H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-930-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-L38-930-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	3233
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
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	2889	2799	2779
55	2600	2615	2673
65	2272	2514	2754
75	1834	2538	3167
85	850	2740	3310

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1259.164	1259.164	1259.164	1259.164	1259.164
5	1265.419	1251.517	1244.567	1227.189	1243.176
10	1241.091	1226.147	1217.110	1215.373	1217.805
15	1200.080	1185.484	1177.490	1174.710	1172.624
20	1145.516	1131.266	1118.059	1111.456	1112.499
25	1077.396	1065.580	1060.019	1042.642	1036.038
30	997.808	985.644	973.132	963.748	958.535
35	915.092	903.970	889.026	876.166	868.868
40	820.211	811.175	795.536	785.457	779.548
45	728.459	718.033	705.868	700.308	700.655
50	631.493	628.365	615.159	617.591	620.719
55	531.747	531.747	534.875	543.216	546.692
60	438.952	441.037	455.287	469.536	478.225
65	342.334	354.846	378.826	403.502	414.971
70	249.539	270.392	304.799	337.816	351.370
75	169.255	190.803	234.247	276.995	292.287
80	88.625	125.465	170.646	215.827	230.076
85	26.414	59.431	85.149	96.618	102.874
90	0.000	1.043	1.390	2.433	1.390

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	450.54	N.A.	13.90
0-30	936.12	N.A.	29.00
0-40	1492.51	N.A.	46.20
0-60	2522.36	N.A.	78.00
0-80	3145.68	N.A.	97.30
0-90	3233.38	N.A.	100.00
10-90	3115.22	N.A.	96.30
20-40	1041.96	N.A.	32.20
20-50	1590.17	N.A.	49.20
40-70	1405.62	N.A.	43.50
60-80	623.33	N.A.	19.30
70-80	247.55	N.A.	7.70
80-90	87.69	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	3233.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	118.16
10-20	332.38
20-30	485.58
30-40	556.38
40-50	548.21
50-60	481.64
60-70	375.78
70-80	247.55
80-90	87.69
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	15.1	16.7	15.5	17.1	17.4	15.4	17.0	15.8	17.4	17.7
	3H	16.8	18.2	17.1	18.6	18.9	17.7	19.2	18.1	19.5	19.8
	4H	17.4	18.7	17.8	19.1	19.5	18.8	20.2	19.2	20.5	20.9
	6H	17.7	19.0	18.2	19.4	19.8	19.8	21.1	20.2	21.5	21.9
	8H	17.8	19.1	18.3	19.5	19.9	20.2	21.5	20.6	21.9	22.3
	12H	17.9	19.1	18.3	19.5	19.9	20.5	21.7	20.9	22.1	22.5
4H	2H	15.8	17.2	16.2	17.6	17.9	16.1	17.4	16.5	17.8	18.2
	3H	17.7	18.9	18.1	19.3	19.7	18.6	19.7	19.0	20.1	20.5
	4H	18.5	19.5	18.9	19.9	20.4	19.8	20.9	20.3	21.3	21.7
	6H	19.0	19.9	19.5	20.4	20.8	21.1	22.0	21.5	22.5	22.9
	8H	19.2	20.0	19.6	20.5	20.9	21.6	22.4	22.0	22.9	23.4
	12H	19.2	20.0	19.7	20.5	21.0	21.9	22.7	22.4	23.2	23.6
8H	4H	19.0	19.9	19.4	20.3	20.8	20.2	21.0	20.6	21.5	21.9
	6H	19.7	20.4	20.2	20.9	21.4	21.6	22.4	22.1	22.8	23.3
	8H	20.0	20.6	20.5	21.1	21.6	22.2	22.9	22.7	23.4	23.9
	12H	20.1	20.7	20.6	21.2	21.8	22.7	23.3	23.2	23.8	24.3
12H	4H	19.1	19.9	19.6	20.4	20.8	20.2	21.0	20.7	21.5	21.9
	6H	19.9	20.6	20.4	21.0	21.6	21.7	22.4	22.2	22.8	23.4
	8H	20.2	20.8	20.8	21.3	21.9	22.4	22.9	22.9	23.4	24.0

Maximum UGR = 24.3

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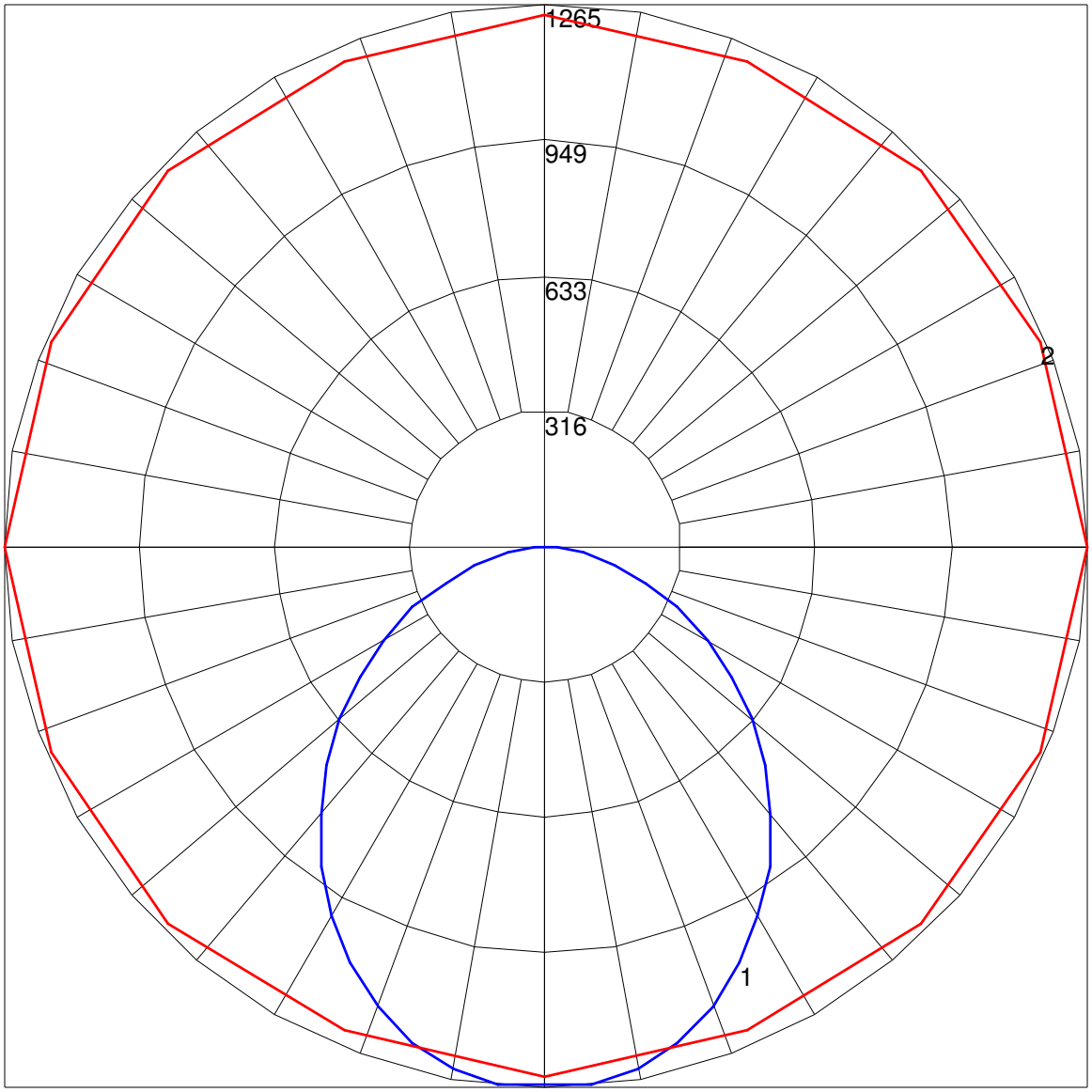
POLAR GRAPH



Maximum Candela = 1265.419 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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