H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP4-L300-840-W-DL-DIM-UNV_40C_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19524.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 18-SEP-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24X19"HIGHBAY
[MORE] LUMINAIRE w/DIFFUSE LENSES & CENTER DRIVER HOUSING
[MORE] 4 ADVANCE #XI095C275V054DNF1 - 18K RESISTORS
[LUMCAT] GP4-L300-840-W-DL-DIM-UNV 40C
[LAMPCAT] D5638D192C2560A8N50
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20948
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	236
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.88 ft
Luminous Width (90-270)	1.58 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	20935	23602	25853
55	19262	23661	26421
65	16848	23301	25982
75	12708	22379	25840
85	6147	26956	36907

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	6639.462	6639.462	6639.462	6639.462	6639.462
5	6634.008	6643.098	6628.554	6604.313	6600.677
10	6548.560	6567.347	6564.923	6547.954	6549.166
15	6383.725	6409.178	6440.084	6447.962	6449.174
20	6140.109	6186.165	6266.159	6311.004	6298.278
25	5827.407	5911.642	6003.150	6127.988	6124.958
30	5460.770	5577.124	5714.689	5906.188	5943.761
35	5054.136	5198.973	5378.958	5634.695	5662.572
40	4582.659	4779.613	4995.353	5321.387	5378.352
45	4085.730	4314.196	4606.293	4957.174	5045.652
50	3576.680	3817.267	4194.206	4542.662	4651.744
55	3049.450	3345.184	3745.757	4074.215	4182.691
60	2515.554	2864.010	3260.342	3546.379	3643.341
65	1965.295	2357.991	2717.962	2954.912	3030.664
70	1416.855	1865.909	2153.159	2353.749	2419.804
75	907.805	1356.254	1598.658	1789.552	1845.911
80	475.113	844.174	1078.094	1269.594	1327.771
85	147.867	406.028	648.432	818.116	887.807
90	3.636	122.414	295.734	436.328	502.384
95	3.030	56.965	209.074	328.458	376.939
100	11.514	23.634	138.777	238.769	284.219
105	15.150	24.240	83.630	163.623	201.802
110	16.968	32.725	42.421	103.628	133.929
115	19.392	39.391	42.421	63.631	83.630
120	23.634	47.269	52.723	52.117	55.753
125	27.271	54.541	59.995	67.267	71.509
130	28.483	59.995	63.631	70.903	75.751
135	32.725	69.085	69.691	74.539	78.781
140	35.755	69.691	75.145	78.175	76.357
145	41.815	67.267	82.418	82.418	83.024
150	47.269	67.267	93.932	89.690	89.690
155	52.723	63.631	90.296	101.204	101.810
160	57.571	63.025	85.448	96.962	101.204
165	63.025	63.631	79.994	89.690	95.144
170	67.267	65.449	72.115	79.994	84.842
175	70.903	69.691	70.297	75.145	78.175
180	73.933	73.933	73.933	73.933	73.933

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2444.89	N.A.	11.70
0-30	5214.14	N.A.	24.90
0-40	8588.47	N.A.	41.00
0-60	15445.76	N.A.	73.70
0-80	19676.98	N.A.	93.90
0-90	20356.86	N.A.	97.20
10-90	19726.79	N.A.	94.20
20-40	6143.59	N.A.	29.30
20-50	9700.38	N.A.	46.30
40-70	9463.42	N.A.	45.20
60-80	4231.21	N.A.	20.20
70-80	1625.08	N.A.	7.80
80-90	679.88	N.A.	3.20
90-110	323.68	N.A.	1.50
90-120	375.87	N.A.	1.80
90-130	426.29	N.A.	2.00
90-150	524.24	N.A.	2.50
90-180	591.17	N.A.	2.80
110-180	267.49	N.A.	1.30
0-180	20948.03	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	630.06
10-20	1814.82
20-30	2769.26
30-40	3374.33
40-50	3556.79
50-60	3300.5
60-70	2606.13
70-80	1625.08
80-90	679.88
90-100	220.10
100-110	103.59
110-120	52.19
120-130	50.42
130-140	51.42
140-150	46.52
150-160	37.85
160-170	22.12
170-180	6.97

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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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	99	99	99	97
1	107	102	98	93	104	100	95	92	95	91	88	90	88	85	86	84	82	80
2	97	89	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	66
3	88	77	69	62	86	76	68	61	72	65	60	69	63	59	66	61	57	55
4	81	68	59	52	78	67	58	52	64	57	51	61	55	50	59	53	49	47
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	53	47	42	40
6	68	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	63	50	41	34	61	49	40	34	47	39	34	45	38	33	43	37	33	31
8	59	45	37	31	57	44	36	30	43	35	30	41	35	30	40	34	29	27
9	55	41	33	27	53	41	33	27	39	32	27	38	31	27	37	31	26	25
10	52	38	30	25	50	38	30	25	36	29	24	35	29	24	34	28	24	22

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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	22.1	23.7	22.5	24.1	24.5	23.7	25.3	24.1	25.7	26.1
	3H	23.8	25.2	24.2	25.6	26.0	25.7	27.2	26.2	27.6	28.0
	4H	24.3	25.7	24.8	26.1	26.6	26.6	28.0	27.1	28.4	28.8
	6H	24.7	25.9	25.1	26.4	26.8	27.4	28.7	27.9	29.1	29.6
	8H	24.7	26.0	25.2	26.4	26.9	27.7	29.0	28.2	29.4	29.9
	12H	24.8	25.9	25.3	26.4	26.9	28.1	29.3	28.6	29.7	30.2
4H	2H	23.1	24.4	23.5	24.8	25.3	24.3	25.6	24.7	26.1	26.5
	3H	25.0	26.1	25.4	26.6	27.1	26.6	27.7	27.0	28.2	28.6
	4H	25.7	26.8	26.2	27.2	27.7	27.6	28.6	28.1	29.1	29.6
	6H	26.2	27.1	26.7	27.6	28.2	28.6	29.5	29.1	30.0	30.5
	8H	26.3	27.2	26.8	27.7	28.2	29.0	29.9	29.5	30.4	30.9
	12H	26.4	27.2	26.9	27.7	28.3	29.4	30.2	30.0	30.8	31.3
8H	4H	26.3	27.2	26.8	27.6	28.2	27.9	28.8	28.4	29.3	29.8
	6H	27.0	27.7	27.5	28.2	28.8	29.0	29.8	29.6	30.3	30.8
	8H	27.2	27.9	27.8	28.4	29.0	29.6	30.3	30.2	30.8	31.4
	12H	27.4	28.0	27.9	28.5	29.1	30.2	30.8	30.8	31.4	32.0
12H	4H	26.4	27.2	26.9	27.7	28.2	27.9	28.7	28.4	29.2	29.8
	6H	27.2	27.8	27.7	28.3	29.0	29.1	29.8	29.7	30.3	30.9
	8H	27.5	28.1	28.1	28.6	29.3	29.7	30.3	30.3	30.9	31.5

Maximum UGR = 32.0

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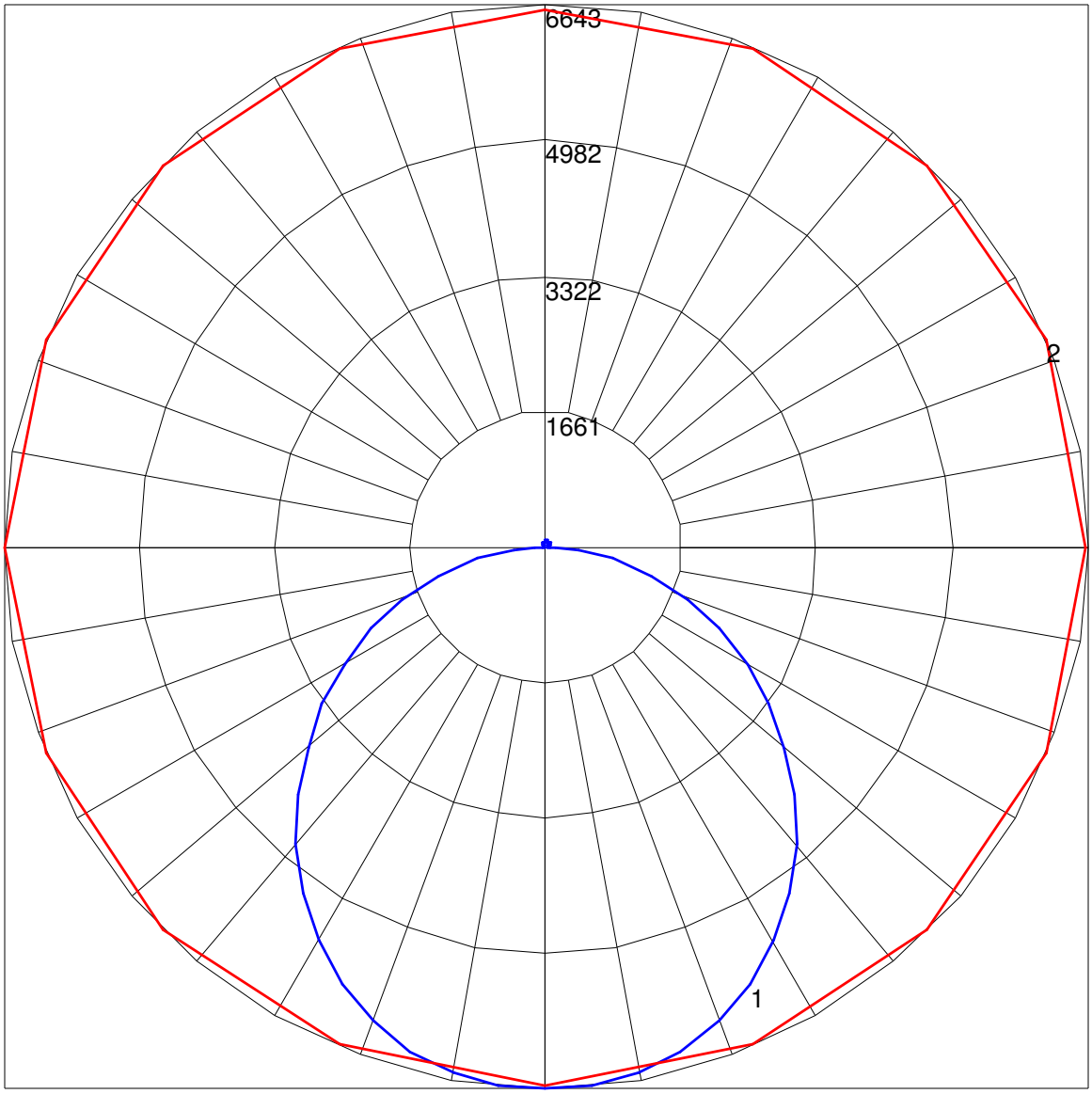
POLAR GRAPH



Maximum Candela = 6643.098 Located At Horizontal Angle = 22.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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