IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP4-L350-840-W-DL-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20797.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 20-NOV-2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24x20"HIGHBAY
[MORE] LUMINAIRE w/DIFFUSE POLYCARBONATE LENSES OVER LEDS & CENTER DRIVER
[MORE] HOUSING 4-ADVANCE #XI095C275V054BSF1 @ 1750mA
[LUMCAT] GP4-L350-840-W-DL-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	25952
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	278
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	1.87 ft
Luminous Width (90-270)	1.67 ft
Luminous Height	0.08 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	26703	29767	30794
55	23450	27876	28690
65	17957	23046	22836
75	9270	13415	13354
85	1094	4136	3847

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	8994.640	8994.640	8994.640	8994.640	8994.640
5	9007.570	8958.725	9116.753	9119.626	9126.809
10	8891.204	9085.147	9269.034	9276.217	9269.034
15	8665.656	8914.190	9149.795	9044.922	8997.514
20	8368.277	8875.402	8815.064	8783.458	8810.754
25	7987.574	8470.276	8481.769	8460.220	8513.375
30	7573.829	8023.489	7977.518	8092.447	8076.644
35	7014.986	7490.506	7654.280	7649.970	7739.040
40	6408.735	6898.621	6928.789	7152.901	7286.506
45	5711.977	6193.243	6502.115	6654.396	6619.917
50	4997.980	5428.964	5782.371	5989.244	5923.160
55	4143.195	4663.249	5071.248	5069.811	5104.290
60	3274.043	3873.111	4196.350	4166.181	4186.293
65	2407.765	3078.664	3223.762	3035.565	3093.030
70	1563.036	2164.977	2127.625	2025.626	2031.372
75	810.250	1291.516	1255.601	1190.953	1186.643
80	254.281	531.547	522.928	583.265	609.124
85	41.662	178.140	183.887	159.464	152.281
90	0.000	126.422	158.028	169.520	170.957
95	0.000	30.169	222.675	303.126	317.492
100	0.000	12.930	50.281	143.661	173.830
105	0.000	0.000	11.493	21.549	44.535
110	0.000	0.000	0.000	12.930	12.930
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	3408.85	N.A.	13.10
0-30	7285.73	N.A.	28.10
0-40	11990.74	N.A.	46.20
0-60	21226.9	N.A.	81.80
0-80	25505.94	N.A.	98.30
0-90	25767.79	N.A.	99.30
10-90	24899.27	N.A.	95.90
20-40	8581.89	N.A.	33.10
20-50	13484.85	N.A.	52.00
40-70	12220.1	N.A.	47.10
60-80	4279.04	N.A.	16.50
70-80	1295.09	N.A.	5.00
80-90	261.85	N.A.	1.00
90-110	182.59	N.A.	0.70
90-120	183.82	N.A.	0.70
90-130	183.82	N.A.	0.70
90-150	183.82	N.A.	0.70
90-180	183.82	N.A.	0.70
110-180	1.23	N.A.	0.00
0-180	25951.61	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	868.52
10-20	2540.33
20-30	3876.87
30-40	4705.02
40-50	4902.96
50-60	4333.2
60-70	2983.94
70-80	1295.09
80-90	261.85
90-100	154.36
100-110	28.23
110-120	1.23
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	141	141	141	141	137	137	137	137	131	131	131	125	125	125	120	120	120	118
1	129	124	119	115	126	121	117	113	116	113	109	111	109	106	107	105	103	100
2	118	109	101	94	115	106	99	93	102	96	91	98	93	89	94	90	87	84
3	108	96	86	79	105	94	85	78	90	83	77	87	80	75	84	78	74	71
4	99	85	75	67	96	83	74	66	80	72	65	77	70	64	75	69	63	61
5	91	76	65	58	88	74	65	57	72	63	57	69	62	56	67	61	55	53
6	84	68	58	50	81	67	57	50	65	56	50	63	55	49	61	54	49	46
7	78	62	52	44	76	61	51	44	59	50	44	57	49	43	55	48	43	41
8	72	56	46	40	70	56	46	39	54	45	39	52	45	39	51	44	39	36
9	67	52	42	36	66	51	42	35	50	41	35	48	40	35	47	40	35	33
10	63	48	38	32	62	47	38	32	46	38	32	45	37	32	44	37	32	29

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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	23.7	25.3	24.1	25.6	26.0	24.4	26.0	24.8	26.3	26.7
	3H	25.0	26.4	25.3	26.7	27.1	25.7	27.1	26.0	27.4	27.8
	4H	25.2	26.6	25.6	26.9	27.3	26.0	27.3	26.4	27.7	28.1
	6H	25.3	26.5	25.7	26.9	27.3	26.1	27.4	26.6	27.8	28.2
	8H	25.3	26.5	25.7	26.9	27.3	26.2	27.3	26.6	27.8	28.2
	12H	25.3	26.4	25.7	26.8	27.2	26.2	27.3	26.6	27.7	28.1
4H	2H	24.4	25.7	24.8	26.1	26.5	24.9	26.3	25.4	26.7	27.1
	3H	25.8	26.9	26.2	27.3	27.8	26.3	27.4	26.7	27.8	28.3
	4H	26.2	27.2	26.6	27.6	28.1	26.7	27.7	27.1	28.1	28.6
	6H	26.4	27.2	26.8	27.7	28.2	27.0	27.8	27.4	28.3	28.8
	8H	26.3	27.2	26.8	27.6	28.1	27.0	27.8	27.5	28.3	28.8
	12H	26.3	27.1	26.8	27.5	28.0	27.0	27.7	27.5	28.2	28.7
8H	4H	26.4	27.2	26.9	27.6	28.1	26.8	27.7	27.3	28.1	28.6
	6H	26.5	27.2	27.1	27.7	28.2	27.1	27.8	27.6	28.3	28.8
	8H	26.6	27.2	27.1	27.7	28.2	27.2	27.8	27.7	28.3	28.8
	12H	26.6	27.1	27.1	27.6	28.2	27.2	27.7	27.7	28.2	28.8
12H	4H	26.4	27.1	26.9	27.6	28.1	26.8	27.6	27.3	28.1	28.5
	6H	26.6	27.2	27.1	27.6	28.2	27.1	27.7	27.7	28.2	28.8
	8H	26.6	27.1	27.1	27.6	28.2	27.2	27.7	27.7	28.2	28.8

Maximum UGR = 28.8

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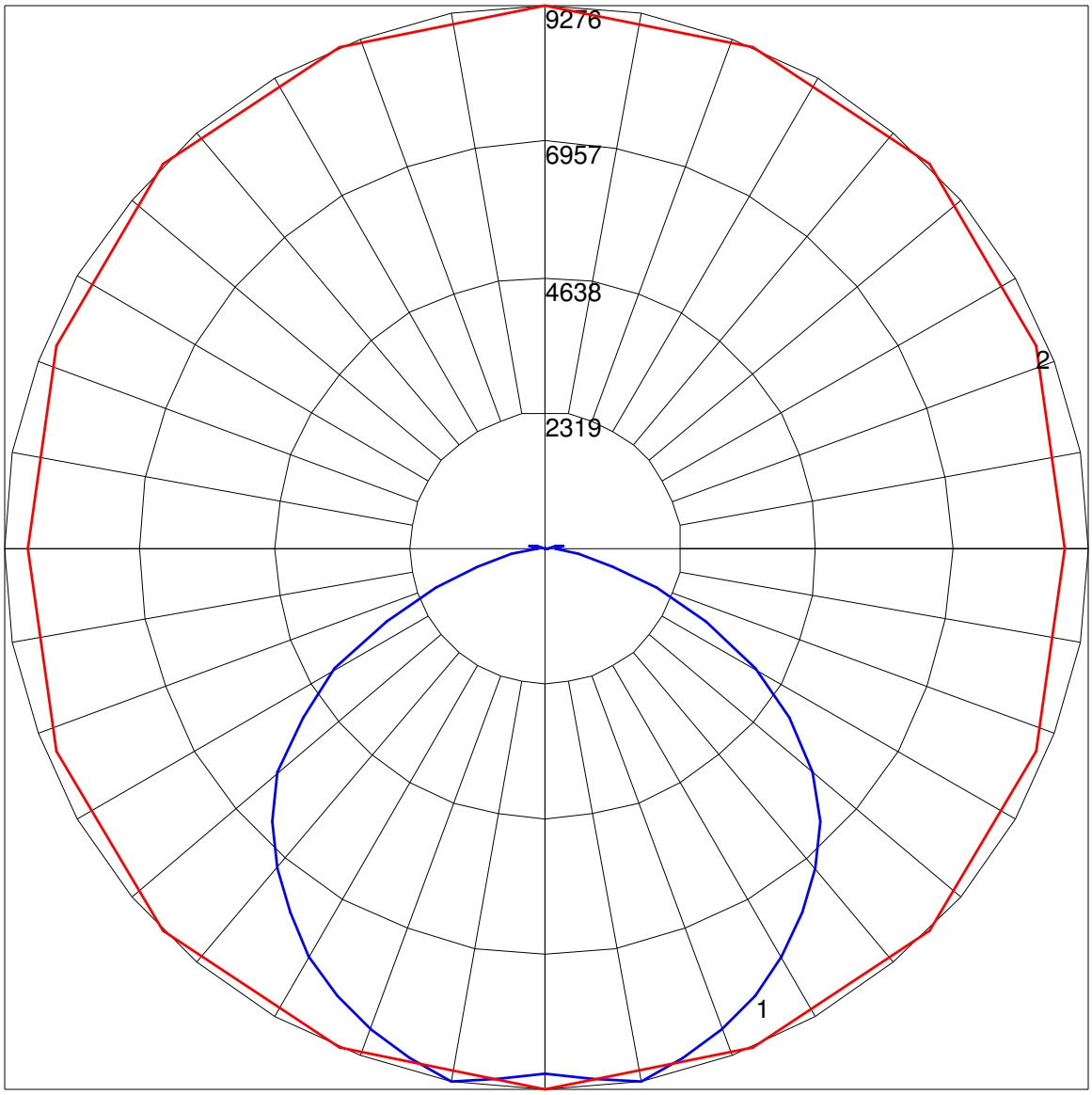
POLAR GRAPH



Maximum Candela = 9276.217 Located At Horizontal Angle = 67.5, Vertical Angle = 10
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)