

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

REPORT NUMBER: ITL83578

PAGE: 1 OF 7

ISSUE DATE: 12/04/14

REVISED: 11/11/15

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: K2-LED-X51-WFL-12, SM-AP-LED-X51-WFL-12, AP-LED-X51-WFL-12, TY2-LED-X51-WFL-12

LUMINAIRE: CAST METAL HOUSING WITH UNFINISHED BROWN INTERIOR FINISH, CAST METAL DRIVER HOUSING, MACHINED BLACK FINISHED CIRCUIT BOARD MOUNTING BLOCK, 1 CIRCUIT BOARD WITH ONE LED, MOLDED WHITE PLASTIC LED SURROUND, MOLDED MULTI-FACETED TIERED PLASTIC REFLECTOR WITH TEXTURED SEMI-SPECULAR FINISH, CLEAR MICRO-PRISMATIC FLAT GLASS LENS IN MACHINED WHITE PAINTED METAL FRAME. LENS PRISMS IN.

LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), AIMED AT THE HORIZON.

INPUT ELECTRICAL: 120.0 VOLTS, 59.0 WATTS, 0.494 AMPS

LED DRIVER: THOMAS RESEARCH PRODUCTS PLED75W-054-C1400-D, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

#### FLOODLIGHT CHARACTERISTICS

#### AXIAL CANDLEPOWER

IES TYPE 5H X 5V  
MAXIMUM CANDLEPOWER 4966. AT 0.0 H, 0.0 V  
HORIZONTAL BEAM ANGLE (50%) 54.0 deg  
VERTICAL BEAM ANGLE (50%) 54.2 deg  
HORIZONTAL FIELD ANGLE (10%) 77.7 deg  
VERTICAL FIELD ANGLE (10%) 80.7 deg  
BEAM LUMENS (% FIXTURE) 2663. ( 67.4 % )  
FIELD LUMENS (% FIXTURE) 3563. ( 90.2 % )  
TOTAL LUMENS (% FIXTURE) 3952. (100.0 % )  
EFFICACY = 67.0 lm/W



Checked ..... *B HYRE* .....

Approved ..... *R BEATTIE* .....  
Lighting Engineer

DEG	HORIZ.	DEG	VERT.
90.0	0.	90.0	0.
85.0	17.	85.0	6.
75.0	35.	75.0	22.
65.0	54.	65.0	45.
55.0	81.	55.0	91.
47.5	146.	47.5	170.
42.5	272.	42.5	324.
37.5	579.	37.5	659.
33.0	1180.	33.0	1274.
29.0	2021.	29.0	2063.
25.5	2822.	25.5	2803.
22.5	3402.	22.5	3365.
19.5	3892.	19.5	3840.
17.0	4188.	17.0	4185.
15.0	4400.	15.0	4407.
13.0	4569.	13.0	4581.
11.0	4701.	11.0	4713.
9.0	4797.	9.0	4817.
7.0	4867.	7.0	4887.
5.0	4916.	5.0	4931.
3.0	4945.	3.0	4955.
1.0	4963.	1.0	4964.
0.0	4966.	0.0	4966.
-1.0	4963.	-1.0	4964.
-3.0	4945.	-3.0	4950.
-5.0	4916.	-5.0	4911.
-7.0	4867.	-7.0	4851.
-9.0	4797.	-9.0	4765.
-11.0	4701.	-11.0	4651.
-13.0	4569.	-13.0	4512.
-15.0	4400.	-15.0	4325.
-17.0	4188.	-17.0	4097.
-19.5	3892.	-19.5	3768.
-22.5	3402.	-22.5	3330.
-25.5	2822.	-25.5	2806.
-29.0	2021.	-29.0	2117.
-33.0	1180.	-33.0	1359.
-37.5	579.	-37.5	731.
-42.5	272.	-42.5	369.
-47.5	146.	-47.5	195.
-55.0	81.	-55.0	97.
-65.0	54.	-65.0	54.
-75.0	35.	-75.0	32.
-85.0	17.	-85.0	16.
-90.0	0.	-90.0	0.

ALL CANDELA AND LUMEN VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY.

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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PAGE: 2 OF 7  
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## CANDELA TABULATION

### AVERAGE OF RIGHT AND LEFT SIDES

	0.0	1.0	3.0	5.0	7.0	9.0	11.0	13.0	15.0	17.0	19.5	22.5	25.5	29.0	33.0	37.5	42.5	47.5	55.0	65.0	75.0	85.0	90.0
90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85.0	6.	8.	9.	11.	13.	14.	16.	17.	17.	17.	17.	17.	17.	16.	15.	15.	15.	14.	11.	7.	4.	1.	0.
75.0	22.	22.	25.	27.	29.	32.	34.	34.	34.	34.	33.	33.	32.	31.	30.	28.	26.	25.	22.	19.	13.	4.	0.
65.0	45.	45.	48.	49.	51.	54.	55.	55.	54.	54.	53.	52.	50.	48.	46.	44.	40.	37.	32.	25.	19.	7.	0.
55.0	91.	91.	91.	90.	90.	88.	87.	85.	83.	81.	78.	75.	71.	68.	63.	58.	54.	49.	42.	32.	22.	10.	0.
47.5	170.	172.	172.	168.	166.	162.	155.	149.	142.	135.	126.	115.	105.	94.	83.	72.	64.	58.	49.	37.	25.	12.	0.
42.5	324.	327.	321.	314.	307.	294.	276.	259.	239.	219.	199.	172.	149.	128.	107.	88.	74.	64.	53.	40.	27.	13.	0.
37.5	659.	665.	653.	634.	611.	579.	546.	500.	458.	410.	353.	294.	240.	190.	146.	112.	86.	71.	57.	43.	28.	14.	0.
33.0	1274.	1278.	1251.	1209.	1149.	1076.	1011.	915.	822.	733.	615.	492.	385.	283.	199.	140.	101.	80.	61.	46.	30.	14.	0.
29.0	2063.	2062.	2033.	1977.	1897.	1794.	1663.	1514.	1367.	1207.	1002.	782.	589.	415.	281.	184.	122.	88.	65.	47.	31.	15.	0.
25.5	2803.	2797.	2767.	2704.	2614.	2492.	2332.	2152.	1967.	1761.	1481.	1152.	856.	586.	376.	232.	143.	96.	68.	49.	32.	15.	0.
22.5	3365.	3361.	3333.	3273.	3182.	3054.	2884.	2702.	2501.	2267.	1942.	1536.	1145.	767.	473.	280.	162.	103.	70.	50.	32.	16.	0.
19.5	3840.	3832.	3803.	3744.	3657.	3543.	3394.	3211.	3008.	2758.	2404.	1942.	1473.	986.	587.	331.	183.	112.	72.	51.	33.	16.	0.
17.0	4185.	4175.	4147.	4089.	3999.	3876.	3736.	3558.	3363.	3122.	2764.	2272.	1751.	1182.	690.	376.	200.	119.	74.	52.	33.	16.	0.
15.0	4407.	4402.	4378.	4324.	4236.	4112.	3962.	3792.	3593.	3370.	3019.	2518.	1966.	1340.	775.	413.	213.	124.	75.	52.	33.	16.	0.
13.0	4581.	4579.	4557.	4508.	4425.	4309.	4171.	4002.	3801.	3583.	3238.	2740.	2168.	1493.	859.	448.	225.	129.	76.	53.	34.	17.	0.
11.0	4713.	4709.	4690.	4642.	4569.	4473.	4339.	4177.	3975.	3750.	3421.	2930.	2347.	1633.	940.	480.	237.	134.	78.	53.	34.	17.	0.
9.0	4817.	4810.	4790.	4745.	4678.	4588.	4477.	4321.	4131.	3901.	3571.	3084.	2500.	1751.	1012.	510.	247.	138.	78.	53.	34.	17.	0.
7.0	4887.	4881.	4860.	4821.	4762.	4675.	4569.	4424.	4249.	4018.	3691.	3213.	2628.	1855.	1074.	535.	256.	141.	79.	54.	34.	17.	0.
5.0	4931.	4925.	4906.	4871.	4818.	4739.	4634.	4497.	4324.	4101.	3779.	3307.	2721.	1937.	1123.	555.	263.	143.	80.	54.	34.	17.	0.
3.0	4955.	4951.	4936.	4902.	4851.	4777.	4679.	4545.	4375.	4157.	3840.	3368.	2786.	1993.	1159.	569.	268.	145.	80.	54.	34.	17.	0.
1.0	4964.	4962.	4943.	4914.	4867.	4798.	4701.	4567.	4400.	4185.	3883.	3399.	2819.	2019.	1176.	577.	271.	146.	81.	54.	35.	17.	0.
0.0	4966.	4963.	4945.	4916.	4867.	4797.	4701.	4569.	4400.	4188.	3892.	3402.	2822.	2021.	1180.	579.	272.	146.	81.	54.	35.	17.	0.
-1.0	4964.	4962.	4946.	4915.	4864.	4793.	4697.	4564.	4396.	4182.	3883.	3396.	2815.	2017.	1177.	578.	272.	146.	81.	54.	35.	17.	0.
-3.0	4950.	4949.	4933.	4900.	4847.	4773.	4674.	4541.	4364.	4148.	3827.	3357.	2779.	1988.	1162.	572.	270.	145.	81.	54.	34.	17.	0.
-5.0	4911.	4911.	4896.	4859.	4804.	4728.	4626.	4489.	4309.	4088.	3761.	3291.	2713.	1935.	1129.	559.	265.	144.	80.	54.	34.	17.	0.
-7.0	4851.	4851.	4834.	4799.	4738.	4654.	4543.	4407.	4219.	3996.	3673.	3198.	2622.	1860.	1083.	540.	259.	142.	80.	54.	34.	17.	0.
-9.0	4765.	4764.	4748.	4709.	4649.	4555.	4434.	4291.	4089.	3875.	3548.	3074.	2500.	1759.	1024.	516.	250.	139.	79.	53.	34.	17.	0.
-11.0	4651.	4653.	4633.	4591.	4521.	4423.	4299.	4147.	3942.	3721.	3393.	2916.	2352.	1641.	956.	488.	241.	135.	78.	53.	34.	17.	0.
-13.0	4512.	4514.	4490.	4432.	4364.	4258.	4127.	3971.	3764.	3540.	3211.	2730.	2178.	1507.	879.	456.	230.	131.	77.	53.	34.	17.	0.
-15.0	4325.	4330.	4303.	4243.	4162.	4053.	3919.	3761.	3555.	3332.	2998.	2516.	1977.	1357.	796.	422.	218.	126.	76.	52.	33.	16.	0.
-17.0	4097.	4108.	4066.	4009.	3927.	3819.	3683.	3521.	3327.	3098.	2758.	2281.	1768.	1203.	709.	387.	204.	121.	75.	52.	33.	16.	0.
-19.5	3768.	3779.	3737.	3683.	3603.	3496.	3355.	3186.	2997.	2760.	2419.	1965.	1501.	1013.	608.	343.	188.	115.	73.	51.	33.	16.	0.
-22.5	3330.	3307.	3298.	3245.	3162.	3035.	2894.	2718.	2524.	2294.	1976.	1573.	1183.	801.	495.	291.	168.	106.	71.	50.	32.	16.	0.
-25.5	2806.	2780.	2760.	2717.	2617.	2498.	2363.	2197.	2002.	1802.	1531.	1197.	895.	616.	396.	242.	148.	99.	69.	49.	32.	15.	0.
-29.0	2117.	2091.	2066.	2019.	1937.	1840.	1717.	1585.	1417.	1263.	1050.	826.	627.	440.	298.	193.	127.	91.	66.	48.	31.	15.	0.
-33.0	1359.	1335.	1313.	1276.	1220.	1149.	1058.	977.	878.	786.	659.	526.	414.	303.	214.	147.	105.	82.	62.	46.	30.	14.	0.
-37.5	731.	718.	707.	694.	671.	637.	593.	548.	501.	451.	388.	323.	261.	205.	157.	118.	89.	73.	58.	44.	28.	14.	0.
-42.5	369.	365.	365.	356.	344.	328.	312.	290.	270.	244.	221.	190.	161.	138.	113.	93.	76.	65.	54.	41.	27.	13.	0.
-47.5	195.	195.	194.	190.	186.	180.	174.	166.	156.	148.	138.	124.	112.	100.	87.	75.	66.	59.	50.	38.	25.	12.	0.
-55.0	97.	97.	96.	95.	94.	93.	91.	89.	86.	84.	80.	77.	73.	68.	64.	59.	55.	50.	43.	32.	22.	10.	0.
-65.0	54.	54.	53.	53.	53.	53.	53.	53.	52.	52.	51.	50.	49.	47.	45.	43.	40.	37.	32.	25.	19.	7.	0.
-75.0	32.	32.	32.	32.	33.	33.	33.	32.	32.	32.	32.	31.	31.	30.	29.	28.	26.	25.	22.	19.	13.	4.	0.
-85.0	16.	16.	16.	17.	17.	17.	17.	17.	17.	17.	17.	16.	16.	16.	15.	15.	15.	14.	11.	8.	4.	1.	0.
-90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

BEAM EDGE = 2483. CP = 50% OF MAX  
FIELD EDGE = 497. CP = 10% OF MAX

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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PAGE: 3 OF 7  
REVISED: 11/11/15

## CANDELA TABULATION - FIELD ONLY

### AVERAGE OF RIGHT AND LEFT SIDES

	0.0	1.0	3.0	5.0	7.0	9.0	11.0	13.0	15.0	17.0	19.5	22.5	25.5	29.0	33.0	37.5	42.5	47.5	55.0	65.0	75.0	85.0	90.0
90.0																							
85.0																							
75.0																							
65.0																							
55.0																							
47.5																							
42.5																							
37.5	659.	665.	653.	634.	611.	579.	546.	500.															
33.0	1274.	1278.	1251.	1209.	1149.	1076.	1011.	915.	822.	733.	615.												
29.0	2063.	2062.	2033.	1977.	1897.	1794.	1663.	1514.	1367.	1207.	1002.	782.	589.										
25.5	2803.	2797.	2767.	2704.	2614.	2492.	2332.	2152.	1967.	1761.	1481.	1152.	856.	586.									
22.5	3365.	3361.	3333.	3273.	3182.	3054.	2884.	2702.	2501.	2267.	1942.	1536.	1145.	767.									
19.5	3840.	3832.	3803.	3744.	3657.	3543.	3394.	3211.	3008.	2758.	2404.	1942.	1473.	986.	587.								
17.0	4185.	4175.	4147.	4089.	3999.	3876.	3736.	3558.	3363.	3122.	2764.	2272.	1751.	1182.	690.								
15.0	4407.	4402.	4378.	4324.	4236.	4112.	3962.	3792.	3593.	3370.	3019.	2518.	1966.	1340.	775.								
13.0	4581.	4579.	4557.	4508.	4425.	4309.	4171.	4002.	3801.	3583.	3238.	2740.	2168.	1493.	859.								
11.0	4713.	4709.	4690.	4642.	4569.	4473.	4339.	4177.	3975.	3750.	3421.	2930.	2347.	1633.	940.								
9.0	4817.	4810.	4790.	4745.	4678.	4588.	4477.	4321.	4131.	3901.	3571.	3084.	2500.	1751.	1012.	510.							
7.0	4887.	4881.	4860.	4821.	4762.	4675.	4569.	4424.	4249.	4018.	3691.	3213.	2628.	1855.	1074.	535.							
5.0	4931.	4925.	4906.	4871.	4818.	4739.	4634.	4497.	4324.	4101.	3779.	3307.	2721.	1937.	1123.	555.							
3.0	4955.	4951.	4936.	4902.	4851.	4777.	4679.	4545.	4375.	4157.	3840.	3368.	2786.	1993.	1159.	569.							
1.0	4964.	4962.	4943.	4914.	4867.	4798.	4701.	4567.	4400.	4185.	3883.	3399.	2819.	2019.	1176.	577.							
0.0	4966.	4963.	4945.	4916.	4867.	4797.	4701.	4569.	4400.	4188.	3892.	3402.	2822.	2021.	1180.	579.							
-1.0	4964.	4962.	4946.	4915.	4864.	4793.	4697.	4564.	4396.	4182.	3883.	3396.	2815.	2017.	1177.	578.							
-3.0	4950.	4949.	4933.	4900.	4847.	4773.	4674.	4541.	4364.	4148.	3827.	3357.	2779.	1988.	1162.	572.							
-5.0	4911.	4911.	4896.	4859.	4804.	4728.	4626.	4489.	4309.	4088.	3761.	3291.	2713.	1935.	1129.	559.							
-7.0	4851.	4851.	4834.	4799.	4738.	4654.	4543.	4407.	4219.	3996.	3673.	3198.	2622.	1860.	1083.	540.							
-9.0	4765.	4764.	4748.	4709.	4649.	4555.	4434.	4291.	4089.	3875.	3548.	3074.	2500.	1759.	1024.	516.							
-11.0	4651.	4653.	4633.	4591.	4521.	4423.	4299.	4147.	3942.	3721.	3393.	2916.	2352.	1641.	956.								
-13.0	4512.	4514.	4490.	4432.	4364.	4258.	4127.	3971.	3764.	3540.	3211.	2730.	2178.	1507.	879.								
-15.0	4325.	4330.	4303.	4243.	4162.	4053.	3919.	3761.	3555.	3332.	2998.	2516.	1977.	1357.	796.								
-17.0	4097.	4108.	4066.	4009.	3927.	3819.	3683.	3521.	3327.	3098.	2758.	2281.	1768.	1203.	709.								
-19.5	3768.	3779.	3737.	3683.	3603.	3496.	3355.	3186.	2997.	2760.	2419.	1965.	1501.	1013.	608.								
-22.5	3330.	3307.	3298.	3245.	3162.	3035.	2894.	2718.	2524.	2294.	1976.	1573.	1183.	801.									
-25.5	2806.	2780.	2760.	2717.	2617.	2498.	2363.	2197.	2002.	1802.	1531.	1197.	895.	616.									
-29.0	2117.	2091.	2066.	2019.	1937.	1840.	1717.	1585.	1417.	1263.	1050.	826.	627.										
-33.0	1359.	1335.	1313.	1276.	1220.	1149.	1058.	977.	878.	786.	659.	526.											
-37.5	731.	718.	707.	694.	671.	637.	593.	548.	501.														
-42.5																							
-47.5																							
-55.0																							
-65.0																							
-75.0																							
-85.0																							
-90.0																							

BEAM EDGE = 2483. CP = 50% OF MAX  
FIELD EDGE = 497. CP = 10% OF MAX

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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

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

REPORT NUMBER: ITL83578  
ISSUE DATE: 12/04/14  
PREPARED FOR: B-K LIGHTING, INC.

PAGE: 4 OF 7  
REVISED: 11/11/15

## LUMEN TABULATION

### AVERAGE OF RIGHT AND LEFT SIDES

	2	4	6	8	10	12	14	16	18	21	24	27	31	35	40	45	50	60	70	80	90	TOTAL	
90	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	2.3	
80	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.1	0.0	0.0	4.7	
70	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.6	0.3	0.1	0.0	7.5	
60	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.7	0.6	0.7	0.6	0.5	0.7	0.4	0.2	0.0	11.1	
50	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.2	0.1	0.0	8.5	
45	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.6	0.9	0.7	0.6	0.7	0.5	0.5	0.4	0.3	0.5	0.3	0.1	0.0	13.2	
40	2.0	2.0	1.9	1.8	1.7	1.6	1.5	1.3	1.2	1.5	1.2	1.0	1.0	0.7	0.7	0.5	0.4	0.5	0.3	0.1	0.0	23.1	
35	3.1	3.0	2.9	2.8	2.6	2.4	2.2	1.9	1.7	2.1	1.7	1.3	1.2	0.8	0.7	0.5	0.3	0.4	0.2	0.1	0.0	32.0	
31	5.0	4.9	4.8	4.6	4.3	4.0	3.6	3.2	2.8	3.5	2.6	1.9	1.8	1.1	0.9	0.5	0.4	0.5	0.2	0.1	0.0	50.8	
27	5.1	5.1	4.9	4.7	4.5	4.2	3.8	3.5	3.1	3.8	2.9	2.1	1.9	1.2	0.8	0.5	0.3	0.4	0.2	0.1	0.0	53.0	
24	6.1	6.1	6.0	5.8	5.5	5.2	4.8	4.4	4.0	5.0	3.9	2.8	2.5	1.4	1.0	0.5	0.3	0.4	0.2	0.1	0.0	66.0	
21	7.0	6.9	6.8	6.6	6.4	6.1	5.7	5.3	4.8	6.2	4.9	3.6	3.2	1.8	1.2	0.6	0.3	0.4	0.2	0.1	0.0	78.3	
18	5.1	5.0	5.0	4.8	4.7	4.5	4.2	4.0	3.6	4.8	3.8	2.9	2.5	1.4	0.9	0.4	0.2	0.3	0.1	0.1	0.0	58.4	
16	5.4	5.3	5.2	5.1	4.9	4.7	4.5	4.2	3.9	5.2	4.3	3.2	2.9	1.6	1.0	0.5	0.3	0.3	0.1	0.1	0.0	62.7	
14	5.6	5.5	5.5	5.4	5.2	5.0	4.8	4.5	4.2	5.6	4.6	3.6	3.2	1.8	1.1	0.5	0.3	0.3	0.1	0.1	0.0	66.6	
12	5.7	5.7	5.6	5.5	5.4	5.2	5.0	4.7	4.4	5.9	4.9	3.9	3.5	1.9	1.2	0.5	0.3	0.3	0.1	0.1	0.0	69.7	
10	5.9	5.8	5.8	5.7	5.5	5.4	5.1	4.9	4.5	6.2	5.2	4.1	3.7	2.1	1.2	0.6	0.3	0.3	0.1	0.1	0.0	72.3	
8	5.9	5.9	5.9	5.8	5.6	5.5	5.3	5.0	4.7	6.4	5.4	4.3	4.0	2.2	1.3	0.6	0.3	0.3	0.1	0.1	0.0	74.4	
6	6.0	6.0	5.9	5.8	5.7	5.5	5.3	5.1	4.8	6.5	5.6	4.5	4.1	2.3	1.3	0.6	0.3	0.3	0.1	0.1	0.0	75.9	
4	6.0	6.0	5.9	5.9	5.7	5.6	5.4	5.1	4.8	6.6	5.7	4.6	4.2	2.4	1.4	0.6	0.3	0.3	0.1	0.1	0.0	76.9	
2	6.0	6.0	6.0	5.9	5.8	5.6	5.4	5.2	4.9	6.7	5.7	4.6	4.3	2.4	1.4	0.6	0.3	0.3	0.1	0.1	0.0	77.4	
0	6.0	6.0	6.0	5.9	5.8	5.6	5.4	5.2	4.9	6.7	5.7	4.6	4.3	2.4	1.4	0.6	0.3	0.3	0.1	0.1	0.0	77.3	
-2	6.0	6.0	5.9	5.9	5.7	5.6	5.4	5.1	4.8	6.6	5.7	4.6	4.2	2.4	1.4	0.6	0.3	0.3	0.1	0.1	0.0	76.8	
-4	6.0	6.0	5.9	5.8	5.7	5.5	5.3	5.1	4.8	6.5	5.6	4.5	4.1	2.3	1.4	0.6	0.3	0.3	0.1	0.1	0.0	75.7	
-6	5.9	5.9	5.8	5.7	5.6	5.4	5.2	5.0	4.7	6.3	5.4	4.3	4.0	2.2	1.3	0.6	0.3	0.3	0.1	0.1	0.0	74.1	
-8	5.8	5.8	5.7	5.6	5.5	5.3	5.1	4.8	4.5	6.1	5.2	4.1	3.7	2.1	1.2	0.6	0.3	0.3	0.1	0.1	0.0	72.0	
-10	5.7	5.6	5.6	5.5	5.3	5.1	4.9	4.6	4.3	5.8	4.9	3.9	3.5	2.0	1.2	0.5	0.3	0.3	0.1	0.1	0.0	69.3	
-12	5.5	5.5	5.4	5.3	5.1	4.9	4.7	4.4	4.1	5.5	4.6	3.6	3.2	1.8	1.1	0.5	0.3	0.3	0.1	0.1	0.0	66.0	
-14	5.3	5.2	5.2	5.0	4.9	4.7	4.5	4.2	3.9	5.2	4.2	3.3	2.9	1.6	1.0	0.5	0.3	0.3	0.1	0.1	0.0	62.2	
-16	5.0	4.9	4.9	4.7	4.6	4.4	4.2	3.9	3.6	4.8	3.9	2.9	2.6	1.4	0.9	0.5	0.2	0.3	0.1	0.1	0.0	57.9	
-18	6.9	6.8	6.7	6.5	6.3	6.0	5.7	5.3	4.8	6.3	5.0	3.7	3.2	1.9	1.2	0.6	0.4	0.4	0.2	0.1	0.0	78.0	
-21	6.0	6.0	5.9	5.7	5.5	5.2	4.8	4.5	4.0	5.1	4.0	2.9	2.6	1.5	1.1	0.6	0.3	0.4	0.2	0.1	0.0	66.4	
-24	5.1	5.0	4.9	4.7	4.5	4.2	3.9	3.5	3.1	4.0	3.0	2.2	2.0	1.2	0.9	0.5	0.3	0.4	0.2	0.1	0.0	53.9	
-27	5.1	5.0	4.9	4.7	4.4	4.1	3.8	3.3	2.9	3.6	2.8	2.1	1.9	1.2	0.9	0.6	0.4	0.5	0.2	0.1	0.0	52.6	
-31	3.3	3.2	3.1	3.0	2.8	2.5	2.3	2.1	1.8	2.3	1.8	1.4	1.3	0.9	0.7	0.5	0.3	0.4	0.2	0.1	0.0	33.9	
-35	2.2	2.2	2.1	2.0	1.9	1.8	1.6	1.5	1.3	1.7	1.4	1.1	1.1	0.8	0.7	0.5	0.4	0.5	0.3	0.1	0.0	25.1	
-40	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.7	1.0	0.8	0.7	0.7	0.6	0.6	0.4	0.3	0.5	0.3	0.1	0.0	14.5	
-45	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.4	0.2	0.1	0.0	9.2	
-50	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.5	0.8	0.4	0.2	0.0	11.5	
-60	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.6	0.3	0.1	0.0	7.5	
-70	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.1	0.0	4.8	
-80	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	2.5	
-90	165.3	164.0	161.5	157.6	152.4	146.0	138.3	129.4	119.4	158.3	131.2	102.7	94.3	55.9	38.0	20.8	13.0	15.5	8.3	3.3	0.5	0.0	1975.8

LUMEN TOTAL THIS PAGE = 1975.8



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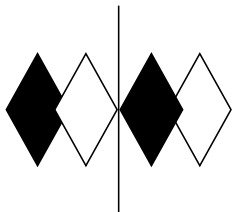
PAGE: 5 OF 7  
REVISED: 11/11/15

# LUMEN TABULATION - FIELD ONLY

## AVERAGE OF RIGHT AND LEFT SIDES

	0	2	4	6	8	10	12	14	16	18	21	24	27	31	35	40	45	50	60	70	80	90	TOTAL
90																							0.0
80																							0.0
70																							0.0
60																							0.0
50																							0.0
45																							0.0
40																							0.0
35	2.0	2.0	1.9	1.8	1.7	1.6	1.5																12.6
31	3.1	3.0	2.9	2.8	2.6	2.4	2.2	1.9	1.7	2.1													24.8
27	5.0	4.9	4.8	4.6	4.3	4.0	3.6	3.2	2.8	3.5	2.6	1.9											45.3
24	5.1	5.1	4.9	4.7	4.5	4.2	3.8	3.5	3.1	3.8	2.9	2.1	1.9										49.6
21	6.1	6.1	6.0	5.8	5.5	5.2	4.8	4.4	4.0	5.0	3.9	2.8	2.5										62.0
18	7.0	6.9	6.8	6.6	6.4	6.1	5.7	5.3	4.8	6.2	4.9	3.6	3.2	1.8									75.5
16	5.1	5.0	5.0	4.8	4.7	4.5	4.2	4.0	3.6	4.8	3.8	2.9	2.5	1.4									56.3
14	5.4	5.3	5.2	5.1	4.9	4.7	4.5	4.2	3.9	5.2	4.3	3.2	2.9	1.6									60.5
12	5.6	5.5	5.5	5.4	5.2	5.0	4.8	4.5	4.2	5.6	4.6	3.6	3.2	1.8									64.2
10	5.7	5.7	5.6	5.5	5.4	5.2	5.0	4.7	4.4	5.9	4.9	3.9	3.5	1.9									67.3
8	5.9	5.8	5.8	5.7	5.5	5.4	5.1	4.9	4.5	6.2	5.2	4.1	3.7	2.1	1.2								71.0
6	5.9	5.9	5.9	5.8	5.6	5.5	5.3	5.0	4.7	6.4	5.4	4.3	4.0	2.2	1.3								73.1
4	6.0	6.0	5.9	5.8	5.7	5.5	5.3	5.1	4.8	6.5	5.6	4.5	4.1	2.3	1.3								74.5
2	6.0	6.0	5.9	5.9	5.7	5.6	5.4	5.1	4.8	6.6	5.7	4.6	4.2	2.4	1.4								75.5
0	6.0	6.0	6.0	5.9	5.8	5.6	5.4	5.2	4.9	6.7	5.7	4.6	4.3	2.4	1.4								76.0
-2	6.0	6.0	6.0	5.9	5.8	5.6	5.4	5.2	4.9	6.7	5.7	4.6	4.3	2.4	1.4								75.9
-4	6.0	6.0	5.9	5.9	5.7	5.6	5.4	5.1	4.8	6.6	5.7	4.6	4.2	2.4	1.4								75.4
-6	6.0	6.0	5.9	5.8	5.7	5.5	5.3	5.1	4.8	6.5	5.6	4.5	4.1	2.3	1.4								74.3
-8	5.9	5.9	5.8	5.7	5.6	5.4	5.2	5.0	4.7	6.3	5.4	4.3	4.0	2.2	1.3								72.8
-10	5.8	5.8	5.7	5.6	5.5	5.3	5.1	4.8	4.5	6.1	5.2	4.1	3.7	2.1	1.2								70.6
-12	5.7	5.6	5.6	5.5	5.3	5.1	4.9	4.6	4.3	5.8	4.9	3.9	3.5	2.0									66.8
-14	5.5	5.5	5.4	5.3	5.1	4.9	4.7	4.4	4.1	5.5	4.6	3.6	3.2	1.8									63.7
-16	5.3	5.2	5.2	5.0	4.9	4.7	4.5	4.2	3.9	5.2	4.2	3.3	2.9	1.6									60.0
-18	5.0	4.9	4.9	4.7	4.6	4.4	4.2	3.9	3.6	4.8	3.9	2.9	2.6	1.4									55.8
-21	6.9	6.8	6.7	6.5	6.3	6.0	5.7	5.3	4.8	6.3	5.0	3.7	3.2	1.9									75.1
-24	6.0	6.0	5.9	5.7	5.5	5.2	4.8	4.5	4.0	5.1	4.0	2.9	2.6										62.3
-27	5.1	5.0	4.9	4.7	4.5	4.2	3.9	3.5	3.1	4.0	3.0	2.2	2.0										50.3
-31	5.1	5.0	4.9	4.7	4.4	4.1	3.8	3.3	2.9	3.6	2.8	2.1											46.8
-35	3.3	3.2	3.1	3.0	2.8	2.5	2.3	2.1	1.8	2.3	1.8												28.1
-40	2.2	2.2	2.1	2.0	1.9	1.8	1.6	1.5															15.3
-45																							0.0
-50																							0.0
-60																							0.0
-70																							0.0
-80																							0.0
-90																							0.0
	159.8	158.6	156.1	152.3	147.2	140.9	133.5	123.4	112.6	149.1	121.4	93.0	80.2	39.9	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1781.4

LUMEN TOTAL THIS PAGE = 1781.4



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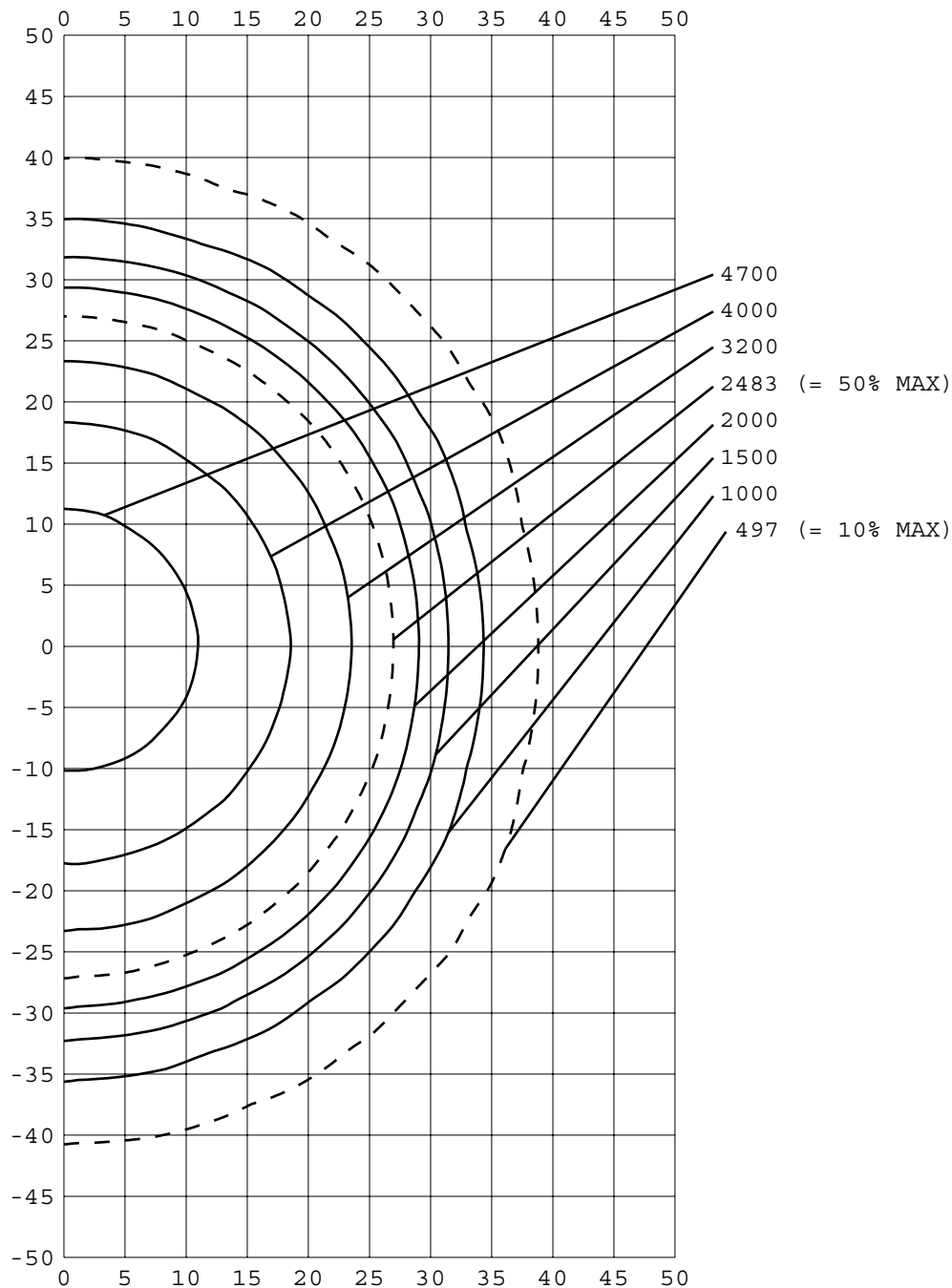
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REVISED: 11/11/15

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