H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-930-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L26-930-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2427
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	21.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2280	2365	2442
55	1928	2124	2267
65	1474	1843	2049
75	1024	1635	2020
85	583	1333	1667

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	927.481	927.481	927.481	927.481	927.481
5	930.600	924.986	923.739	920.620	920.620
10	918.125	912.512	911.888	908.769	908.146
15	896.295	890.058	889.434	888.187	887.563
20	865.109	859.495	858.871	859.495	859.495
25	821.448	815.834	819.577	822.072	819.577
30	767.807	765.312	769.055	773.421	770.302
35	706.058	705.435	713.543	716.662	719.780
40	634.954	634.954	648.676	654.289	659.279
45	553.869	553.869	574.452	587.550	593.164
50	468.419	469.042	496.486	513.951	522.059
55	379.849	386.710	418.520	437.232	446.588
60	293.151	306.873	338.683	359.266	369.246
65	213.938	232.026	267.579	290.033	297.518
70	144.081	166.535	202.087	225.165	233.897
75	91.064	112.894	145.328	168.406	179.633
80	49.274	67.986	96.678	112.894	124.122
85	17.464	30.563	39.918	39.918	49.898
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	338.87	N.A.	14.00
0-30	716.07	N.A.	29.50
0-40	1160.85	N.A.	47.80
0-60	1972.12	N.A.	81.30
0-80	2382.4	N.A.	98.20
0-90	2426.8	N.A.	100.00
10-90	2339.01	N.A.	96.40
20-40	821.98	N.A.	33.90
20-50	1263.02	N.A.	52.00
40-70	1071.72	N.A.	44.20
60-80	410.29	N.A.	16.90
70-80	149.83	N.A.	6.20
80-90	44.39	N.A.	1.80
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	2426.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	87.79
10-20	251.08
20-30	377.21
30-40	444.78
40-50	441.04
50-60	370.22
60-70	260.45
70-80	149.83
80-90	44.39
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	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	13.9	15.5	14.2	15.8	16.1	14.9	16.5	15.3	16.8	17.1
	3H	15.2	16.6	15.5	16.9	17.3	16.7	18.2	17.1	18.5	18.9
	4H	15.6	16.9	16.0	17.3	17.7	17.5	18.9	17.9	19.2	19.6
	6H	15.8	17.1	16.3	17.5	17.9	18.2	19.5	18.6	19.8	20.2
	8H	15.9	17.1	16.3	17.5	17.9	18.4	19.6	18.9	20.0	20.4
	12H	15.9	17.1	16.4	17.5	17.9	18.6	19.7	19.0	20.1	20.6
4H	2H	14.6	15.9	15.0	16.3	16.7	15.4	16.8	15.8	17.1	17.5
	3H	16.1	17.2	16.5	17.6	18.0	17.5	18.6	17.9	19.0	19.4
	4H	16.7	17.7	17.1	18.1	18.5	18.4	19.4	18.8	19.8	20.3
	6H	17.0	17.9	17.5	18.4	18.8	19.3	20.2	19.7	20.6	21.1
	8H	17.1	18.0	17.6	18.4	18.9	19.6	20.4	20.0	20.8	21.3
	12H	17.2	18.0	17.7	18.4	18.9	19.8	20.5	20.3	21.0	21.5
8H	4H	17.1	17.9	17.6	18.4	18.9	18.7	19.5	19.1	19.9	20.4
	6H	17.6	18.3	18.1	18.8	19.3	19.6	20.3	20.1	20.8	21.3
	8H	17.8	18.4	18.3	19.0	19.4	20.0	20.7	20.6	21.2	21.7
	12H	17.9	18.5	18.4	19.0	19.5	20.3	20.9	20.8	21.3	21.9
12H	4H	17.2	17.9	17.7	18.4	18.9	18.7	19.4	19.1	19.9	20.4
	6H	17.8	18.4	18.3	18.9	19.4	19.7	20.3	20.2	20.8	21.3
	8H	18.0	18.6	18.5	19.1	19.6	20.1	20.7	20.6	21.2	21.7

Maximum UGR = 21.9

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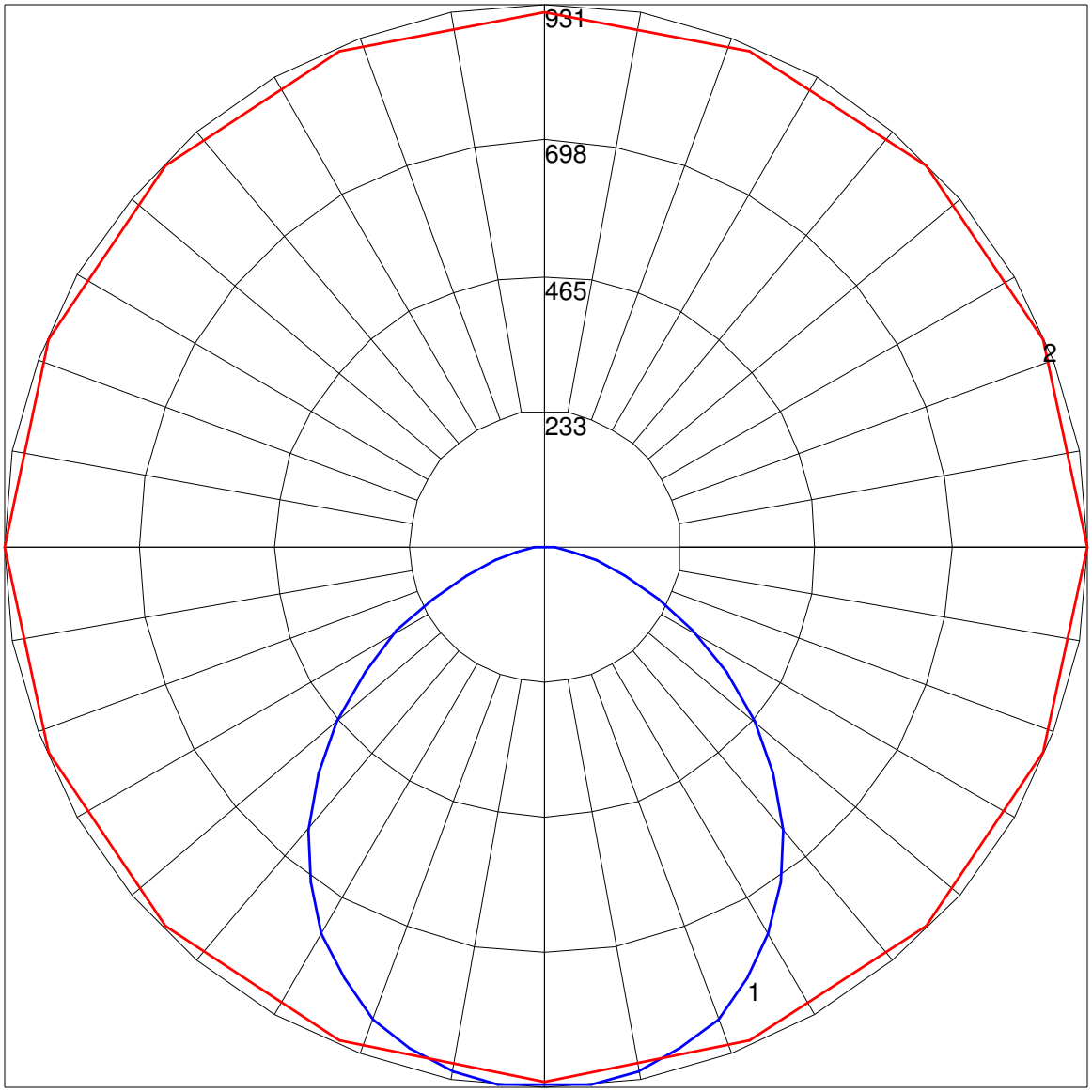
POLAR GRAPH



Maximum Candela = 930.6 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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