H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-950-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-L26-950-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2631
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
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	2473	2564	2648
55	2090	2303	2458
65	1598	1999	2222
75	1111	1772	2191
85	633	1446	1807

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1005.703	1005.703	1005.703	1005.703	1005.703
5	1009.084	1002.997	1001.645	998.263	998.263
10	995.558	989.471	988.794	985.413	984.736
15	971.886	965.123	964.447	963.094	962.418
20	938.070	931.983	931.306	931.983	931.983
25	890.727	884.640	888.698	891.403	888.698
30	832.562	829.857	833.915	838.649	835.268
35	765.606	764.929	773.721	777.103	780.485
40	688.504	688.504	703.383	709.470	714.881
45	600.581	600.581	622.900	637.103	643.190
50	507.924	508.600	538.359	557.296	566.088
55	411.885	419.325	453.817	474.107	484.252
60	317.875	332.754	367.247	389.566	400.387
65	231.981	251.595	290.146	314.493	322.609
70	156.232	180.580	219.131	244.155	253.624
75	98.744	122.416	157.585	182.609	194.783
80	53.430	73.720	104.831	122.416	134.590
85	18.937	33.140	43.285	43.285	54.106
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	367.45	N.A.	14.00
0-30	776.47	N.A.	29.50
0-40	1258.75	N.A.	47.80
0-60	2138.44	N.A.	81.30
0-80	2583.33	N.A.	98.20
0-90	2631.47	N.A.	100.00
10-90	2536.28	N.A.	96.40
20-40	891.31	N.A.	33.90
20-50	1369.54	N.A.	52.00
40-70	1162.1	N.A.	44.20
60-80	444.89	N.A.	16.90
70-80	162.47	N.A.	6.20
80-90	48.14	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	2631.47	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.19
10-20	272.26
20-30	409.02
30-40	482.29
40-50	478.24
50-60	401.45
60-70	282.42
70-80	162.47
80-90	48.14
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	92	89	90	88	87	84
2	100	91	85	79	97	90	84	78	86	81	76	83	79	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	34	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	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	14.2	15.8	14.5	16.1	16.4	15.2	16.8	15.6	17.1	17.4
	3H	15.5	16.9	15.8	17.2	17.6	17.0	18.5	17.4	18.8	19.2
	4H	15.9	17.2	16.3	17.6	18.0	17.8	19.2	18.2	19.5	19.9
	6H	16.1	17.4	16.6	17.8	18.2	18.5	19.8	18.9	20.1	20.5
	8H	16.2	17.4	16.6	17.8	18.2	18.7	19.9	19.2	20.3	20.7
	12H	16.2	17.4	16.7	17.8	18.2	18.9	20.0	19.3	20.4	20.9
4H	2H	14.9	16.2	15.3	16.6	17.0	15.7	17.1	16.1	17.4	17.8
	3H	16.4	17.5	16.8	17.9	18.3	17.8	18.9	18.2	19.3	19.7
	4H	17.0	18.0	17.4	18.4	18.8	18.7	19.7	19.1	20.1	20.6
	6H	17.3	18.2	17.8	18.7	19.1	19.6	20.5	20.0	20.9	21.4
	8H	17.4	18.3	17.9	18.7	19.2	19.9	20.7	20.3	21.1	21.6
	12H	17.5	18.3	18.0	18.7	19.2	20.1	20.8	20.5	21.3	21.8
8H	4H	17.4	18.2	17.9	18.7	19.2	19.0	19.8	19.4	20.2	20.7
	6H	17.9	18.6	18.4	19.1	19.6	19.9	20.6	20.4	21.1	21.6
	8H	18.1	18.7	18.6	19.3	19.7	20.3	21.0	20.9	21.5	22.0
	12H	18.2	18.8	18.7	19.3	19.8	20.6	21.2	21.1	21.6	22.2
12H	4H	17.5	18.2	18.0	18.7	19.2	19.0	19.7	19.4	20.2	20.7
	6H	18.1	18.7	18.6	19.2	19.7	20.0	20.6	20.5	21.1	21.6
	8H	18.3	18.9	18.8	19.4	19.9	20.4	21.0	20.9	21.5	22.0

Maximum UGR = 22.2

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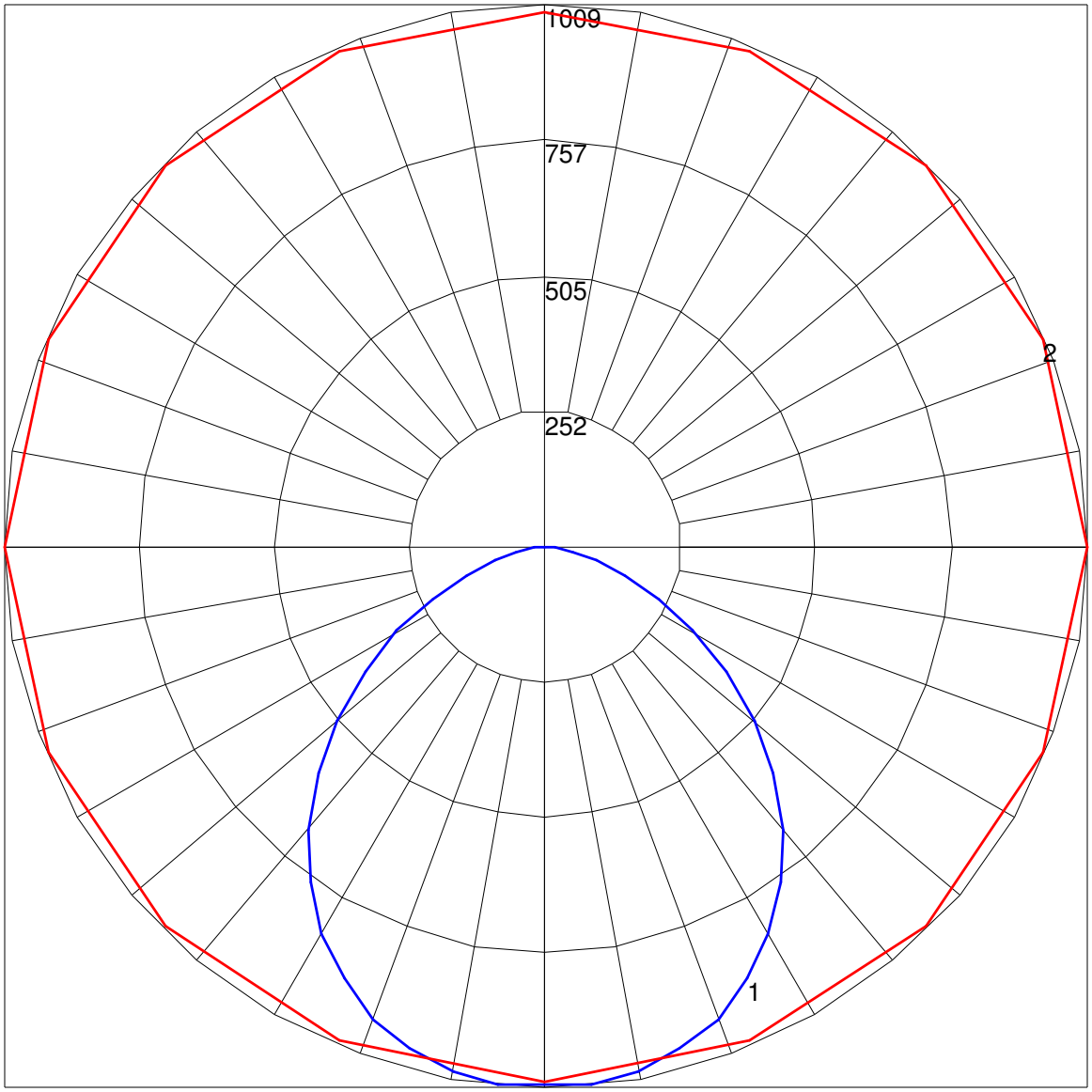
POLAR GRAPH



Maximum Candela = 1009.084 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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