



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L40-840-DIM-UNV-OW-OF-CS\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20685.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 20 APRIL 2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4" RND RECESSED LED CAST HOUSING DOWNLIGHT

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

[LUMCAT] 4DR-TL-L40-840-DIM-UNV-OW-OF-CS

[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	4018
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	38
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	12184	12184	12184
55	3755	3755	3755
65	463	463	463
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0	3448.354
5	3551.233
10	3657.923
15	3734.129
20	3899.879
25	4250.430
30	3330.234
35	584.887
40	152.413
45	83.827
50	43.819
55	20.957
60	9.526
65	1.905
70	1.905
75	0.000
80	0.000
85	0.000
90	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1409.21	N.A.	35.10
0-30	3223.37	N.A.	80.20
0-40	3922.91	N.A.	97.60
0-60	4013.58	N.A.	99.90
0-80	4017.82	N.A.	100.00
0-90	4017.82	N.A.	100.00
10-90	3676.25	N.A.	91.50
20-40	2513.7	N.A.	62.60
20-50	2583.23	N.A.	64.30
40-70	94.41	N.A.	2.30
60-80	4.24	N.A.	0.10
70-80	0.50	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	4017.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	341.57
10-20	1067.64
20-30	1814.16
30-40	699.54
40-50	69.53
50-60	21.13
60-70	3.74
70-80	0.50
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	98	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	87	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

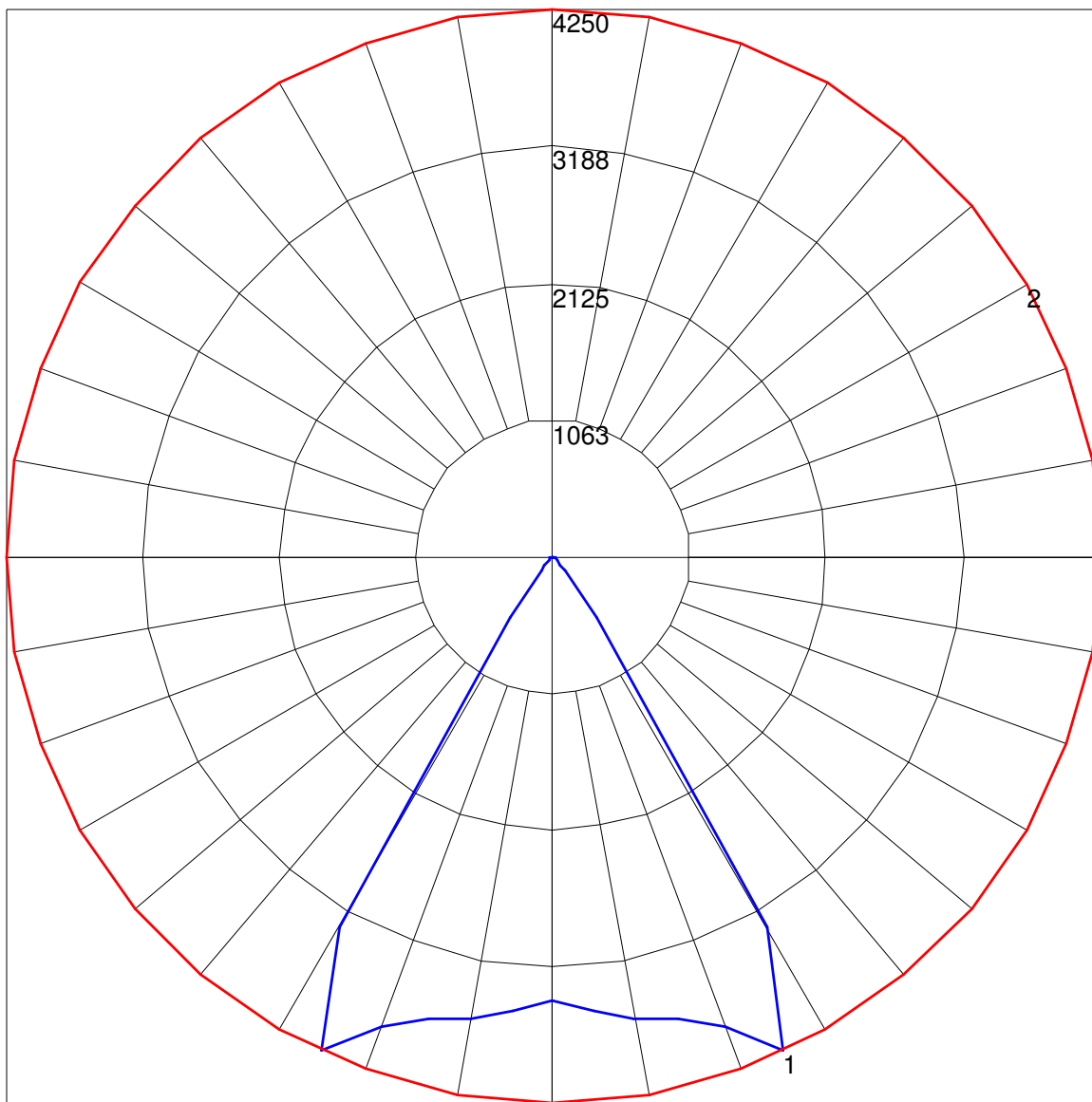
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	3H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	4H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	6H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	8H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	12H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
4H	2H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	3H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	4H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	6H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	8H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	12H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
8H	4H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	6H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	8H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	12H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
12H	4H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	6H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	8H	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8

Maximum UGR = 4.8

POLAR GRAPH



Maximum Candela = 4250.43 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.)