

**REPORT NUMBER:** ITL91852-GONIOPHOTOMETRY

**PAGE:** 2 OF 6

**ISSUE DATE:** 05/29/19

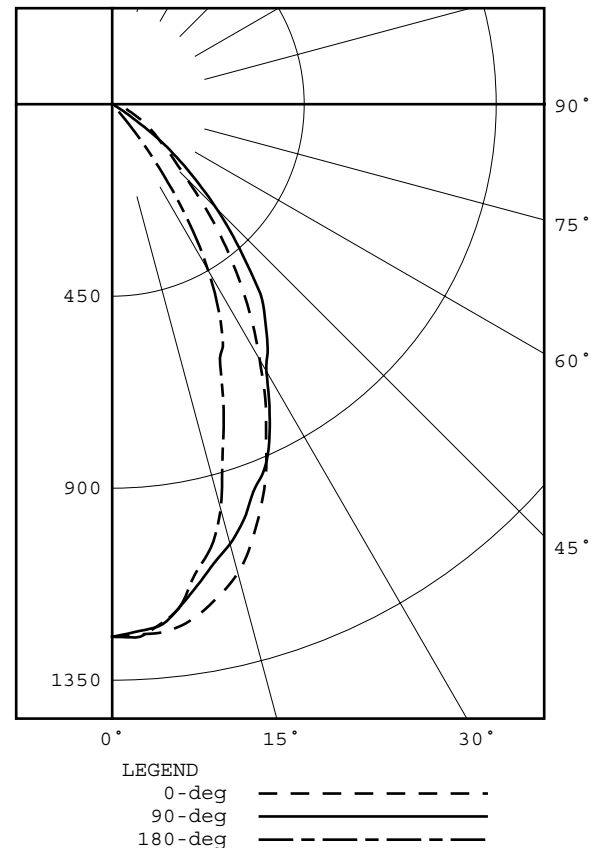
**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** A72-L1800-A-9230-P

CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	1248	1248	1248	1248	1248	
5	1244	1242	1229	1226	1227	115
15	1138	1108	1067	1007	982	295
25	853	916	871	631	614	362
35	535	652	627	417	246	321
45	249	364	346	33	0	179
55	122	189	79	1	0	76
65	56	73	8	0	0	28
75	24	21	2	0	0	10
85	10	7	0	0	0	3
90	6	4	0	0	0	
95	4	2	0	0	0	1
105	2	1	0	0	0	0
115	1	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	773	55.5
0- 40	1094	78.6
0- 60	1350	96.9
0- 90	1391	99.9
90-120	2	0.1
90-130	2	0.1
90-150	2	0.1
90-180	2	0.1
0-180	1392	100.0

EFFICACY = 66.0 lm/W  
CIE TYPE - DIRECT  
PLANE : 0-DEG 90-DEG 180-DEG  
SPACING CRITERIA : 0.95 0.96 0.74  
BEAM ANGLE (50%) : 56.5 X 70.1 DEGREES  
FIELD ANGLE (10%) : 92.7 X 106.8 DEGREES





PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

**REPORT NUMBER:** ITL91852-GONIOPHOTOMETRY

**PAGE:** 3 OF 6

**ISSUE DATE:** 05/29/19

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** A72-L1800-A-9230-P

CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	1248	1248	1248	1248	1248	1248	1248	1248	1248
5.0	1244	1247	1242	1232	1229	1221	1226	1221	1227
10.0	1209	1199	1183	1169	1146	1157	1148	1129	1118
15.0	1138	1129	1108	1096	1067	1041	1007	984	982
20.0	1014	1010	1029	1003	967	926	821	764	764
25.0	853	889	916	922	871	751	631	617	614
30.0	691	725	789	810	723	604	532	486	450
35.0	535	580	652	674	627	524	417	308	246
40.0	384	426	501	556	495	404	223	79	60
45.0	249	296	364	407	346	242	33	1	0
50.0	170	201	265	267	208	47	1	0	0
55.0	122	151	189	170	79	5	1	0	0
60.0	87	102	123	96	16	2	0	0	0
65.0	56	63	73	38	8	1	0	0	0
70.0	37	39	39	18	4	1	0	0	0
75.0	24	25	21	10	2	0	0	0	0
80.0	16	15	12	5	1	0	0	0	0
85.0	10	9	7	3	0	0	0	0	0
90.0	6	6	4	1	0	0	0	0	0
95.0	4	4	2	1	0	0	0	0	0
100.0	3	2	1	0	0	0	0	0	0
105.0	2	1	1	0	0	0	0	0	0
110.0	1	1	0	0	0	0	0	0	0
115.0	1	0	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0



PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

**REPORT NUMBER:** ITL91852-GONIOPHOTOMETRY  
**ISSUE DATE:** 05/29/19  
**PREPARED FOR:** LITELAB CORPORATION  
**CATALOG NUMBER:** A72-L1800-A-9230-P

**PAGE:** 4 OF 6

5-DEGREE  
 ZONAL LUMEN SUMMARY

0- 5	30
5- 10	86
10- 15	132
15- 20	164
20- 25	180
25- 30	183
30- 35	173
35- 40	148
40- 45	108
45- 50	72
50- 55	46
55- 60	30
60- 65	18
65- 70	10
70- 75	6
75- 80	4
80- 85	2
85- 90	1
90- 95	1
95-100	0
100-105	0
105-110	0
110-115	0
115-120	0
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE  
 ZONAL LUMEN SUMMARY

0- 10	115
0- 20	411
0- 30	773
0- 40	1094
0- 50	1274
0- 60	1350
0- 70	1378
0- 80	1387
0- 90	1391
0-100	1392
0-110	1392
0-120	1392
0-130	1392
0-140	1392
0-150	1392
0-160	1392
0-170	1392
0-180	1392



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL91852-GONIOPHOTOMETRY

PAGE: 5 OF 6

ISSUE DATE: 05/29/19

PREPARED FOR: LITELAB CORPORATION

CATALOG NUMBER: A72-L1800-A-9230-P

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	113	109	106	104	110	107	105	102	103	101	99	99	98	96	96	94	93	91
2	106	100	96	92	104	98	94	91	95	92	89	92	89	87	89	87	85	83
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77	75
4	93	85	78	74	92	84	78	73	81	76	72	79	75	71	77	74	70	69
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58
7	78	68	61	56	77	67	60	56	65	60	55	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	69	58	52	48	57	52	48	56	51	47	56	51	47	46
10	66	55	49	45	65	55	49	45	54	48	44	53	48	44	52	48	44	43

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

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.

**REPORT NUMBER:** ITL91852-GONIOPHOTOMETRY

**PAGE:** 6 OF 6

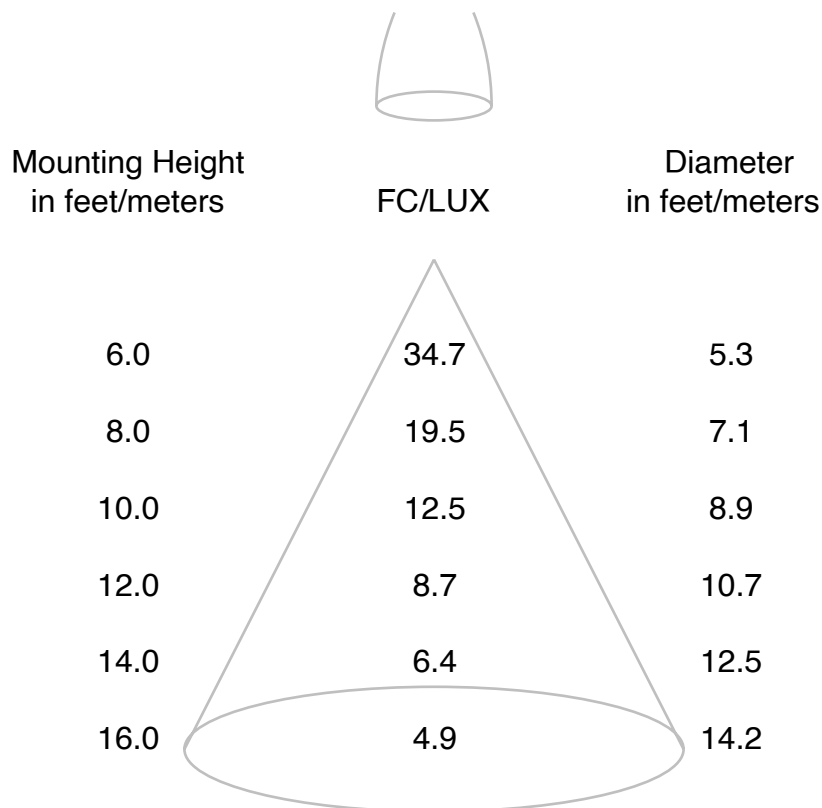
**ISSUE DATE:** 05/29/19

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** A72-L1800-A-9230-P

## CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.  
If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.