H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-850-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L38-850-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4129
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3690	3575	3549
55	3320	3340	3414
65	2901	3210	3517
75	2342	3241	4045
85	1085	3499	4227

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1608.088	1608.088	1608.088	1608.088	1608.088
5	1616.078	1598.324	1589.447	1567.254	1587.671
10	1585.008	1565.922	1554.382	1552.163	1555.270
15	1532.633	1513.991	1503.782	1500.232	1497.568
20	1462.948	1444.750	1427.883	1419.450	1420.781
25	1375.952	1360.861	1353.759	1331.566	1323.133
30	1274.309	1258.774	1242.795	1230.811	1224.153
35	1168.672	1154.468	1135.382	1118.960	1109.639
40	1047.499	1035.959	1015.985	1003.113	995.568
45	930.321	917.005	901.471	894.369	894.813
50	806.485	802.491	785.624	788.731	792.726
55	679.099	679.099	683.094	693.746	698.185
60	560.589	563.253	581.451	599.649	610.745
65	437.198	453.176	483.802	515.316	529.963
70	318.688	345.320	389.261	431.428	448.738
75	216.158	243.677	299.159	353.753	373.282
80	113.183	160.232	217.933	275.634	293.832
85	33.733	75.899	108.745	123.392	131.381
90	0.000	1.332	1.775	3.107	1.775

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	575.39	N.A.	13.90
0-30	1195.53	N.A.	29.00
0-40	1906.09	N.A.	46.20
0-60	3221.32	N.A.	78.00
0-80	4017.38	N.A.	97.30
0-90	4129.37	N.A.	100.00
10-90	3978.47	N.A.	96.30
20-40	1330.7	N.A.	32.20
20-50	2030.83	N.A.	49.20
40-70	1795.13	N.A.	43.50
60-80	796.06	N.A.	19.30
70-80	316.15	N.A.	7.70
80-90	111.99	N.A.	2.70
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	4129.37	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	150.90
10-20	424.49
20-30	620.14
30-40	710.56
40-50	700.13
50-60	615.10
60-70	479.91
70-80	316.15
80-90	111.99
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	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
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	15.9	17.5	16.3	17.9	18.2	16.2	17.8	16.6	18.2	18.5
	3H	17.6	19.0	17.9	19.4	19.7	18.5	20.0	18.9	20.3	20.6
	4H	18.2	19.5	18.6	19.9	20.3	19.6	21.0	20.0	21.3	21.7
	6H	18.5	19.8	19.0	20.2	20.6	20.6	21.9	21.0	22.3	22.7
	8H	18.6	19.9	19.1	20.3	20.7	21.0	22.3	21.4	22.7	23.1
	12H	18.7	19.9	19.1	20.3	20.7	21.3	22.5	21.7	22.9	23.3
4H	2H	16.6	18.0	17.0	18.4	18.7	16.9	18.2	17.3	18.6	19.0
	3H	18.5	19.7	18.9	20.1	20.5	19.4	20.5	19.8	20.9	21.3
	4H	19.3	20.3	19.7	20.7	21.2	20.6	21.7	21.1	22.1	22.5
	6H	19.8	20.7	20.3	21.2	21.6	21.9	22.8	22.3	23.3	23.7
	8H	20.0	20.8	20.4	21.3	21.7	22.4	23.2	22.8	23.7	24.2
	12H	20.0	20.8	20.5	21.3	21.8	22.7	23.5	23.2	24.0	24.4
8H	4H	19.8	20.7	20.2	21.1	21.6	21.0	21.8	21.4	22.3	22.7
	6H	20.5	21.2	21.0	21.7	22.2	22.4	23.2	22.9	23.6	24.1
	8H	20.8	21.4	21.3	21.9	22.4	23.0	23.7	23.5	24.2	24.7
	12H	20.9	21.5	21.4	22.0	22.6	23.5	24.1	24.0	24.6	25.1
12H	4H	19.9	20.7	20.4	21.2	21.6	21.0	21.8	21.5	22.3	22.7
	6H	20.7	21.4	21.2	21.8	22.4	22.5	23.2	23.0	23.6	24.2
	8H	21.0	21.6	21.6	22.1	22.7	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 25.1

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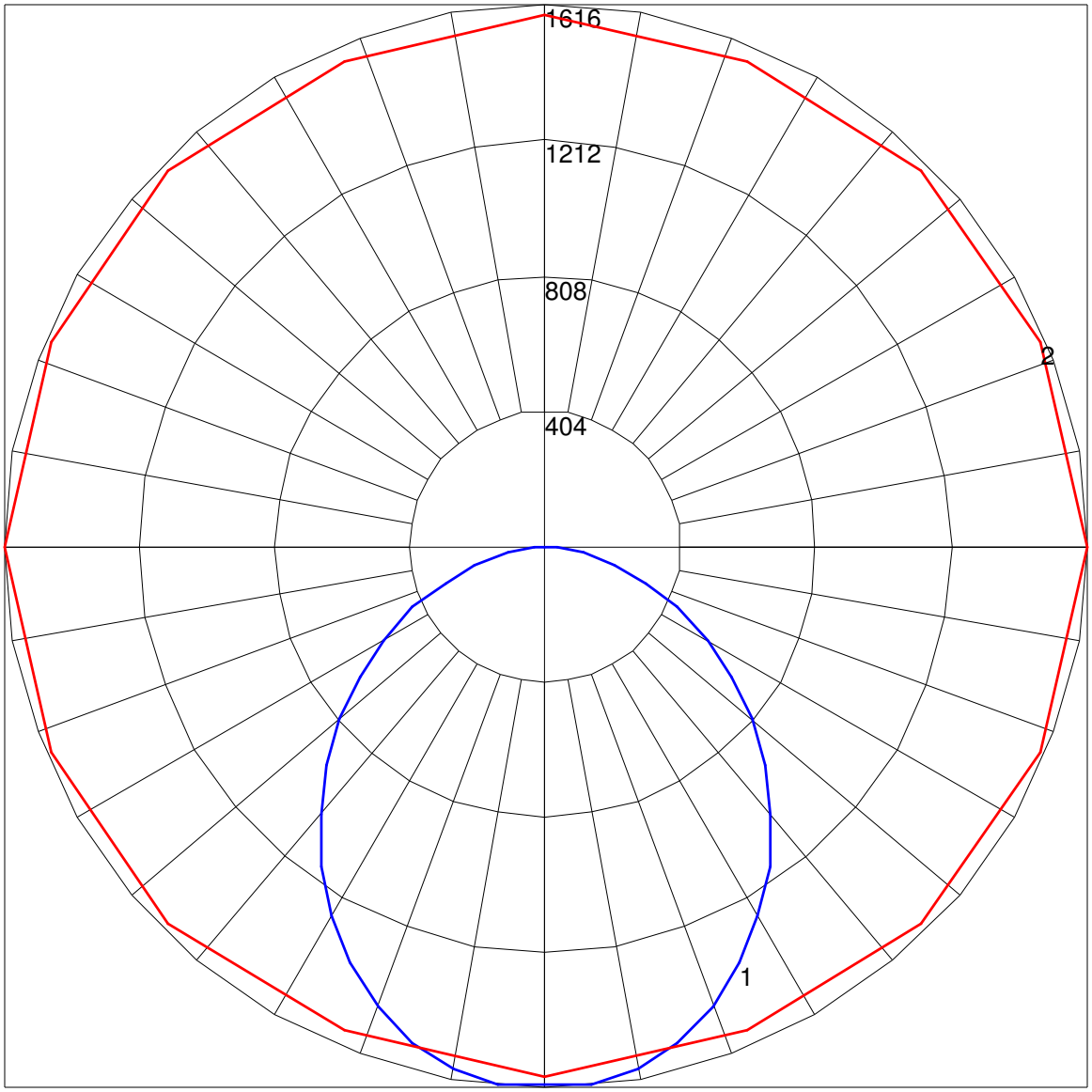
POLAR GRAPH



Maximum Candela = 1616.078 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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