H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-850-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-L52-850-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5651
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	41.6
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	5309	5507	5686
55	4489	4946	5278
65	3431	4292	4772
75	2385	3806	4704
85	1358	3105	3881

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2159.555	2159.555	2159.555	2159.555	2159.555
5	2166.817	2153.746	2150.842	2143.580	2143.580
10	2137.771	2124.700	2123.248	2115.987	2114.534
15	2086.941	2072.418	2070.966	2068.061	2066.609
20	2014.326	2001.256	1999.803	2001.256	2001.256
25	1912.666	1899.595	1908.309	1914.118	1908.309
30	1787.769	1781.960	1790.674	1800.840	1793.578
35	1643.992	1642.540	1661.420	1668.681	1675.943
40	1478.431	1478.431	1510.382	1523.452	1535.071
45	1289.634	1289.634	1337.559	1368.057	1381.128
50	1090.670	1092.122	1156.023	1196.687	1215.567
55	884.445	900.420	974.487	1018.055	1039.840
60	682.576	714.527	788.594	836.519	859.756
65	498.135	540.252	623.032	675.315	692.742
70	335.479	387.761	470.542	524.277	544.609
75	212.034	262.865	338.384	392.118	418.260
80	114.731	158.300	225.105	262.865	289.006
85	40.664	71.162	92.947	92.947	116.183
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	789.02	N.A.	14.00
0-30	1667.31	N.A.	29.50
0-40	2702.94	N.A.	47.80
0-60	4591.89	N.A.	81.30
0-80	5547.21	N.A.	98.20
0-90	5650.58	N.A.	100.00
10-90	5446.17	N.A.	96.40
20-40	1913.91	N.A.	33.90
20-50	2940.84	N.A.	52.00
40-70	2495.4	N.A.	44.20
60-80	955.32	N.A.	16.90
70-80	348.87	N.A.	6.20
80-90	103.37	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	5650.58	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	204.40
10-20	584.62
20-30	878.29
30-40	1035.62
40-50	1026.92
50-60	862.03
60-70	606.44
70-80	348.87
80-90	103.37
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	16.8	18.4	17.1	18.7	19.0	17.8	19.4	18.2	19.7	20.0
	3H	18.1	19.5	18.4	19.8	20.2	19.6	21.1	20.0	21.4	21.8
	4H	18.5	19.8	18.9	20.2	20.6	20.4	21.8	20.8	22.1	22.5
	6H	18.7	20.0	19.2	20.4	20.8	21.1	22.4	21.5	22.7	23.1
	8H	18.8	20.0	19.2	20.4	20.8	21.3	22.5	21.8	22.9	23.3
	12H	18.8	20.0	19.3	20.4	20.8	21.5	22.6	21.9	23.0	23.5
4H	2H	17.5	18.8	17.9	19.2	19.6	18.3	19.7	18.7	20.0	20.4
	3H	19.0	20.1	19.4	20.5	20.9	20.4	21.5	20.8	21.9	22.3
	4H	19.6	20.6	20.0	21.0	21.4	21.3	22.3	21.7	22.7	23.2
	6H	19.9	20.8	20.4	21.3	21.7	22.2	23.1	22.6	23.5	24.0
	8H	20.0	20.9	20.5	21.3	21.8	22.5	23.3	22.9	23.7	24.2
	12H	20.1	20.9	20.6	21.3	21.8	22.7	23.4	23.1	23.9	24.4
8H	4H	20.0	20.8	20.5	21.3	21.7	21.6	22.4	22.0	22.8	23.3
	6H	20.5	21.2	21.0	21.7	22.2	22.5	23.2	23.0	23.7	24.2
	8H	20.7	21.3	21.2	21.9	22.3	22.9	23.6	23.5	24.1	24.6
	12H	20.8	21.4	21.3	21.9	22.4	23.2	23.8	23.7	24.2	24.8
12H	4H	20.1	20.8	20.6	21.3	21.8	21.6	22.3	22.0	22.8	23.3
	6H	20.7	21.3	21.2	21.8	22.3	22.6	23.2	23.1	23.7	24.2
	8H	20.9	21.5	21.4	22.0	22.5	23.0	23.6	23.5	24.1	24.6

Maximum UGR = 24.8

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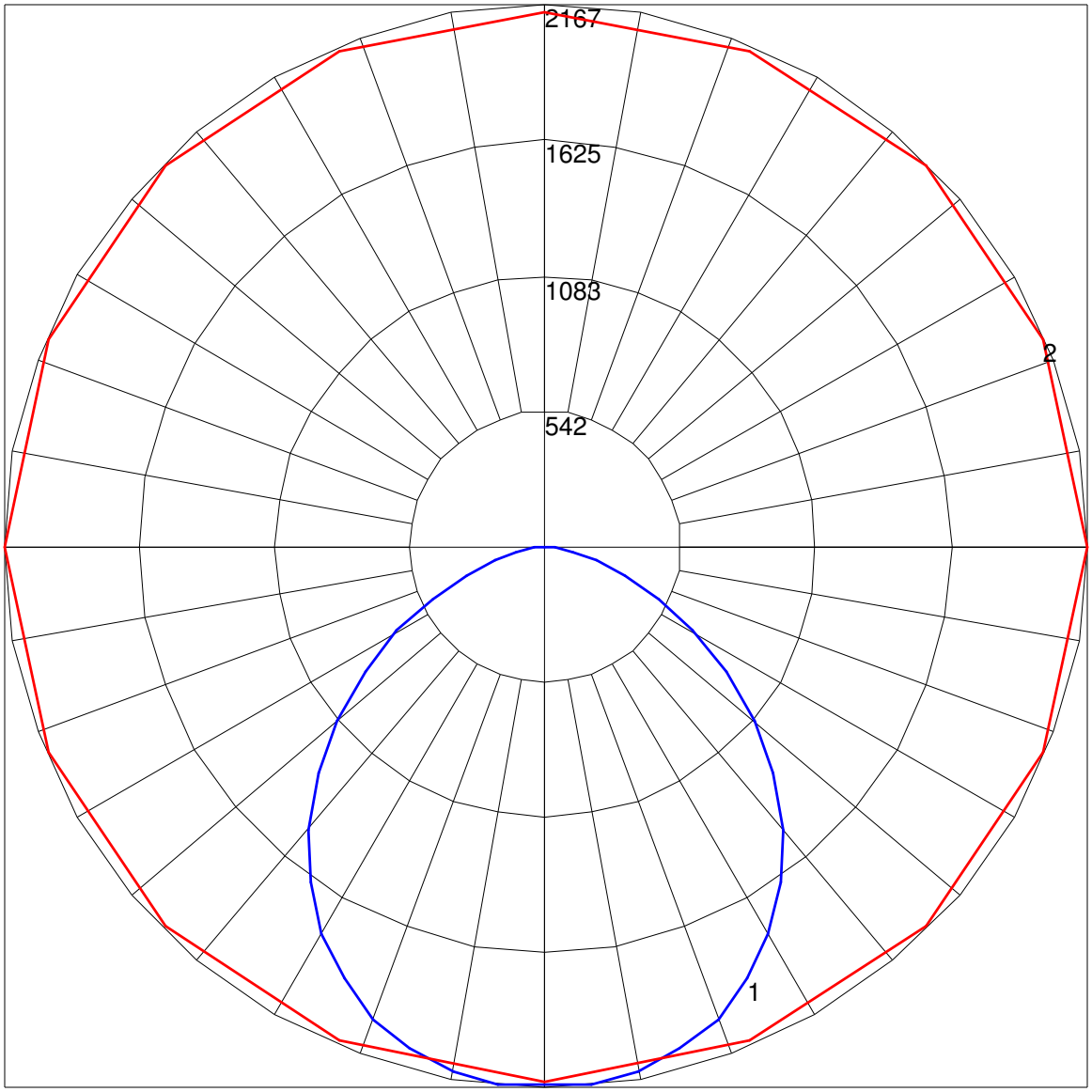
POLAR GRAPH



Maximum Candela = 2166.817 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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