

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L40-935-(L35)-DIM-UNV-OW-OF-CS-WETCC\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 20685.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 08-30-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4"RND RECESSED CAST HOUSING DOWNLIGHT

[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)

[LUMCAT] 4DR-TL-L40-935-(L35)-DIM-UNV-OW-OF-CS-WETCC

[LAMPCAT] V13 BXRE-35E2000

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2478
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	33.94
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.37 ft (Diameter)
Luminous Width (90-270)	0.37 ft (Diameter)
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7516	7516	7516
55	2316	2316	2316
65	286	286	286
75	0	0	0
85	0	0	0

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## CANDELA TABULATION

	<u>0</u>
0	2127.201
5	2190.664
10	2256.478
15	2303.488
20	2405.735
25	2621.980
30	2054.335
35	360.801
40	94.020
45	51.711
50	27.031
55	12.928
60	5.876
65	1.175
70	1.175
75	0.000
80	0.000
85	0.000
90	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4DR-TL-L40-935-(L35)-DIM-UNV-OW-OF-CS-WETCC\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	869.31	N.A.	35.10
0-30	1988.41	N.A.	80.20
0-40	2419.94	N.A.	97.60
0-60	2475.87	N.A.	99.90
0-80	2478.49	N.A.	100.00
0-90	2478.49	N.A.	100.00
10-90	2267.78	N.A.	91.50
20-40	1550.64	N.A.	62.60
20-50	1593.53	N.A.	64.30
40-70	58.24	N.A.	2.30
60-80	2.62	N.A.	0.10
70-80	0.31	N.A.	0.00
80-90	0.00	N.A.	0.00
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	2478.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	210.71
10-20	658.60
20-30	1119.11
30-40	431.53
40-50	42.89
50-60	13.03
60-70	2.31
70-80	0.31
80-90	0.00
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	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	95	91	88	93	89	86	90	87	85	88	86	83	82
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	93	85	79	75	92	84	79	75	82	78	74	81	77	74	79	76	73	72
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59
9	76	67	61	57	75	66	61	57	66	60	57	65	60	57	64	60	57	55
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52

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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

X=2H	Y=2H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	3H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	4H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	6H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	8H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	12H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

### UGR Viewed Endwise

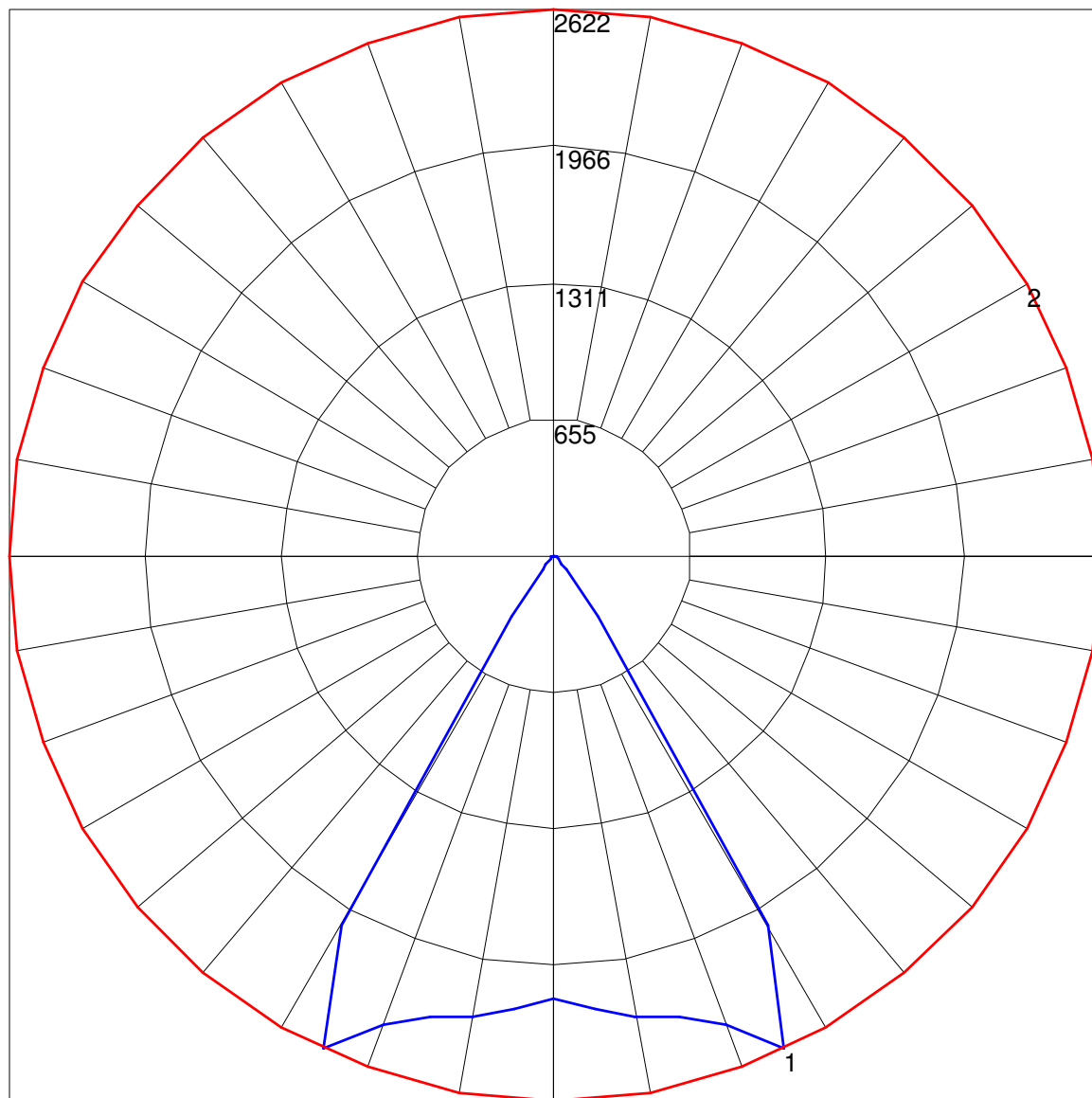
4H	2H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	3H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	4H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	6H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	8H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	12H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8H	4H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	6H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	8H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	12H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
12H	4H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	6H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	8H	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

Maximum UGR = 3.2

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## POLAR GRAPH



Maximum Candela = 2621.98 Located At Horizontal Angle = 0, Vertical Angle = 25

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)