



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-840-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] 15 APRIL 2020

[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-L10-840-DIM-UNV-OW-OF-CS

[LAMPCAT] V13 BXRE-35E2000

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1037
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	9
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	3145	3145	3145
55	969	969	969
65	120	120	120
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0	889.981
5	916.533
10	944.068
15	963.736
20	1006.514
25	1096.988
30	859.495
35	150.953
40	39.336
45	21.635
50	11.309
55	5.409
60	2.459
65	0.492
70	0.492
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	363.70	N.A.	35.10
0-30	831.91	N.A.	80.20
0-40	1012.46	N.A.	97.60
0-60	1035.86	N.A.	99.90
0-80	1036.95	N.A.	100.00
0-90	1036.95	N.A.	100.00
10-90	948.80	N.A.	91.50
20-40	648.76	N.A.	62.60
20-50	666.70	N.A.	64.30
40-70	24.37	N.A.	2.40
60-80	1.10	N.A.	0.10
70-80	0.13	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	1036.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.16
10-20	275.55
20-30	468.21
30-40	180.54
40-50	17.95
50-60	5.45
60-70	0.97
70-80	0.13
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

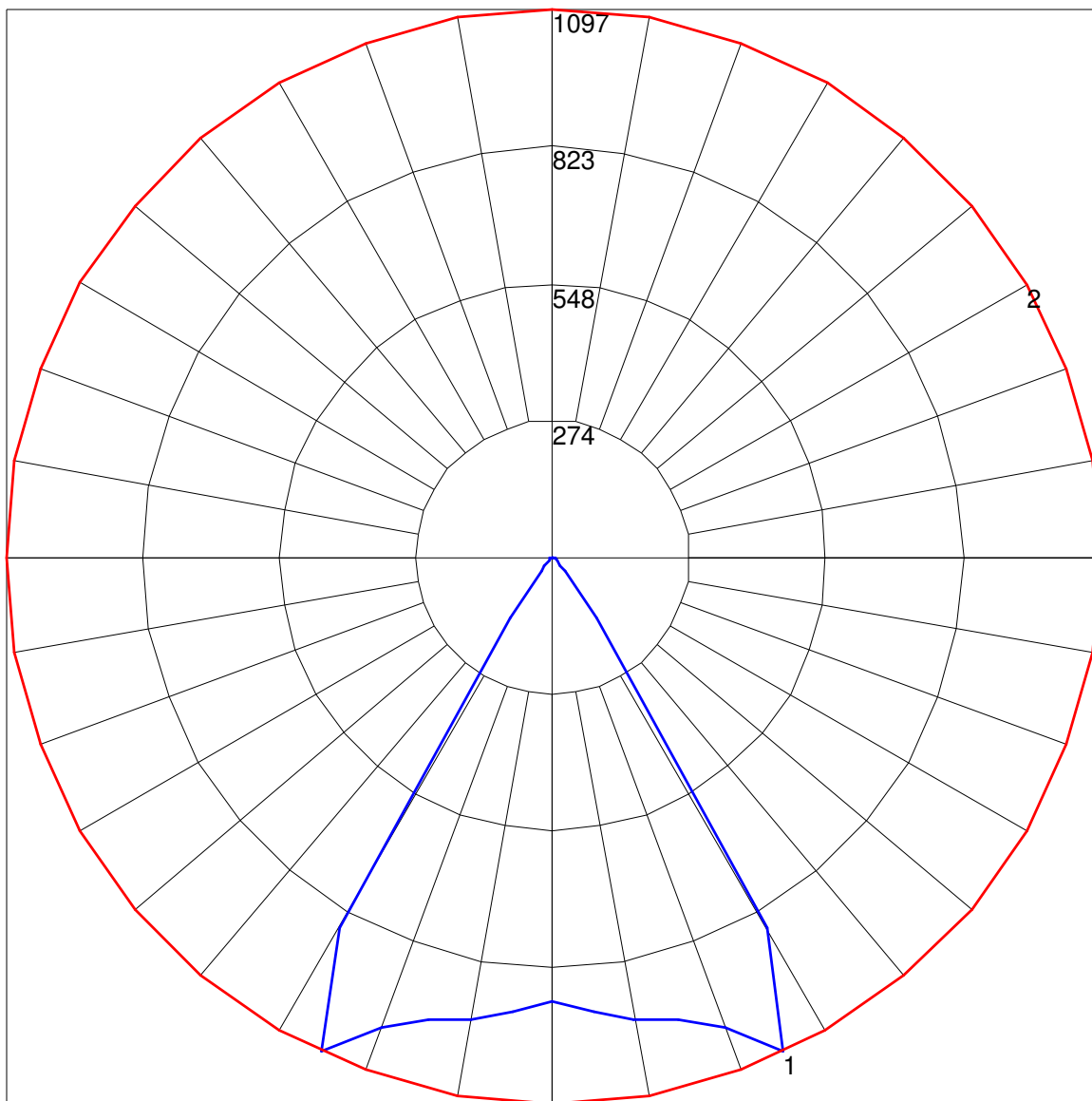
X=2H	Y=2H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	3H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

UGR Viewed Endwise

4H	2H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	3H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8H	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12H	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Maximum UGR = 0.1

POLAR GRAPH



Maximum Candela = 1096.988 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.)