



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-8TWU-L20-8TWD-XXX-DALI-UNV-OW-CSU-LN-WHD-WM 4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from UL #13537338.03  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUE DATE] 24-FEB-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO  
 [LUMCAT] 8CRDI-TL-L20-8TWU-L20-8TWD-xxx-DALI-UNV-OW-CSU-LN-WHD-WM 4000k  
 [LUMINAIRE] White formed aluminum housing, wide distribution reflector  
 [MORE] trims, clear uplight glass lens enclosure, no downlight enclosure  
 [LAMP] Two white LEDs (one up/one down)  
 [SEARCH\_SOURCETYPE] LED  
 [SEARCH\_APPLICATION] INDOOR, DIRECT, INDIRECT  
 [SEARCH\_MOUNTING] WALL

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4337
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	764	764	764
55	415	415	415
65	236	236	236
75	115	115	115
85	25	25	25

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
<b>0</b>	7962.877	7962.877	7962.877	7962.877	7962.877	7962.877	7962.877	7962.877	7962.877
<b>5</b>	7206.827	7206.827	7206.827	7206.827	7206.827	7206.827	7206.827	7206.827	7206.827
<b>10</b>	5300.468	5300.468	5300.468	5300.468	5300.468	5300.468	5300.468	5300.468	5300.468
<b>15</b>	3094.935	3094.935	3094.935	3094.935	3094.935	3094.935	3094.935	3094.935	3094.935
<b>20</b>	1558.484	1558.484	1558.484	1558.484	1558.484	1558.484	1558.484	1558.484	1558.484
<b>25</b>	735.641	735.641	735.641	735.641	735.641	735.641	735.641	735.641	735.641
<b>30</b>	352.746	352.746	352.746	352.746	352.746	352.746	352.746	352.746	352.746
<b>35</b>	190.868	190.868	190.868	190.868	190.868	190.868	190.868	190.868	190.868
<b>40</b>	120.597	120.597	120.597	120.597	120.597	120.597	120.597	120.597	120.597
<b>45</b>	86.737	86.737	86.737	86.737	86.737	86.737	86.737	86.737	86.737
<b>50</b>	66.096	66.096	66.096	66.096	66.096	66.096	66.096	66.096	66.096
<b>55</b>	51.486	51.486	51.486	51.486	51.486	51.486	51.486	51.486	51.486
<b>60</b>	40.238	40.238	40.238	40.238	40.238	40.238	40.238	40.238	40.238
<b>65</b>	30.845	30.845	30.845	30.845	30.845	30.845	30.845	30.845	30.845
<b>70</b>	22.496	22.496	22.496	22.496	22.496	22.496	22.496	22.496	22.496
<b>75</b>	15.422	15.422	15.422	15.422	15.422	15.422	15.422	15.422	15.422
<b>80</b>	9.045	9.045	9.045	9.045	9.045	9.045	9.045	9.045	9.045
<b>85</b>	3.363	3.363	3.363	3.363	3.363	3.363	3.363	3.363	3.363
<b>90</b>	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448
<b>95</b>	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785
<b>100</b>	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789
<b>105</b>	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162
<b>110</b>	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035
<b>115</b>	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846
<b>120</b>	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397
<b>125</b>	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830
<b>130</b>	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453
<b>135</b>	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843
<b>140</b>	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337
<b>145</b>	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783
<b>150</b>	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772
<b>155</b>	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574
<b>160</b>	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761
<b>165</b>	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714
<b>170</b>	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434
<b>175</b>	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538
<b>180</b>	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506

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Zone	Lumens	%Lamp	%Fixt
0-20	1510.29	N.A.	34.80
0-30	1888.64	N.A.	43.60
0-40	2020.66	N.A.	46.60
0-60	2136.7	N.A.	49.30
0-80	2183.94	N.A.	50.40
0-90	2189.45	N.A.	50.50
10-90	1560.68	N.A.	36.00
20-40	510.36	N.A.	11.80
20-50	579.64	N.A.	13.40
40-70	146.83	N.A.	3.40
60-80	47.24	N.A.	1.10
70-80	16.46	N.A.	0.40
80-90	5.51	N.A.	0.10
90-110	13.10	N.A.	0.30
90-120	25.25	N.A.	0.60
90-130	48.76	N.A.	1.10
90-150	680.56	N.A.	15.70
90-180	2147.09	N.A.	49.50
110-180	2133.99	N.A.	49.20
0-180	4336.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	628.77
10-20	881.52
20-30	378.35
30-40	132.02
40-50	69.27
50-60	46.77
60-70	30.79
70-80	16.46
80-90	5.51
90-100	5.40
100-110	7.70
110-120	12.15
120-130	23.51
130-140	78.66
140-150	553.14
150-160	823.41
160-170	494.68
170-180	148.44

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	50
1	101	97	94	92	93	90	88	86	77	76	74	65	64	63	54	54	53	48
2	94	89	84	81	87	83	79	76	72	69	67	61	60	58	52	51	50	46
3	89	82	76	72	82	77	72	68	67	64	61	58	56	54	50	48	47	43
4	84	76	70	65	78	71	66	62	63	59	56	55	52	50	48	46	45	41
5	79	70	64	60	74	66	61	57	59	55	52	52	49	47	46	44	43	40
6	75	66	60	55	70	62	57	53	56	52	49	50	47	45	44	42	41	38
7	71	62	56	51	67	59	53	50	53	49	46	47	45	42	42	41	39	37
8	68	58	52	48	64	55	50	47	50	46	44	46	43	41	41	39	38	36
9	64	55	49	45	61	53	48	44	48	44	41	44	41	39	40	38	36	34
10	62	52	47	43	58	50	45	42	46	42	40	42	39	37	38	36	35	33

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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	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	3H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	4H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	6H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	8H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	12H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1

### UGR Viewed Endwise

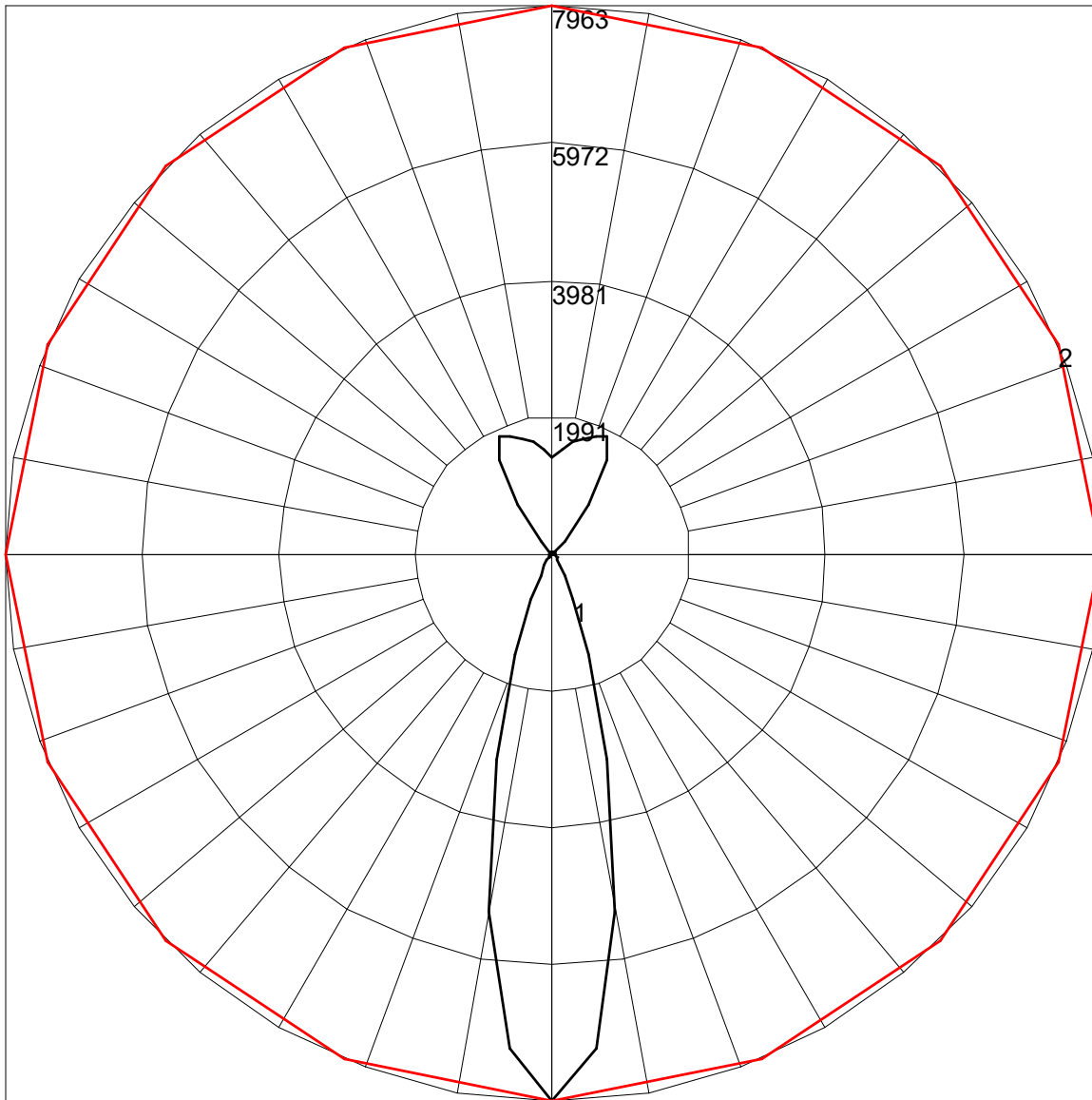
4H	2H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	3H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	4H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	6H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	8H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	12H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
8H	4H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	6H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	8H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	12H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
12H	4H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	6H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
	8H	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1

Maximum UGR = 5.1

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POLAR GRAPH



Maximum Candela = 7962.877 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)