



# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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REPORT NUMBER: ITL77192

PAGE: 1 OF 4

ISSUE DATE: 06/03/13

PREPARED FOR: OXYGEN LIGHTING

CATALOG NUMBER: 2-5156-124

LUMINAIRE: FABRICATED SPECULAR METAL MOUNTING PLATE AND BRACKET, FROSTED CYLINDRICAL GLASS DIFFUSER WITH TRANSLUCENT WHITE FINISHED INTERIOR. OPEN TOP.

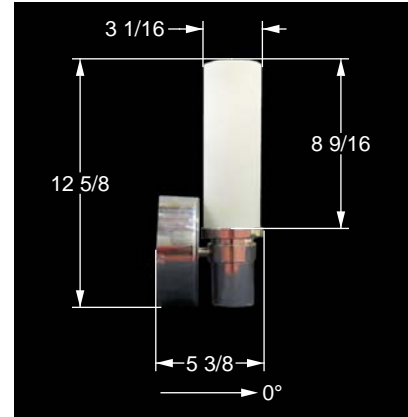
LAMP: ONE 18-WATT DOUBLE TWIN TUBE COMPACT FLUORESCENT, SYLVANIA CF18DD/E/827, VERTICAL BASE-DOWN POSITION.

BALLAST: ANTRON ELECTRONICS CSD-UV18P

TOTAL INPUT WATTS = 16.8 AT 120.0 VOLTS

MOUNTING: WALL

REPORT IS BASED ON 1250 LUMENS PER LAMP.



### CANDELA DISTRIBUTION

### FLUX

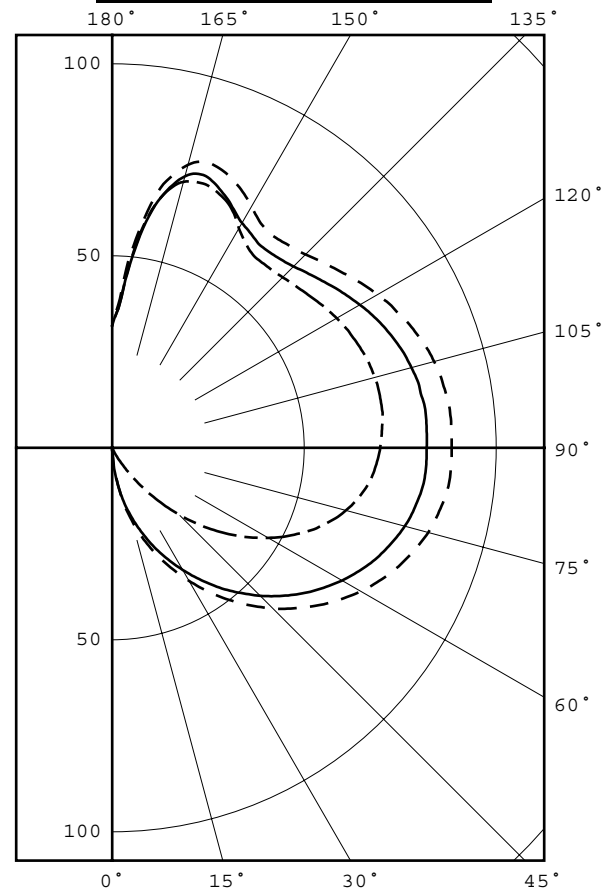
	0.0	45.0	90.0	135.0	180.0	
0	0.0	0.0	0.0	0.0	0.0	
5	3.9	4.9	4.7	2.1	0.7	1
15	19.5	20.2	18.0	5.6	0.1	4
25	33.3	33.2	30.6	12.9	1.1	11
35	46.7	46.1	42.8	27.3	9.4	23
45	59.2	58.4	54.5	42.6	24.6	38
55	70.0	69.1	64.7	55.2	40.0	55
65	78.9	77.8	73.0	64.8	53.1	70
75	85.2	83.9	78.9	71.5	63.0	81
85	88.3	86.9	81.8	75.0	68.5	88
90	88.4	87.0	81.9	75.6	69.8	
95	88.5	87.1	82.1	76.1	70.6	89
105	86.8	85.4	80.7	75.7	70.8	85
115	82.4	81.2	77.0	73.0	68.9	76
125	76.8	75.6	71.8	68.8	65.8	65
135	71.2	70.2	66.8	64.6	62.8	52
145	69.6	69.0	65.6	63.5	62.6	42
155	76.1	74.5	71.3	70.0	70.7	33
165	76.3	76.5	73.2	71.8	71.7	21
175	49.0	48.5	45.9	45.6	46.3	5
180	31.9	31.9	31.9	31.9	31.9	

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	15	1.2	1.8
0- 40	38	3.0	4.5
0- 60	131	10.5	15.6
0- 90	370	29.6	44.2
90-120	249	20.0	29.8
90-130	314	25.1	37.5
90-150	408	32.6	48.8
90-180	467	37.3	55.8
0-180	837	66.9	100.0

TOTAL LUMINAIRE EFFICIENCY = 66.9 %

CIE TYPE - GENERAL DIFFUSE



LEGEND:  
 0-deg -----  
 90-deg \_\_\_\_\_  
 180-deg - . - . - .

Checked B. HYRE  
 Approved R. BEATTIE  
 Lighting Engineer



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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	3.9	3.9	4.9	5.2	4.7	3.5	2.1	1.2	0.7
10.0	11.5	12.6	13.4	12.7	11.6	8.8	4.4	1.4	0.3
15.0	19.5	20.0	20.2	19.3	18.0	12.9	5.6	0.9	0.1
20.0	26.6	27.1	26.8	25.7	24.3	18.0	8.0	0.3	0.1
25.0	33.3	33.7	33.2	32.1	30.6	24.3	12.9	1.0	1.1
30.0	40.0	40.3	39.8	38.6	36.7	31.2	19.6	4.7	4.1
35.0	46.7	46.8	46.1	44.9	42.8	38.1	27.3	11.7	9.4
40.0	53.1	53.2	52.4	51.2	48.8	44.6	35.2	20.5	16.7
45.0	59.2	59.1	58.4	56.9	54.5	50.8	42.6	29.4	24.6
50.0	64.7	64.7	64.0	62.3	59.8	56.2	49.2	37.3	32.5
55.0	70.0	70.0	69.1	67.5	64.7	61.4	55.2	44.9	40.0
60.0	74.8	74.7	73.7	72.0	69.1	66.0	60.3	51.5	46.9
65.0	78.9	78.8	77.8	75.9	73.0	70.0	64.8	57.5	53.1
70.0	82.3	82.2	81.1	79.2	76.2	73.4	68.5	62.1	58.6
75.0	85.2	84.9	83.9	81.8	78.9	76.2	71.5	65.8	63.0
80.0	87.1	86.8	85.8	83.7	80.7	78.2	73.7	68.8	66.3
85.0	88.3	89.3	86.9	84.8	81.8	79.4	75.0	70.6	68.5
90.0	88.4	88.0	87.0	84.9	81.9	79.8	75.6	71.7	69.8
95.0	88.5	88.2	87.1	85.0	82.1	80.0	76.1	72.3	70.6
100.0	87.9	87.6	86.5	84.5	81.6	79.8	76.1	72.4	71.0
105.0	86.8	86.4	85.4	83.4	80.7	78.9	75.7	72.2	70.8
110.0	84.9	84.5	83.5	81.7	79.1	77.4	74.6	71.4	70.1
115.0	82.4	82.1	81.2	79.4	77.0	75.4	73.0	70.1	68.9
120.0	79.8	79.5	78.5	76.9	74.5	73.1	71.0	68.5	67.5
125.0	76.8	76.5	75.6	74.0	71.8	70.5	68.8	66.7	65.8
130.0	73.8	73.4	72.7	71.2	69.1	67.9	66.6	64.8	64.1
135.0	71.2	70.9	70.2	68.8	66.8	65.6	64.6	63.4	62.8
140.0	69.7	69.4	68.6	67.4	65.5	64.2	63.4	62.5	62.1
145.0	69.6	69.5	69.0	67.8	65.6	64.2	63.5	62.9	62.6
150.0	72.5	72.4	71.5	70.0	67.6	65.8	65.8	66.0	66.0
155.0	76.1	75.5	74.5	73.3	71.3	68.9	70.0	70.6	70.7
160.0	78.2	77.6	77.5	76.1	74.5	71.3	73.1	72.9	72.7
165.0	76.3	76.1	76.5	74.7	73.2	70.0	71.8	71.7	71.7
170.0	67.4	67.5	67.8	65.8	64.0	62.9	63.3	64.3	64.1
175.0	49.0	48.7	48.5	47.6	45.9	45.8	45.6	46.7	46.3
180.0	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9



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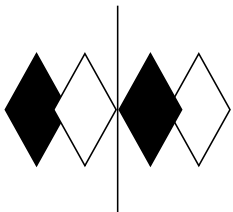
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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	0
5- 10	0
10- 15	1
15- 20	3
20- 25	4
25- 30	7
30- 35	10
35- 40	13
40- 45	17
45- 50	21
50- 55	25
55- 60	29
60- 65	33
65- 70	37
70- 75	40
75- 80	42
80- 85	44
85- 90	44
90- 95	44
95-100	44
100-105	43
105-110	42
110-115	39
115-120	37
120-125	34
125-130	31
130-135	28
135-140	25
140-145	22
145-150	20
150-155	18
155-160	15
160-165	12
165-170	8
170-175	4
175-180	1

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	1
0- 20	4
0- 30	15
0- 40	38
0- 50	76
0- 60	131
0- 70	201
0- 80	282
0- 90	370
0-100	459
0-110	543
0-120	619
0-130	684
0-140	736
0-150	778
0-160	811
0-170	832
0-180	837



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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	71	71	71	71	65	65	65	65	54	54	54	43	43	43	34	34	34	30
1	61	57	53	49	55	51	48	45	42	39	36	33	31	29	24	23	21	17
2	54	47	42	37	49	43	38	34	34	31	27	27	24	21	19	17	15	12
3	48	40	34	29	44	37	31	27	29	25	21	22	19	16	16	14	12	8
4	44	35	29	24	39	32	26	22	25	21	17	19	16	13	14	11	9	6
5	40	31	24	20	36	28	22	18	22	18	14	17	13	11	12	9	7	5
6	36	27	21	16	33	25	19	15	20	15	12	15	11	9	11	8	6	4
7	33	24	18	14	30	22	17	13	17	13	10	13	10	8	9	7	5	3
8	31	22	16	12	28	20	15	11	16	12	9	12	9	6	9	6	4	2
9	29	20	14	10	26	18	13	9	14	10	8	11	8	6	8	5	4	2
10	27	18	13	9	24	16	11	8	13	9	7	10	7	5	7	5	3	2

ALL CANDELA, LUMENS, LUMINANCE, COEFFICIENT OF UTILIZATION AND VCP VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.000. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.