H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-840-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-L45-840-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	4446
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
Total Luminaire Watts	30.4
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	4161	4346	4409
55	3672	4035	4206
65	3196	3787	3885
75	2322	3253	3391
85	1058	1741	2048

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1620.049	1620.049	1620.049	1620.049	1620.049
5	1656.638	1644.441	1638.343	1623.098	1613.951
10	1628.180	1619.033	1615.984	1599.722	1591.592
15	1583.461	1575.330	1579.396	1560.085	1560.085
20	1519.431	1516.382	1523.497	1505.203	1511.301
25	1448.287	1441.173	1455.402	1442.189	1438.124
30	1364.947	1351.735	1372.062	1364.947	1362.915
35	1260.264	1250.101	1276.526	1271.444	1277.542
40	1138.303	1136.270	1164.728	1168.793	1163.712
45	1005.162	1008.211	1049.881	1059.028	1065.126
50	863.891	879.136	922.839	945.198	945.198
55	719.570	748.028	790.714	834.417	824.253
60	589.478	613.871	664.688	700.260	695.178
65	461.419	482.762	546.792	572.201	561.021
70	329.295	368.932	421.782	433.978	428.896
75	205.301	258.151	287.625	299.821	299.821
80	104.683	153.468	164.647	173.794	166.680
85	31.507	59.964	51.833	56.915	60.981
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	598.25	N.A.	13.50
0-30	1264.2	N.A.	28.40
0-40	2055.55	N.A.	46.20
0-60	3558.55	N.A.	80.00
0-80	4373.55	N.A.	98.40
0-90	4445.5	N.A.	100.00
10-90	4290.45	N.A.	96.50
20-40	1457.31	N.A.	32.80
20-50	2257.64	N.A.	50.80
40-70	2026.00	N.A.	45.60
60-80	815.00	N.A.	18.30
70-80	292.00	N.A.	6.60
80-90	71.95	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	4445.5	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	155.05
10-20	443.19
20-30	665.95
30-40	791.36
40-50	800.33
50-60	702.67
60-70	523.00
70-80	292.00
80-90	71.95
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	16.5	18.1	16.8	18.4	18.7	17.3	18.9	17.7	19.3	19.6
	3H	18.0	19.5	18.4	19.8	20.2	19.1	20.6	19.5	20.9	21.3
	4H	18.5	19.9	18.9	20.3	20.6	19.8	21.1	20.2	21.5	21.9
	6H	18.8	20.1	19.3	20.5	20.9	20.2	21.5	20.6	21.8	22.2
	8H	18.9	20.1	19.3	20.5	20.9	20.3	21.5	20.7	21.9	22.3
	12H	18.9	20.1	19.4	20.5	20.9	20.4	21.6	20.8	21.9	22.4
4H	2H	17.2	18.6	17.6	18.9	19.3	17.9	19.3	18.3	19.6	20.0
	3H	19.0	20.2	19.4	20.6	21.0	19.9	21.1	20.3	21.5	21.9
	4H	19.7	20.7	20.1	21.1	21.6	20.7	21.7	21.1	22.2	22.6
	6H	20.1	21.0	20.6	21.5	21.9	21.3	22.2	21.7	22.6	23.1
	8H	20.2	21.1	20.7	21.5	22.0	21.4	22.3	21.9	22.7	23.2
	12H	20.3	21.1	20.8	21.5	22.0	21.5	22.3	22.0	22.8	23.3
8H	4H	20.1	20.9	20.5	21.4	21.8	21.0	21.8	21.4	22.3	22.7
	6H	20.7	21.4	21.1	21.8	22.3	21.7	22.4	22.2	22.9	23.3
	8H	20.8	21.5	21.3	22.0	22.5	21.9	22.5	22.4	23.0	23.5
	12H	21.0	21.5	21.5	22.0	22.6	22.0	22.6	22.5	23.1	23.7
12H	4H	20.1	20.9	20.6	21.4	21.8	21.0	21.8	21.5	22.2	22.7
	6H	20.7	21.4	21.2	21.8	22.4	21.7	22.3	22.2	22.8	23.3
	8H	21.0	21.5	21.5	22.0	22.6	22.0	22.5	22.5	23.0	23.6

Maximum UGR = 23.7

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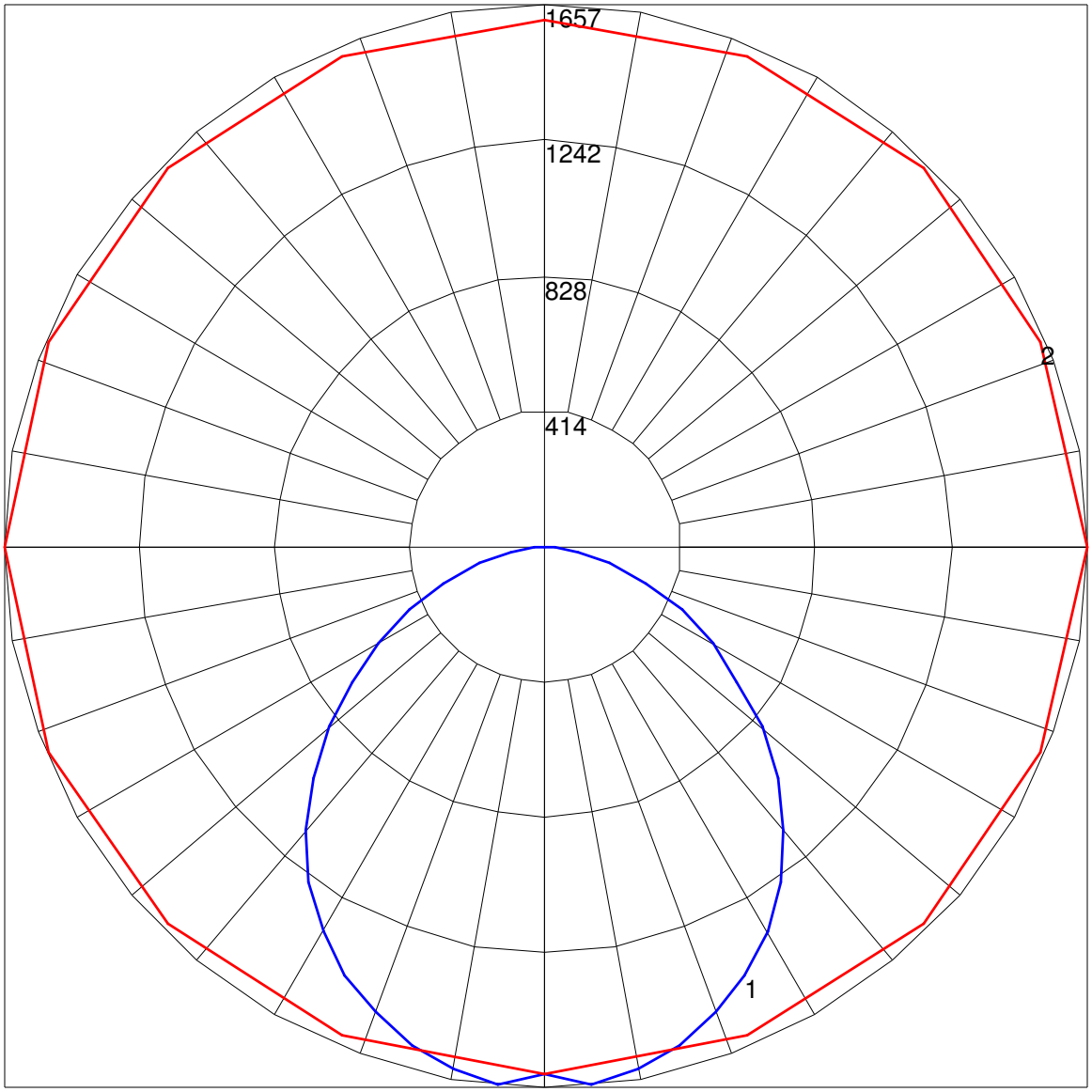
POLAR GRAPH



Maximum Candela = 1656.638 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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