H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-840-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-L26-840-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3012
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
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	2830	2935	3030
55	2392	2636	2813
65	1829	2287	2543
75	1271	2028	2507
85	724	1655	2068

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1150.971	1150.971	1150.971	1150.971	1150.971
5	1154.841	1147.875	1146.327	1142.457	1142.457
10	1139.361	1132.394	1131.620	1127.750	1126.976
15	1112.270	1104.530	1103.756	1102.207	1101.433
20	1073.569	1066.602	1065.828	1066.602	1066.602
25	1019.387	1012.421	1017.065	1020.161	1017.065
30	952.821	949.725	954.369	959.787	955.917
35	876.193	875.419	885.481	889.351	893.222
40	787.955	787.955	804.983	811.949	818.141
45	687.332	687.332	712.874	729.129	736.095
50	581.291	582.065	616.122	637.794	647.856
55	471.379	479.894	519.369	542.589	554.200
60	363.790	380.819	420.294	445.837	458.221
65	265.490	287.936	332.055	359.920	369.209
70	178.799	206.664	250.783	279.422	290.258
75	113.007	140.098	180.347	208.986	222.918
80	61.148	84.368	119.973	140.098	154.030
85	21.673	37.927	49.537	49.537	61.922
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	420.52	N.A.	14.00
0-30	888.62	N.A.	29.50
0-40	1440.57	N.A.	47.80
0-60	2447.32	N.A.	81.30
0-80	2956.48	N.A.	98.20
0-90	3011.57	N.A.	100.00
10-90	2902.63	N.A.	96.40
20-40	1020.05	N.A.	33.90
20-50	1567.37	N.A.	52.00
40-70	1329.96	N.A.	44.20
60-80	509.15	N.A.	16.90
70-80	185.94	N.A.	6.20
80-90	55.09	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	3011.57	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	108.94
10-20	311.58
20-30	468.10
30-40	551.95
40-50	547.32
50-60	459.43
60-70	323.21
70-80	185.94
80-90	55.09
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	14.6	16.2	14.9	16.5	16.8	15.6	17.2	16.0	17.5	17.8
	3H	15.9	17.3	16.2	17.6	18.0	17.4	18.9	17.8	19.2	19.6
	4H	16.3	17.6	16.7	18.0	18.4	18.2	19.6	18.6	19.9	20.3
	6H	16.5	17.8	17.0	18.2	18.6	18.9	20.2	19.3	20.5	20.9
	8H	16.6	17.8	17.0	18.2	18.6	19.1	20.3	19.6	20.7	21.1
	12H	16.6	17.8	17.1	18.2	18.6	19.3	20.4	19.7	20.8	21.3
4H	2H	15.3	16.6	15.7	17.0	17.4	16.1	17.5	16.5	17.8	18.2
	3H	16.8	17.9	17.2	18.3	18.7	18.2	19.3	18.6	19.7	20.1
	4H	17.4	18.4	17.8	18.8	19.2	19.1	20.1	19.5	20.5	21.0
	6H	17.7	18.6	18.2	19.1	19.5	20.0	20.9	20.4	21.3	21.8
	8H	17.8	18.7	18.3	19.1	19.6	20.3	21.1	20.7	21.5	22.0
	12H	17.9	18.7	18.4	19.1	19.6	20.5	21.2	21.0	21.7	22.2
8H	4H	17.8	18.6	18.3	19.1	19.6	19.4	20.2	19.8	20.6	21.1
	6H	18.3	19.0	18.8	19.5	20.0	20.3	21.0	20.8	21.5	22.0
	8H	18.5	19.1	19.0	19.7	20.1	20.7	21.4	21.3	21.9	22.4
	12H	18.6	19.2	19.1	19.7	20.2	21.0	21.6	21.5	22.0	22.6
12H	4H	17.9	18.6	18.4	19.1	19.6	19.4	20.1	19.8	20.6	21.1
	6H	18.5	19.1	19.0	19.6	20.1	20.4	21.0	20.9	21.5	22.0
	8H	18.7	19.3	19.2	19.8	20.3	20.8	21.4	21.3	21.9	22.4

Maximum UGR = 22.6

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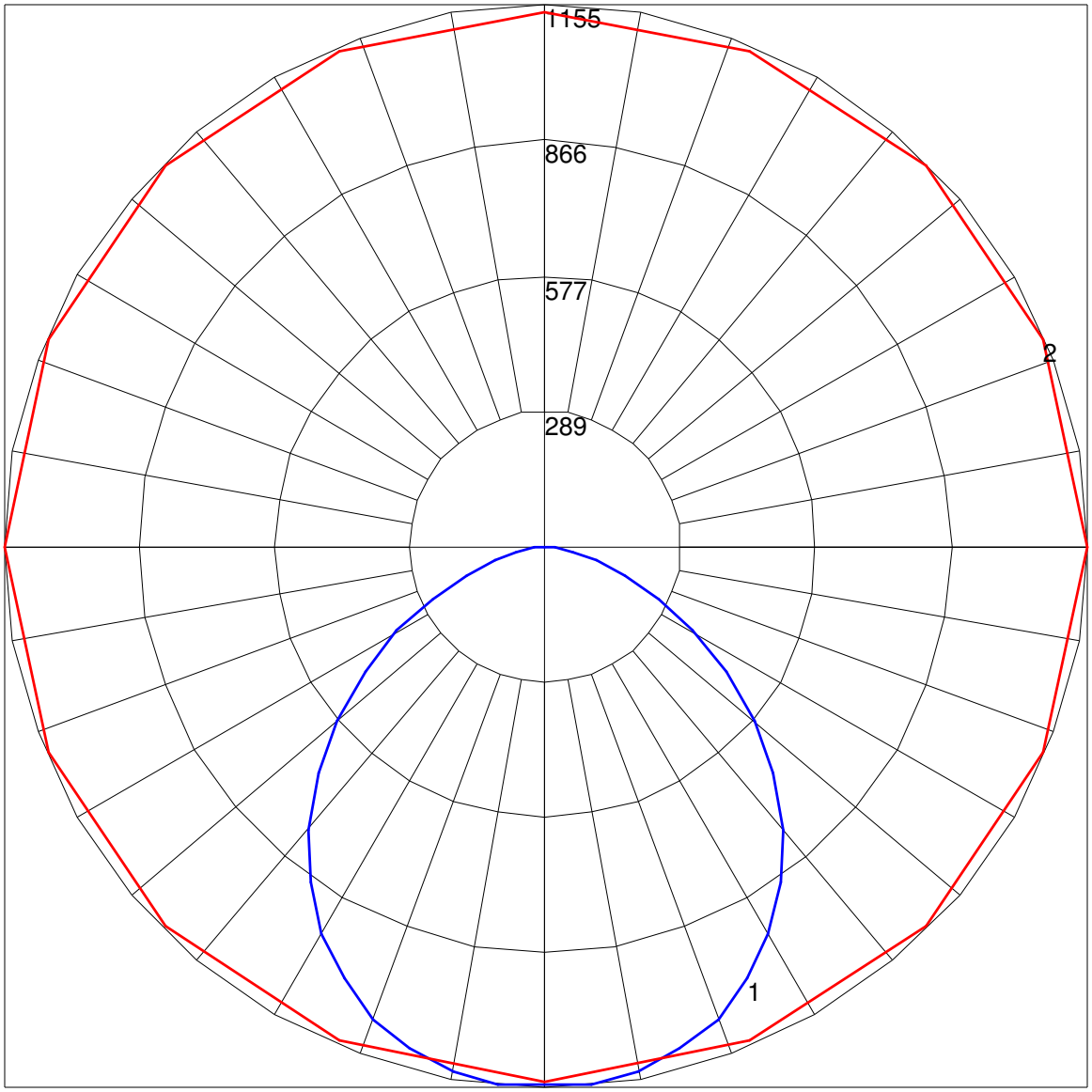
POLAR GRAPH



Maximum Candela = 1154.841 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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