



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-ON-CSD-WM 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from UL #13537338.04 & #12326812.05
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 25-FEB-2021
 [MANUFAC] WILLIAMS INDOOR
 [MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO
 [LUMCAT] 8CRDI-TL-P29-8TWU-P29-8TWD-xxx-PoE PR-ON-CS-WM 4000k
 [LUMINAIRE] White formed aluminum housing, wide distribution reflector
 [MORE] trims, flush upright frosted 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	4784
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	50
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	140	140	140
55	40	40	40
65	9	9	9
75	0	0	0
85	0	0	0

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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>	<u>202.5</u>
0.0	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720
2.5	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086
5.0	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136
7.5	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444
10.0	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793
12.5	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985
15.0	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760
17.5	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407
20.0	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513
22.5	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437
25.0	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012
27.5	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212
30.0	925.826	925.826	925.826	925.826	925.826	925.826	925.826	925.826	925.826	925.826
32.5	664.633	664.633	664.633	664.633	664.633	664.633	664.633	664.633	664.633	664.633
35.0	296.755	296.755	296.755	296.755	296.755	296.755	296.755	296.755	296.755	296.755
37.5	46.598	46.598	46.598	46.598	46.598	46.598	46.598	46.598	46.598	46.598
40.0	25.752	25.752	25.752	25.752	25.752	25.752	25.752	25.752	25.752	25.752
42.5	20.846	20.846	20.846	20.846	20.846	20.846	20.846	20.846	20.846	20.846
45.0	15.941	15.941	15.941	15.941	15.941	15.941	15.941	15.941	15.941	15.941
47.5	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263
50.0	9.810	9.810	9.810	9.810	9.810	9.810	9.810	9.810	9.810	9.810
52.5	6.131	6.131	6.131	6.131	6.131	6.131	6.131	6.131	6.131	6.131
55.0	4.905	4.905	4.905	4.905	4.905	4.905	4.905	4.905	4.905	4.905
57.5	3.679	3.679	3.679	3.679	3.679	3.679	3.679	3.679	3.679	3.679
60.0	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453
62.5	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453	2.453
65.0	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226
67.5	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226
70.0	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226
72.5	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	5.348	5.348	5.348	5.348	5.348	5.348	5.348	5.348	5.348	5.348
92.5	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236
95.0	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392
97.5	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410
100.0	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338
102.5	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862
105.0	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363
107.5	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602
110.0	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347
112.5	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299
115.0	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884
117.5	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186
120.0	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500
122.5	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000
125.0	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811
127.5	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956
130.0	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588
132.5	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431

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CANDELA TABULATION - (Cont.)

135.0	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233
137.5	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689
140.0	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387
142.5	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244
145.0	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903
147.5	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335
150.0	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813
152.5	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811
155.0	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931
157.5	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193
160.0	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710
162.5	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812
165.0	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321
167.5	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849
170.0	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886
172.5	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952
175.0	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169
177.5	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565
180.0	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720	26977.720
2.5	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086	21251.086
5.0	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136	12054.136
7.5	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444	6782.444
10.0	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793	4323.793
12.5	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985	3099.985
15.0	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760	2491.760
17.5	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407	2148.407
20.0	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513	1910.513
22.5	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437	1617.437
25.0	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012	1252.012
27.5	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212	1009.212
30.0	925.826	925.826	925.826	925.826	925.826	925.826	925.826
32.5	664.633	664.633	664.633	664.633	664.633	664.633	664.633
35.0	296.755	296.755	296.755	296.755	296.755	296.755	296.755
37.5	46.598	46.598	46.598	46.598	46.598	46.598	46.598
40.0	25.752	25.752	25.752	25.752	25.752	25.752	25.752
42.5	20.846	20.846	20.846	20.846	20.846	20.846	20.846
45.0	15.941	15.941	15.941	15.941	15.941	15.941	15.941
47.5	12.263	12.263	12.263	12.263	12.263	12.263	12.263
50.0	9.810	9.810	9.810	9.810	9.810	9.810	9.810
52.5	6.131	6.131	6.131	6.131	6.131	6.131	6.131
55.0	4.905	4.905	4.905	4.905	4.905	4.905	4.905
57.5	3.679	3.679	3.679	3.679	3.679	3.679	3.679
60.0	2.453	2.453	2.453	2.453	2.453	2.453	2.453
62.5	2.453	2.453	2.453	2.453	2.453	2.453	2.453
65.0	1.226	1.226	1.226	1.226	1.226	1.226	1.226
67.5	1.226	1.226	1.226	1.226	1.226	1.226	1.226
70.0	1.226	1.226	1.226	1.226	1.226	1.226	1.226
72.5	1.226	1.226	1.226	1.226	1.226	1.226	1.226
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	5.348	5.348	5.348	5.348	5.348	5.348	5.348
92.5	8.236	8.236	8.236	8.236	8.236	8.236	8.236
95.0	14.392	14.392	14.392	14.392	14.392	14.392	14.392
97.5	24.410	24.410	24.410	24.410	24.410	24.410	24.410
100.0	36.338	36.338	36.338	36.338	36.338	36.338	36.338
102.5	48.862	48.862	48.862	48.862	48.862	48.862	48.862
105.0	62.363	62.363	62.363	62.363	62.363	62.363	62.363
107.5	77.602	77.602	77.602	77.602	77.602	77.602	77.602
110.0	95.347	95.347	95.347	95.347	95.347	95.347	95.347
112.5	115.299	115.299	115.299	115.299	115.299	115.299	115.299
115.0	137.884	137.884	137.884	137.884	137.884	137.884	137.884
117.5	163.186	163.186	163.186	163.186	163.186	163.186	163.186
120.0	191.500	191.500	191.500	191.500	191.500	191.500	191.500
122.5	223.000	223.000	223.000	223.000	223.000	223.000	223.000
125.0	257.811	257.811	257.811	257.811	257.811	257.811	257.811
127.5	294.956	294.956	294.956	294.956	294.956	294.956	294.956
130.0	333.588	333.588	333.588	333.588	333.588	333.588	333.588
132.5	372.431	372.431	372.431	372.431	372.431	372.431	372.431
135.0	411.233	411.233	411.233	411.233	411.233	411.233	411.233
137.5	451.689	451.689	451.689	451.689	451.689	451.689	451.689
140.0	498.387	498.387	498.387	498.387	498.387	498.387	498.387
142.5	558.244	558.244	558.244	558.244	558.244	558.244	558.244
145.0	638.903	638.903	638.903	638.903	638.903	638.903	638.903
147.5	743.335	743.335	743.335	743.335	743.335	743.335	743.335
150.0	872.813	872.813	872.813	872.813	872.813	872.813	872.813
152.5	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811
155.0	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931
157.5	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193
160.0	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710
162.5	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812
165.0	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321
167.5	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849
170.0	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886
172.5	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952
175.0	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169
177.5	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565
180.0	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-ON-CSD-WM 4000K_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1692.93	N.A.	35.40
0-30	2291.25	N.A.	47.90
0-40	2511.59	N.A.	52.50
0-60	2528.97	N.A.	52.90
0-80	2531.12	N.A.	52.90
0-90	2531.85	N.A.	52.90
10-90	1576.41	N.A.	32.90
20-40	818.66	N.A.	17.10
20-50	831.42	N.A.	17.40
40-70	19.05	N.A.	0.40
60-80	2.14	N.A.	0.00
70-80	0.48	N.A.	0.00
80-90	0.73	N.A.	0.00
90-110	85.60	N.A.	1.80
90-120	223.91	N.A.	4.70
90-130	455.57	N.A.	9.50
90-150	1181.43	N.A.	24.70
90-180	2252.59	N.A.	47.10
110-180	2166.99	N.A.	45.30
0-180	4784.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	955.43
10-20	737.49
20-30	598.32
30-40	220.34
40-50	12.77
50-60	4.62
60-70	1.66
70-80	0.48
80-90	0.73
90-100	18.47
100-110	67.13
110-120	138.31
120-130	231.66
130-140	318.00
140-150	407.86
150-160	518.30
160-170	409.34
170-180	143.53

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	102	99	96	93	94	92	90	87	79	78	76	68	67	66	57	56	56	51
2	96	91	86	83	89	85	81	78	74	72	69	64	62	61	55	54	53	49
3	90	84	79	75	84	79	75	71	70	67	64	61	59	57	53	52	51	47
4	86	78	72	68	80	74	69	65	66	62	59	58	56	54	51	50	48	45
5	81	73	67	63	76	69	64	60	62	58	56	56	53	51	49	48	46	44
6	77	69	63	59	73	65	60	57	59	55	52	53	51	49	48	46	45	42
7	74	65	59	55	69	62	57	53	56	52	50	51	48	46	46	44	43	41
8	70	61	56	52	66	59	54	50	54	50	47	49	46	44	45	43	42	40
9	67	58	53	49	64	56	51	48	52	48	45	47	45	43	43	42	40	38
10	64	56	50	47	61	53	49	46	50	46	43	46	43	41	42	40	39	37

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-ON-CSD-WM 4000K_.IES

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	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

UGR Viewed Endwise

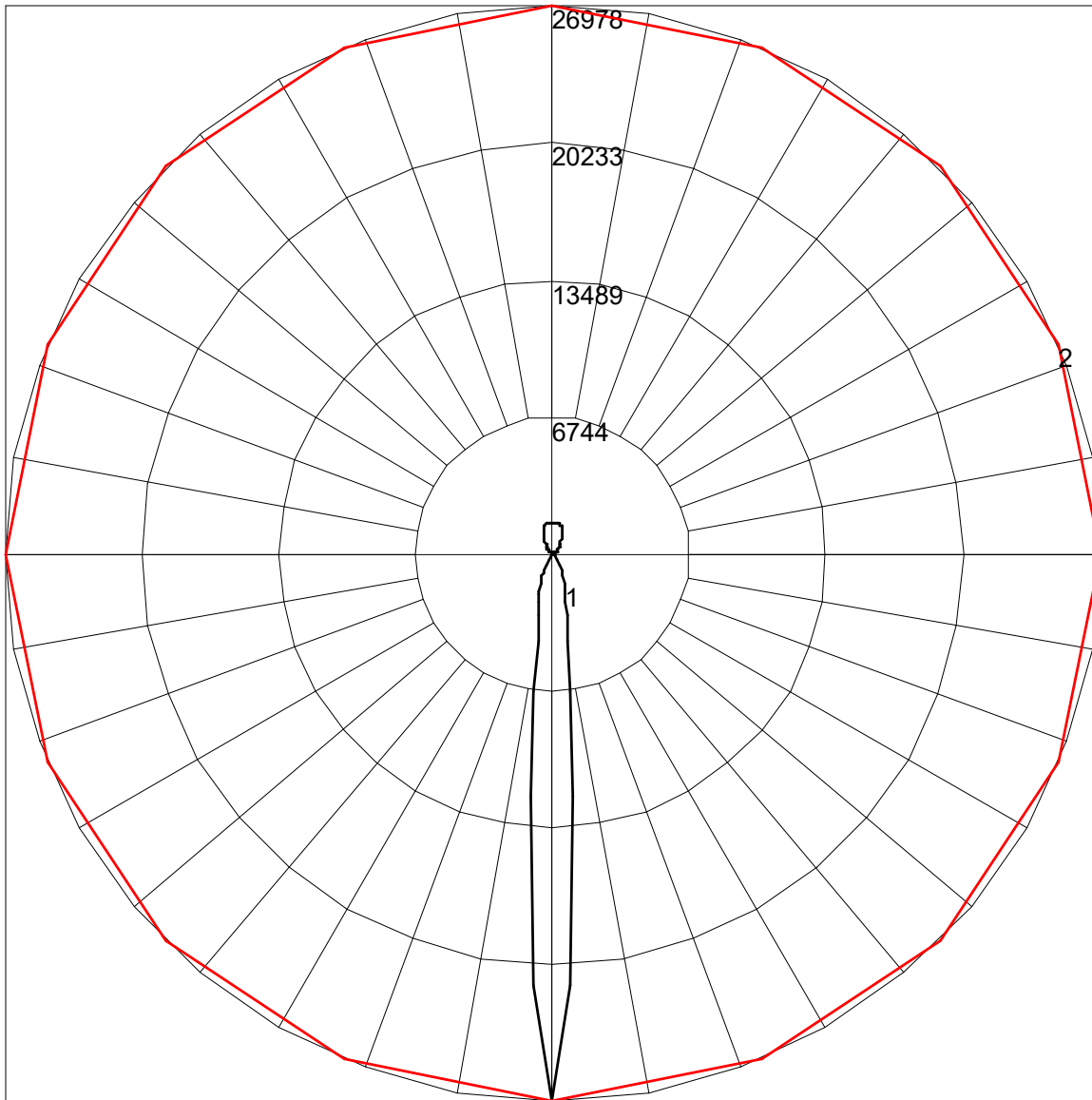
4H	2H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
8H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
12H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

Maximum UGR = 5.6

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-ON-CSD-WM 4000K_.IES

POLAR GRAPH



Maximum Candela = 26977.72 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.)