1188
75	772	928	1025
85	285	729	874

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	473.391	473.391	473.391	473.391	473.391
5	477.542	471.425	468.366	466.182	465.527
10	471.206	463.560	458.754	457.007	455.259
15	459.410	450.672	443.463	439.312	436.909
20	442.370	433.414	422.709	413.971	413.753
25	422.273	412.661	396.932	385.791	382.295
30	396.932	384.698	363.508	360.231	360.668
35	365.693	353.241	333.143	342.974	348.216
40	330.085	318.725	308.895	319.817	324.186
45	292.511	281.806	283.335	285.738	291.855
50	250.349	240.081	249.257	253.407	257.339
55	205.347	200.104	213.867	222.168	227.193
60	159.472	164.933	177.822	192.458	199.667
65	114.033	130.199	146.365	167.555	173.671
70	77.988	95.683	121.024	143.088	146.801
75	45.439	66.629	96.557	117.092	121.024
80	21.409	44.346	72.308	91.969	95.683
85	7.209	28.181	52.429	71.653	75.585
90	3.058	17.039	38.230	53.740	57.672
95	2.403	11.797	30.584	42.380	46.094
100	2.185	7.209	25.122	35.390	37.356
105	1.748	4.369	19.006	28.399	30.365
110	1.092	1.311	13.326	22.064	24.248
115	0.655	0.655	8.738	16.384	19.006
120	0.000	0.000	4.369	11.797	14.200
125	0.000	0.000	1.311	7.209	9.394
130	0.000	0.000	0.000	3.714	5.243
135	0.000	0.000	0.000	0.874	1.966
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	169.98	N.A.	12.70
0-30	354.00	N.A.	26.40
0-40	570.77	N.A.	42.60
0-60	981.84	N.A.	73.30
0-80	1224.93	N.A.	91.40
0-90	1279.03	N.A.	95.40
10-90	1234.49	N.A.	92.10
20-40	400.79	N.A.	29.90
20-50	620.79	N.A.	46.30
40-70	557.35	N.A.	41.60
60-80	243.08	N.A.	18.10
70-80	96.80	N.A.	7.20
80-90	54.10	N.A.	4.00
90-110	48.40	N.A.	3.60
90-120	57.36	N.A.	4.30
90-130	60.53	N.A.	4.50
90-150	61.03	N.A.	4.60
90-180	61.03	N.A.	4.60
110-180	12.63	N.A.	0.90
0-180	1340.05	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.54
10-20	125.44
20-30	184.02
30-40	216.77
40-50	220.00
50-60	191.07
60-70	146.29
70-80	96.80
80-90	54.10
90-100	30.35
100-110	18.05
110-120	8.96
120-130	3.17
130-140	0.50
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	95
1	107	102	97	93	104	99	95	91	94	90	87	89	86	84	85	83	81	78
2	97	89	82	76	94	86	80	74	82	77	72	78	73	70	74	71	67	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	59	53	49	47
5	75	62	53	46	72	60	52	46	58	50	45	55	49	44	53	47	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	43	38	48	42	38	36
7	64	50	42	36	62	49	41	35	47	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	35	31	40	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

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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	11.7	13.2	12.1	13.6	14.1	13.4	14.9	13.8	15.3	15.8
	3H	12.8	14.2	13.3	14.6	15.1	15.7	17.0	16.1	17.5	18.0
	4H	13.1	14.4	13.6	14.9	15.4	16.7	18.0	17.2	18.5	18.9
	6H	13.2	14.4	13.7	14.9	15.4	17.7	18.9	18.2	19.4	19.9
	8H	13.2	14.4	13.7	14.9	15.4	18.2	19.3	18.7	19.8	20.3
	12H	13.2	14.3	13.7	14.8	15.4	18.7	19.8	19.2	20.3	20.8
4H	2H	12.4	13.7	12.9	14.1	14.6	13.8	15.1	14.2	15.5	16.0
	3H	13.8	14.9	14.3	15.4	15.9	16.3	17.4	16.8	17.9	18.4
	4H	14.2	15.2	14.7	15.7	16.3	17.5	18.5	18.0	19.0	19.5
	6H	14.4	15.3	15.0	15.9	16.4	18.7	19.5	19.2	20.1	20.6
	8H	14.5	15.3	15.0	15.9	16.4	19.2	20.1	19.8	20.6	21.2
	12H	14.5	15.3	15.1	15.8	16.4	19.9	20.6	20.4	21.2	21.8
8H	4H	14.8	15.6	15.3	16.2	16.8	17.7	18.5	18.2	19.0	19.6
	6H	15.2	15.9	15.8	16.5	17.1	19.0	19.7	19.6	20.3	20.9
	8H	15.3	16.0	15.9	16.5	17.1	19.7	20.3	20.3	20.9	21.5
	12H	15.4	16.0	16.0	16.5	17.2	20.5	21.1	21.1	21.6	22.3
12H	4H	15.0	15.7	15.5	16.3	16.9	17.7	18.4	18.2	19.0	19.6
	6H	15.5	16.1	16.0	16.6	17.3	19.0	19.7	19.6	20.2	20.9
	8H	15.7	16.2	16.2	16.8	17.4	19.8	20.3	20.4	20.9	21.6

Maximum UGR = 22.3

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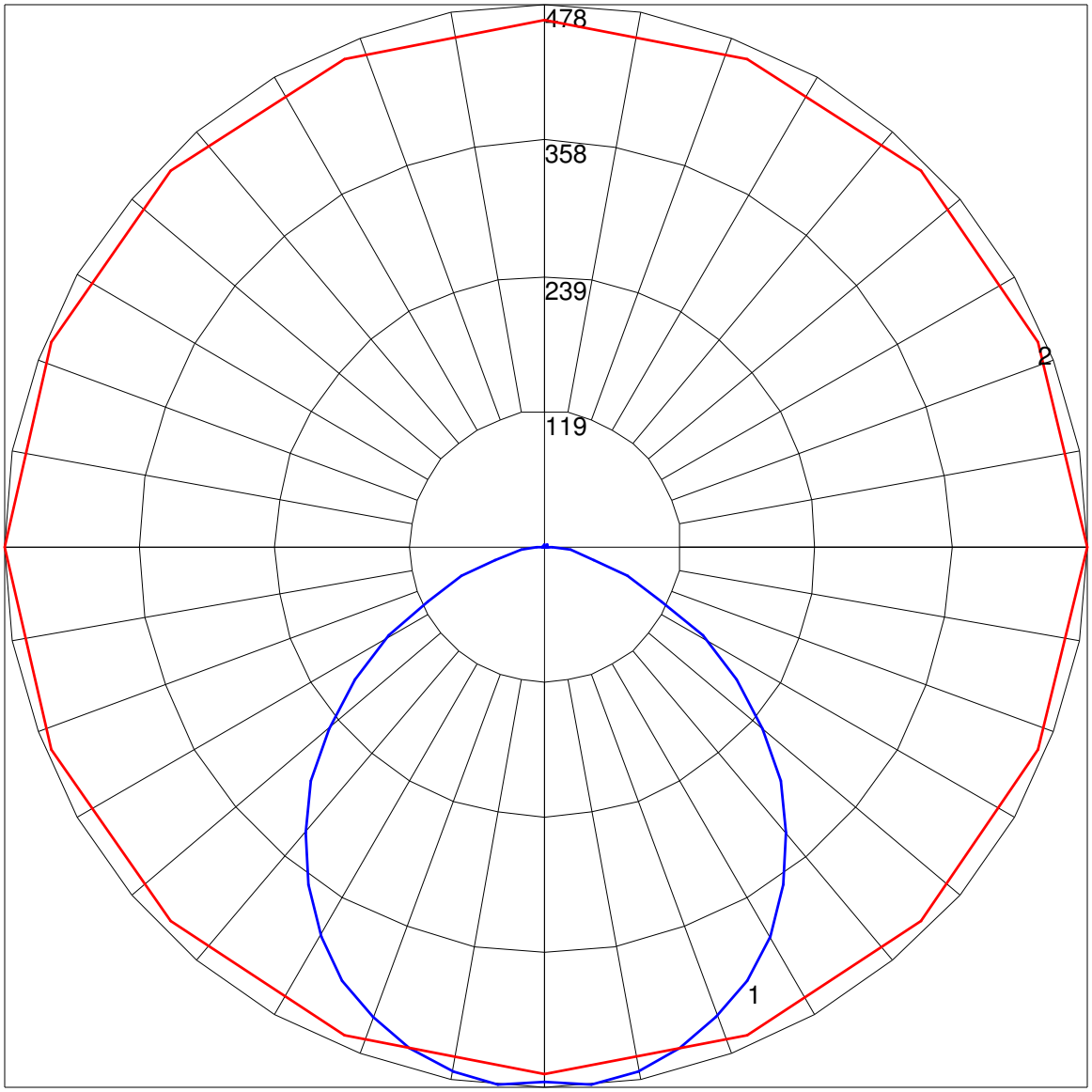
POLAR GRAPH



Maximum Candela = 477.542 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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