H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-840-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19323.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L27-840-RA-DIM-UNV
[LAMPCAT] 22" LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2705
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	18.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.94 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2531	2644	2682
55	2234	2455	2559
65	1944	2304	2364
75	1413	1979	2063
85	644	1059	1246

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	985.693	985.693	985.693	985.693	985.693
5	1007.954	1000.534	996.823	987.548	981.982
10	990.640	985.074	983.219	973.325	968.378
15	963.431	958.484	960.958	949.208	949.208
20	924.473	922.618	926.947	915.816	919.526
25	881.187	876.858	885.516	877.477	875.003
30	830.480	822.441	834.809	830.480	829.243
35	766.787	760.603	776.681	773.589	777.300
40	692.582	691.345	708.660	711.133	708.041
45	611.575	613.430	638.783	644.349	648.059
50	525.620	534.896	561.486	575.090	575.090
55	437.811	455.125	481.097	507.687	501.504
60	358.659	373.500	404.418	426.062	422.970
65	280.743	293.729	332.687	348.146	341.344
70	200.354	224.471	256.626	264.047	260.955
75	124.912	157.068	175.001	182.421	182.421
80	63.693	93.375	100.177	105.742	101.414
85	19.170	36.484	31.537	34.629	37.103
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	363.99	N.A.	13.50
0-30	769.18	N.A.	28.40
0-40	1250.67	N.A.	46.20
0-60	2165.14	N.A.	80.00
0-80	2661.02	N.A.	98.40
0-90	2704.79	N.A.	100.00
10-90	2610.45	N.A.	96.50
20-40	886.67	N.A.	32.80
20-50	1373.62	N.A.	50.80
40-70	1232.68	N.A.	45.60
60-80	495.87	N.A.	18.30
70-80	177.66	N.A.	6.60
80-90	43.78	N.A.	1.60
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	2704.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	94.34
10-20	269.65
20-30	405.19
30-40	481.49
40-50	486.95
50-60	427.53
60-70	318.21
70-80	177.66
80-90	43.78
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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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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	14.8	16.4	15.1	16.7	17.0	15.6	17.2	16.0	17.6	17.9
	3H	16.3	17.8	16.7	18.1	18.5	17.4	18.9	17.8	19.2	19.5
	4H	16.8	18.2	17.2	18.6	18.9	18.1	19.4	18.5	19.8	20.2
	6H	17.1	18.4	17.6	18.8	19.2	18.5	19.8	18.9	20.1	20.5
	8H	17.2	18.4	17.6	18.8	19.2	18.6	19.8	19.0	20.2	20.6
	12H	17.2	18.4	17.7	18.8	19.2	18.7	19.9	19.1	20.2	20.7
4H	2H	15.5	16.9	15.9	17.2	17.6	16.2	17.6	16.6	17.9	18.3
	3H	17.3	18.5	17.7	18.9	19.3	18.2	19.4	18.6	19.8	20.2
	4H	18.0	19.0	18.4	19.4	19.9	19.0	20.0	19.4	20.5	20.9
	6H	18.4	19.3	18.9	19.8	20.2	19.6	20.5	20.0	20.9	21.4
	8H	18.5	19.4	19.0	19.8	20.3	19.7	20.6	20.2	21.0	21.5
	12H	18.6	19.4	19.1	19.8	20.3	19.8	20.6	20.3	21.1	21.6
8H	4H	18.4	19.2	18.8	19.7	20.1	19.3	20.1	19.7	20.6	21.0
	6H	19.0	19.7	19.4	20.1	20.6	20.0	20.7	20.5	21.2	21.6
	8H	19.1	19.8	19.6	20.3	20.8	20.2	20.8	20.7	21.3	21.8
	12H	19.3	19.8	19.8	20.3	20.9	20.3	20.9	20.8	21.4	22.0
12H	4H	18.4	19.2	18.9	19.7	20.1	19.3	20.1	19.8	20.5	21.0
	6H	19.0	19.7	19.5	20.1	20.7	20.0	20.6	20.5	21.1	21.6
	8H	19.3	19.8	19.8	20.3	20.9	20.3	20.8	20.8	21.3	21.9

Maximum UGR = 22.0

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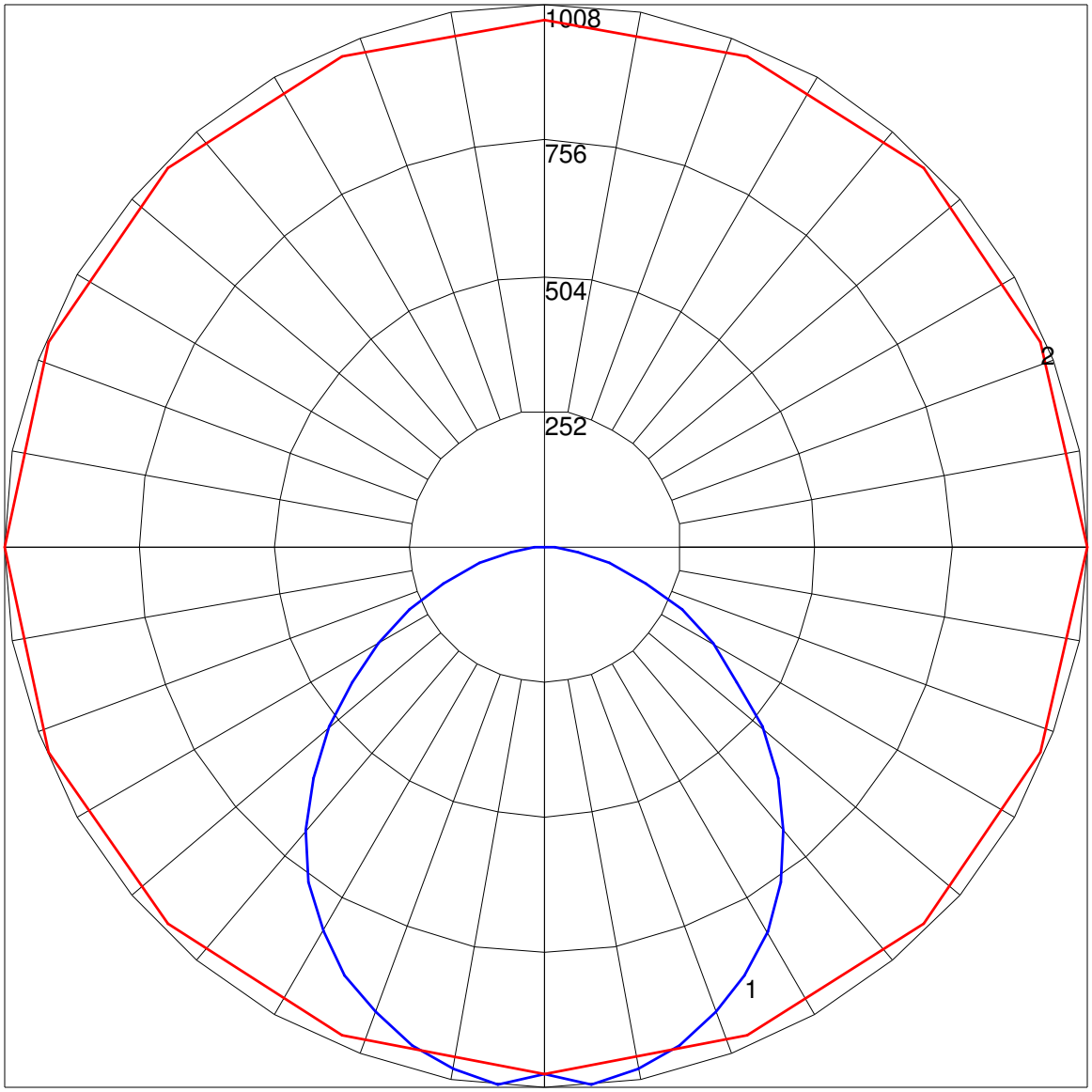
POLAR GRAPH



Maximum Candela = 1007.954 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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