IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L93-840-W-DIM-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 19516.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 06-NOV-2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24X14"HIGHBAY
[MORE] LUMINAIRE W/ NO DIFFUSER/OPEN BOTTOM & CENTER DRIVER HOUSING
[LUMCAT] GP2-L93-840-W-DIM-UNV
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended
[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9281
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	66
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.88 ft
Luminous Width (90-270)	1.18 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	15514	15741	15714
55	14807	14697	15173
65	13209	13475	11317
75	10135	8533	6311
85	3748	3916	2853

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3284.769	3284.769	3284.769	3284.769	3284.769
5	3285.770	3279.767	3275.765	3267.760	3275.765
10	3256.754	3253.753	3247.749	3236.743	3242.747
15	3179.713	3174.710	3192.720	3180.713	3183.715
20	3099.670	3079.659	3094.667	3095.667	3101.671
25	2973.602	2975.603	2978.604	2994.613	3001.617
30	2831.525	2828.524	2856.539	2869.546	2883.553
35	2646.426	2670.438	2685.447	2713.462	2722.466
40	2464.327	2468.330	2501.347	2525.360	2528.362
45	2251.213	2253.214	2284.230	2294.236	2280.228
50	2008.082	2009.082	2024.090	2048.103	2036.097
55	1742.939	1754.945	1729.932	1778.958	1785.962
60	1445.779	1467.791	1450.781	1493.805	1520.819
65	1145.617	1154.622	1168.629	1102.594	981.529
70	833.449	841.453	788.425	675.364	681.367
75	538.290	543.293	453.244	389.210	335.181
80	264.142	219.118	182.098	178.096	173.093
85	67.036	63.034	70.038	56.030	51.027
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1210.33	N.A.	13.00
0-30	2586.37	N.A.	27.90
0-40	4267.68	N.A.	46.00
0-60	7589.58	N.A.	81.80
0-80	9193.31	N.A.	99.10
0-90	9281.35	N.A.	100.00
10-90	8969.57	N.A.	96.60
20-40	3057.35	N.A.	32.90
20-50	4809.88	N.A.	51.80
40-70	4431.11	N.A.	47.70
60-80	1603.73	N.A.	17.30
70-80	494.51	N.A.	5.30
80-90	88.05	N.A.	0.90
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	9281.35	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	311.78
10-20	898.55
20-30	1376.04
30-40	1681.32
40-50	1752.53
50-60	1569.37
60-70	1109.22
70-80	494.51
80-90	88.05
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	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	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	55	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	21.6	23.3	22.0	23.6	23.9	21.8	23.4	22.1	23.7	24.0
	3H	23.2	24.7	23.6	25.0	25.4	22.9	24.4	23.3	24.7	25.1
	4H	23.8	25.1	24.2	25.5	25.9	23.2	24.5	23.6	24.9	25.3
	6H	24.0	25.3	24.5	25.7	26.1	23.3	24.6	23.7	24.9	25.3
	8H	24.1	25.3	24.5	25.7	26.1	23.3	24.5	23.8	24.9	25.3
	12H	24.1	25.3	24.6	25.7	26.1	23.3	24.5	23.8	24.9	25.3
4H	2H	22.2	23.6	22.6	24.0	24.3	22.4	23.7	22.7	24.1	24.4
	3H	24.0	25.2	24.4	25.6	26.0	23.7	24.8	24.1	25.2	25.6
	4H	24.7	25.7	25.1	26.1	26.5	24.0	25.0	24.4	25.4	25.9
	6H	25.0	25.9	25.5	26.3	26.8	24.2	25.1	24.7	25.5	26.0
	8H	25.1	25.9	25.5	26.4	26.8	24.2	25.1	24.7	25.5	26.0
	12H	25.1	25.9	25.6	26.3	26.8	24.2	25.0	24.7	25.5	25.9
8H	4H	24.8	25.6	25.3	26.1	26.5	24.2	25.0	24.7	25.5	25.9
	6H	25.2	25.9	25.7	26.4	26.8	24.4	25.1	24.9	25.6	26.1
	8H	25.3	25.9	25.8	26.4	26.9	24.5	25.1	25.0	25.6	26.1
	12H	25.4	25.9	25.9	26.4	26.9	24.5	25.1	25.0	25.6	26.1
12H	4H	24.8	25.5	25.3	26.0	26.5	24.2	24.9	24.7	25.4	25.9
	6H	25.2	25.8	25.7	26.3	26.8	24.4	25.1	25.0	25.5	26.1
	8H	25.3	25.9	25.8	26.3	26.9	24.5	25.1	25.0	25.6	26.1

Maximum UGR = 26.9

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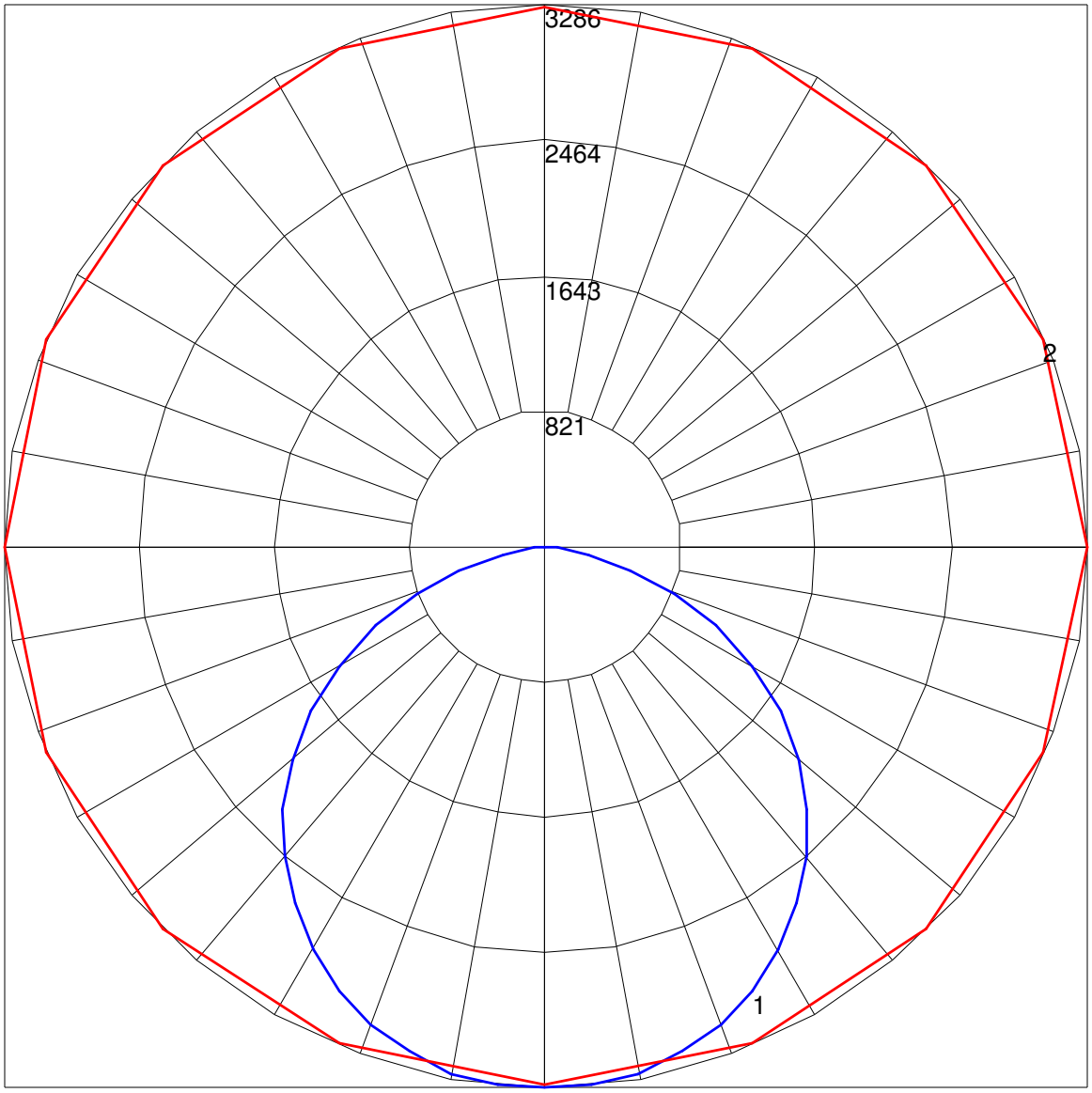
POLAR GRAPH



Maximum Candela = 3285.77 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.)