

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

REPORT NUMBER: ITL83835

PAGE: 1 OF 7

ISSUE DATE: 12/31/14

REVISED: 11/10/15

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: K2-LED-X45-FL-12, SM-AP-LED-X45-FL-12, AP-LED-X45-FL-12, TY2-LED-X45-FL-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, 34.8 WATTS, 0.293 AMPS

LED DRIVER: ELDOLED ECODRIVE 561/S, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 1050mA OUTPUT.

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

AXIAL CANDLEPOWER

FLOODLIGHT CHARACTERISTICS

IES TYPE 5H X 5V
 MAXIMUM CANDLEPOWER 4174. AT 0.0 H, 0.0 V
 HORIZONTAL BEAM ANGLE (50%) 40.2 deg
 VERTICAL BEAM ANGLE (50%) 40.9 deg
 HORIZONTAL FIELD ANGLE (10%) 72.6 deg
 VERTICAL FIELD ANGLE (10%) 74.0 deg
 BEAM LUMENS (% FIXTURE) 1138. (47.3 %)
 FIELD LUMENS (% FIXTURE) 2052. (85.4 %)
 TOTAL LUMENS (% FIXTURE) 2404. (100.0 %)
 EFFICACY = 69.1 lm/W

DEG	HORIZ.	DEG	VERT.
90.0	0.	90.0	0.
85.0	10.	85.0	2.
75.0	21.	75.0	14.
65.0	39.	65.0	24.
55.0	73.	55.0	46.
47.5	128.	47.5	106.
42.5	195.	42.5	202.
37.5	343.	37.5	385.
33.0	620.	33.0	659.
29.0	1053.	29.0	1079.
25.5	1458.	25.5	1475.
22.5	1798.	22.5	1800.
19.5	2163.	19.5	2153.
17.0	2464.	17.0	2488.
15.0	2735.	15.0	2758.
13.0	2998.	13.0	3030.
11.0	3261.	11.0	3292.
9.0	3513.	9.0	3534.
7.0	3745.	7.0	3759.
5.0	3934.	5.0	3946.
3.0	4087.	3.0	4092.
1.0	4165.	1.0	4169.
0.0	4174.	0.0	4174.
-1.0	4165.	-1.0	4164.
-3.0	4087.	-3.0	4089.
-5.0	3934.	-5.0	3958.
-7.0	3745.	-7.0	3782.
-9.0	3513.	-9.0	3566.
-11.0	3261.	-11.0	3332.
-13.0	2998.	-13.0	3084.
-15.0	2735.	-15.0	2815.
-17.0	2464.	-17.0	2548.
-19.5	2163.	-19.5	2226.
-22.5	1798.	-22.5	1868.
-25.5	1458.	-25.5	1524.
-29.0	1053.	-29.0	1109.
-33.0	620.	-33.0	673.
-37.5	343.	-37.5	386.
-42.5	195.	-42.5	216.
-47.5	128.	-47.5	134.
-55.0	73.	-55.0	74.
-65.0	39.	-65.0	39.
-75.0	21.	-75.0	20.
-85.0	10.	-85.0	9.
-90.0	0.	-90.0	0.



Checked *B HYRE*
 Approved *R BEATTIE*
 Lighting Engineer

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.



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: ITL83835
ISSUE DATE: 12/31/14
PREPARED FOR: B-K LIGHTING, INC.

PAGE: 2 OF 7
REVISED: 11/10/15

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	2.	1.	2.	3.	4.	5.	6.	7.	8.	8.	9.	9.	9.	9.	9.	9.	9.	8.	6.	4.	3.	1.	0.
75.0	14.	14.	14.	15.	16.	17.	18.	19.	20.	20.	20.	20.	20.	19.	18.	17.	16.	15.	13.	11.	8.	3.	0.
65.0	24.	25.	26.	29.	31.	33.	35.	37.	37.	37.	37.	36.	35.	33.	31.	29.	27.	24.	20.	15.	11.	4.	0.
55.0	46.	47.	51.	57.	62.	66.	69.	70.	69.	67.	65.	62.	59.	55.	50.	46.	40.	35.	28.	20.	13.	6.	0.
47.5	106.	106.	111.	118.	123.	124.	123.	120.	116.	111.	106.	99.	91.	83.	73.	63.	54.	45.	35.	24.	15.	7.	0.
42.5	202.	200.	207.	209.	205.	200.	192.	183.	173.	163.	151.	137.	124.	110.	95.	80.	65.	53.	40.	26.	16.	7.	0.
37.5	385.	381.	378.	367.	356.	345.	323.	303.	281.	260.	232.	202.	176.	149.	124.	101.	79.	63.	45.	29.	17.	8.	0.
33.0	659.	658.	649.	631.	603.	570.	537.	498.	455.	414.	362.	302.	249.	199.	156.	123.	93.	73.	49.	31.	18.	8.	0.
29.0	1079.	1082.	1066.	1034.	988.	940.	870.	795.	710.	633.	539.	438.	348.	266.	199.	149.	109.	82.	54.	33.	19.	9.	0.
25.5	1475.	1478.	1459.	1426.	1377.	1327.	1235.	1135.	1025.	914.	771.	611.	473.	349.	248.	175.	124.	89.	58.	34.	19.	9.	0.
22.5	1800.	1802.	1785.	1749.	1688.	1620.	1528.	1427.	1311.	1183.	1013.	803.	610.	434.	297.	200.	136.	96.	61.	35.	20.	9.	0.
19.5	2153.	2154.	2132.	2085.	2010.	1924.	1813.	1698.	1576.	1439.	1252.	1012.	767.	533.	351.	226.	149.	103.	64.	36.	20.	9.	0.
17.0	2488.	2482.	2455.	2395.	2299.	2188.	2064.	1927.	1784.	1634.	1438.	1183.	908.	626.	400.	249.	159.	109.	66.	37.	20.	9.	0.
15.0	2758.	2756.	2722.	2651.	2543.	2413.	2270.	2114.	1953.	1786.	1572.	1308.	1014.	705.	439.	267.	166.	113.	68.	37.	21.	9.	0.
13.0	3030.	3027.	2984.	2890.	2778.	2639.	2472.	2292.	2113.	1929.	1697.	1419.	1115.	779.	477.	283.	173.	116.	69.	38.	21.	10.	0.
11.0	3292.	3291.	3240.	3133.	3007.	2848.	2662.	2462.	2267.	2061.	1811.	1519.	1210.	851.	512.	298.	179.	119.	70.	38.	21.	10.	0.
9.0	3534.	3521.	3467.	3360.	3217.	3042.	2836.	2617.	2406.	2182.	1911.	1605.	1293.	914.	543.	311.	184.	122.	71.	38.	21.	10.	0.
7.0	3759.	3734.	3690.	3568.	3409.	3213.	2990.	2756.	2528.	2285.	2000.	1678.	1357.	969.	572.	324.	189.	124.	72.	38.	21.	10.	0.
5.0	3946.	3928.	3868.	3733.	3561.	3348.	3113.	2868.	2623.	2365.	2069.	1734.	1407.	1011.	595.	333.	191.	126.	72.	39.	21.	10.	0.
3.0	4092.	4073.	3999.	3851.	3669.	3446.	3200.	2944.	2687.	2422.	2117.	1771.	1439.	1039.	612.	340.	194.	127.	73.	39.	21.	10.	0.
1.0	4169.	4155.	4074.	3923.	3734.	3501.	3248.	2988.	2726.	2455.	2157.	1793.	1456.	1052.	619.	343.	195.	127.	73.	39.	21.	10.	0.
0.0	4174.	4165.	4087.	3934.	3745.	3513.	3261.	2998.	2735.	2464.	2163.	1798.	1458.	1053.	620.	343.	195.	128.	73.	39.	21.	10.	0.
-1.0	4164.	4155.	4077.	3925.	3742.	3511.	3259.	2996.	2735.	2465.	2155.	1796.	1458.	1052.	620.	342.	195.	127.	73.	39.	21.	10.	0.
-3.0	4089.	4088.	4014.	3867.	3692.	3464.	3216.	2966.	2709.	2441.	2127.	1778.	1442.	1040.	612.	339.	194.	127.	73.	39.	21.	10.	0.
-5.0	3958.	3959.	3883.	3755.	3585.	3372.	3140.	2898.	2647.	2391.	2083.	1743.	1413.	1012.	597.	332.	191.	125.	72.	38.	21.	10.	0.
-7.0	3782.	3790.	3720.	3599.	3435.	3240.	3019.	2793.	2557.	2315.	2018.	1689.	1371.	969.	574.	322.	188.	124.	71.	38.	21.	10.	0.
-9.0	3566.	3575.	3510.	3405.	3262.	3081.	2875.	2664.	2438.	2215.	1940.	1624.	1303.	913.	543.	309.	183.	121.	70.	38.	21.	10.	0.
-11.0	3332.	3343.	3281.	3188.	3060.	2895.	2703.	2512.	2301.	2094.	1839.	1541.	1223.	849.	508.	294.	177.	118.	69.	38.	21.	10.	0.
-13.0	3084.	3097.	3050.	2953.	2839.	2693.	2519.	2342.	2149.	1961.	1724.	1436.	1132.	778.	471.	279.	171.	115.	68.	37.	21.	10.	0.
-15.0	2815.	2831.	2793.	2709.	2604.	2474.	2319.	2160.	1989.	1819.	1600.	1322.	1025.	704.	434.	261.	164.	111.	66.	37.	20.	9.	0.
-17.0	2548.	2566.	2535.	2458.	2367.	2255.	2115.	1976.	1825.	1671.	1464.	1199.	912.	624.	396.	244.	156.	107.	65.	36.	20.	9.	0.
-19.5	2226.	2243.	2210.	2158.	2075.	1979.	1863.	1751.	1617.	1473.	1271.	1015.	765.	530.	347.	222.	146.	101.	63.	35.	20.	9.	0.
-22.5	1868.	1878.	1853.	1803.	1743.	1673.	1574.	1469.	1339.	1202.	1022.	801.	604.	431.	293.	196.	134.	94.	60.	34.	20.	9.	0.
-25.5	1524.	1535.	1516.	1467.	1412.	1344.	1253.	1154.	1043.	922.	775.	605.	467.	346.	245.	172.	121.	87.	56.	33.	19.	9.	0.
-29.0	1109.	1118.	1091.	1056.	1009.	950.	885.	800.	714.	629.	538.	432.	347.	266.	197.	146.	107.	80.	52.	32.	19.	9.	0.
-33.0	673.	680.	663.	642.	612.	577.	546.	502.	458.	415.	361.	301.	249.	200.	155.	121.	91.	71.	48.	30.	18.	8.	0.
-37.5	386.	389.	381.	373.	361.	345.	327.	306.	284.	262.	233.	203.	176.	148.	123.	99.	77.	61.	43.	28.	17.	8.	0.
-42.5	216.	214.	215.	211.	206.	199.	192.	184.	173.	163.	151.	137.	123.	109.	93.	78.	63.	51.	38.	26.	16.	7.	0.
-47.5	134.	133.	133.	132.	129.	126.	124.	120.	115.	110.	105.	97.	89.	81.	71.	61.	52.	44.	33.	23.	14.	7.	0.
-55.0	74.	75.	74.	74.	74.	73.	71.	70.	68.	66.	63.	60.	57.	53.	48.	44.	38.	33.	27.	19.	13.	6.	0.
-65.0	39.	38.	38.	38.	38.	38.	37.	37.	37.	36.	35.	34.	33.	32.	30.	28.	25.	23.	19.	15.	11.	4.	0.
-75.0	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.	19.	19.	18.	18.	17.	16.	15.	14.	12.	11.	8.	3.	0.
-85.0	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	8.	8.	8.	6.	4.	3.	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 = 2087. CP = 50% OF MAX
FIELD EDGE = 417. 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 • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL83835
ISSUE DATE: 12/31/14
PREPARED FOR: B-K LIGHTING, INC.

PAGE: 3 OF 7
REVISED: 11/10/15

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																								
33.0	659.	658.	649.	631.	603.	570.	537.	498.	455.															
29.0	1079.	1082.	1066.	1034.	988.	940.	870.	795.	710.	633.	539.	438.												
25.5	1475.	1478.	1459.	1426.	1377.	1327.	1235.	1135.	1025.	914.	771.	611.	473.											
22.5	1800.	1802.	1785.	1749.	1688.	1620.	1528.	1427.	1311.	1183.	1013.	803.	610.	434.										
19.5	2153.	2154.	2132.	2085.	2010.	1924.	1813.	1698.	1576.	1439.	1252.	1012.	767.	533.										
17.0	2488.	2482.	2455.	2395.	2299.	2188.	2064.	1927.	1784.	1634.	1438.	1183.	908.	626.										
15.0	2758.	2756.	2722.	2651.	2543.	2413.	2270.	2114.	1953.	1786.	1572.	1308.	1014.	705.	439.									
13.0	3030.	3027.	2984.	2890.	2778.	2639.	2472.	2292.	2113.	1929.	1697.	1419.	1115.	779.	477.									
11.0	3292.	3291.	3240.	3133.	3007.	2848.	2662.	2462.	2267.	2061.	1811.	1519.	1210.	851.	512.									
9.0	3534.	3521.	3467.	3360.	3217.	3042.	2836.	2617.	2406.	2182.	1911.	1605.	1293.	914.	543.									
7.0	3759.	3734.	3690.	3568.	3409.	3213.	2990.	2756.	2528.	2285.	2000.	1678.	1357.	969.	572.									
5.0	3946.	3928.	3868.	3733.	3561.	3348.	3113.	2868.	2623.	2365.	2069.	1734.	1407.	1011.	595.									
3.0	4092.	4073.	3999.	3851.	3669.	3446.	3200.	2944.	2687.	2422.	2117.	1771.	1439.	1039.	612.									
1.0	4169.	4155.	4074.	3923.	3734.	3501.	3248.	2988.	2726.	2455.	2157.	1793.	1456.	1052.	619.									
0.0	4174.	4165.	4087.	3934.	3745.	3513.	3261.	2998.	2735.	2464.	2163.	1798.	1458.	1053.	620.									
-1.0	4164.	4155.	4077.	3925.	3742.	3511.	3259.	2996.	2735.	2465.	2155.	1796.	1458.	1052.	620.									
-3.0	4089.	4088.	4014.	3867.	3692.	3464.	3216.	2966.	2709.	2441.	2127.	1778.	1442.	1040.	612.									
-5.0	3958.	3959.	3883.	3755.	3585.	3372.	3140.	2898.	2647.	2391.	2083.	1743.	1413.	1012.	597.									
-7.0	3782.	3790.	3720.	3599.	3435.	3240.	3019.	2793.	2557.	2315.	2018.	1689.	1371.	969.	574.									
-9.0	3566.	3575.	3510.	3405.	3262.	3081.	2875.	2664.	2438.	2215.	1940.	1624.	1303.	913.	543.									
-11.0	3332.	3343.	3281.	3188.	3060.	2895.	2703.	2512.	2301.	2094.	1839.	1541.	1223.	849.	508.									
-13.0	3084.	3097.	3050.	2953.	2839.	2693.	2519.	2342.	2149.	1961.	1724.	1436.	1132.	778.	471.									
-15.0	2815.	2831.	2793.	2709.	2604.	2474.	2319.	2160.	1989.	1819.	1600.	1322.	1025.	704.	434.									
-17.0	2548.	2566.	2535.	2458.	2367.	2255.	2115.	1976.	1825.	1671.	1464.	1199.	912.	624.										
-19.5	2226.	2243.	2210.	2158.	2075.	1979.	1863.	1751.	1617.	1473.	1271.	1015.	765.	530.										
-22.5	1868.	1878.	1853.	1803.	1743.	1673.	1574.	1469.	1339.	1202.	1022.	801.	604.	431.										
-25.5	1524.	1535.	1516.	1467.	1412.	1344.	1253.	1154.	1043.	922.	775.	605.	467.											
-29.0	1109.	1118.	1091.	1056.	1009.	950.	885.	800.	714.	629.	538.	432.												
-33.0	673.	680.	663.	642.	612.	577.	546.	502.	458.															
-37.5																								
-42.5																								
-47.5																								
-55.0																								
-65.0																								
-75.0																								
-85.0																								
-90.0																								

BEAM EDGE = 2087. CP = 50% OF MAX
FIELD EDGE = 417. 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 • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL83835
ISSUE DATE: 12/31/14
PREPARED FOR: B-K LIGHTING, INC.

PAGE: 4 OF 7
REVISED: 11/10/15

LUMEN TABULATION

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	1.2
80	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	2.8
70	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.1	0.0	4.9
60	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.6	0.5	0.6	0.4	0.4	0.5	0.3	0.1	0.0	8.2
50	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.1	0.0	6.7
45	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.0	9.7
40	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.8	0.8	1.0	0.9	0.7	0.8	0.6	0.6	0.4	0.3	0.4	0.2	0.1	0.0	0.0	15.0
35	1.6	1.6	1.5	1.5	1.4	1.3	1.2	1.1	1.0	1.2	1.0	0.8	0.8	0.6	0.6	0.4	0.3	0.3	0.2	0.1	0.0	0.0	18.5
31	2.6	2.6	2.5	2.4	2.3	2.1	1.9	1.7	1.5	1.9	1.5	1.1	1.1	0.8	0.7	0.5	0.3	0.4	0.2	0.1	0.0	0.0	28.1
27	2.7	2.7	2.6	2.5	2.4	2.2	2.0	1.8	1.6	2.0	1.5	1.2	1.1	0.8	0.6	0.4	0.3	0.3	0.1	0.0	0.0	0.0	28.9
24	3.3	3.3	3.2	3.1	2.9	2.7	2.5	2.3	2.1	2.6	2.0	1.5	1.4	0.9	0.7	0.5	0.3	0.3	0.1	0.0	0.0	0.0	35.8
21	3.9	3.9	3.8	3.6	3.5	3.3	3.0	2.8	2.5	3.2	2.6	1.9	1.7	1.1	0.8	0.5	0.3	0.3	0.1	0.0	0.0	0.0	43.0
18	3.0	3.0	2.9	2.8	2.6	2.5	2.3	2.1	1.9	2.5	2.0	1.5	1.3	0.8	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	32.8
16	3.4	3.3	3.2	3.1	2.9	2.7	2.5	2.3	2.1	2.7	2.2	1.7	1.5	0.9	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	36.1
14	3.7	3.6	3.5	3.4	3.2	3.0	2.7	2.5	2.2	2.9	2.4	1.8	1.7	1.0	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.0	39.3
12	4.0	3.9	3.8	3.6	3.4	3.2	2.9	2.7	2.4	3.1	2.6	2.0	1.8	1.0	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.0	42.3
10	4.3	4.2	4.1	3.9	3.7	3.4	3.1	2.8	2.5	3.3	2.7	2.1	1.9	1.1	0.8	0.4	0.3	0.2	0.1	0.0	0.0	0.0	45.0
8	4.5	4.5	4.3	4.1	3.9	3.6	3.3	3.0	2.7	3.4	2.8	2.2	2.1	1.2	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	47.4
6	4.8	4.7	4.5	4.3	4.0	3.7	3.4	3.1	2.8	3.6	2.9	2.3	2.2	1.2	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	49.4
4	5.0	4.9	4.7	4.4	4.1	3.8	3.5	3.2	2.8	3.6	3.0	2.4	2.2	1.3	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	50.8
2	5.1	5.0	4.8	4.5	4.2	3.9	3.5	3.2	2.9	3.7	3.0	2.4	2.2	1.3	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	51.6
0	5.1	5.0	4.8	4.5	4.2	3.9	3.6	3.2	2.9	3.7	3.0	2.4	2.2	1.3	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	51.7
-2	5.0	4.9	4.7	4.5	4.2	3.8	3.5	3.2	2.8	3.7	3.0	2.4	2.2	1.3	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	51.0
-4	4.8	4.7	4.6	4.3	4.1	3.8	3.4	3.1	2.8	3.6	2.9	2.3	2.2	1.2	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	49.7
-6	4.6	4.5	4.4	4.2	3.9	3.6	3.3	3.0	2.7	3.5	2.9	2.3	2.1	1.2	0.8	0.4	0.3	0.2	0.1	0.0	0.0	0.0	47.9
-8	4.4	4.3	4.1	3.9	3.7	3.4	3.2	2.9	2.6	3.3	2.7	2.1	1.9	1.1	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.0	45.5
-10	4.1	4.0	3.9	3.7	3.5	3.2	3.0	2.7	2.4	3.2	2.6	2.0	1.8	1.0	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.0	42.8
-12	3.8	3.7	3.6	3.4	3.2	3.0	2.8	2.5	2.3	3.0	2.4	1.9	1.7	1.0	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.0	39.9
-14	3.4	3.4	3.3	3.1	3.0	2.8	2.6	2.3	2.1	2.8	2.2	1.7	1.5	0.9	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	36.7
-16	3.1	3.1	3.0	2.9	2.7	2.5	2.3	2.1	1.9	2.5	2.0	1.5	1.3	0.8	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	33.4
-18	4.1	4.0	3.9	3.8	3.6	3.3	3.1	2.9	2.6	3.3	2.6	1.9	1.7	1.1	0.8	0.5	0.3	0.3	0.1	0.0	0.0	0.0	43.9
-21	3.4	3.4	3.3	3.2	3.0	2.8	2.6	2.4	2.1	2.6	2.0	1.5	1.4	0.9	0.7	0.5	0.3	0.3	0.1	0.0	0.0	0.0	36.6
-24	2.8	2.8	2.7	2.6	2.4	2.2	2.1	1.8	1.6	2.0	1.5	1.2	1.1	0.8	0.6	0.4	0.3	0.3	0.1	0.0	0.0	0.0	29.3
-27	2.7	2.7	2.6	2.4	2.3	2.1	1.9	1.7	1.5	1.9	1.5	1.1	1.1	0.8	0.7	0.5	0.3	0.4	0.2	0.1	0.0	0.0	28.3
-31	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.1	1.0	1.2	1.0	0.8	0.9	0.6	0.6	0.4	0.3	0.3	0.2	0.1	0.0	0.0	18.6
-35	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.8	1.0	0.9	0.7	0.8	0.6	0.6	0.4	0.3	0.4	0.2	0.1	0.0	0.0	15.1
-40	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.7	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.0	0.0	9.7
-45	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.1	0.1	0.0	0.0	6.8
-50	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.3	0.5	0.2	0.1	0.0	0.0	8.6
-60	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	0.2	0.3	0.2	0.1	0.0	0.0	5.0
-70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.0	2.8
-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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	1.4
-90	110.6	108.9	105.4	100.9	95.2	88.7	81.7	74.3	66.8	86.5	70.6	55.3	52.3	32.9	25.4	16.0	10.7	12.0	5.5	2.0	0.3	0.0	1202.1

LUMEN TOTAL THIS PAGE = 1202.1



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: ITL83835
ISSUE DATE: 12/31/14
PREPARED FOR: B-K LIGHTING, INC.

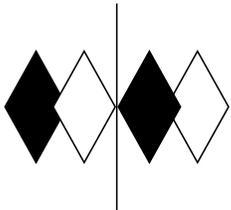
PAGE: 5 OF 7
REVISED: 11/10/15

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																							0.0
31	1.6	1.6	1.5	1.5	1.4	1.3	1.2	1.1															11.1
27	2.6	2.6	2.5	2.4	2.3	2.1	1.9	1.7	1.5	1.9	1.5												22.8
24	2.7	2.7	2.6	2.5	2.4	2.2	2.0	1.8	1.6	2.0	1.5	1.2											25.2
21	3.3	3.3	3.2	3.1	2.9	2.7	2.5	2.3	2.1	2.6	2.0	1.5	1.4										32.9
18	3.9	3.9	3.8	3.6	3.5	3.3	3.0	2.8	2.5	3.2	2.6	1.9	1.7										39.7
16	3.0	3.0	2.9	2.8	2.6	2.5	2.3	2.1	1.9	2.5	2.0	1.5	1.3										30.4
14	3.4	3.3	3.2	3.1	2.9	2.7	2.5	2.3	2.1	2.7	2.2	1.7	1.5	0.9									34.5
12	3.7	3.6	3.5	3.4	3.2	3.0	2.7	2.5	2.2	2.9	2.4	1.8	1.7	1.0									37.6
10	4.0	3.9	3.8	3.6	3.4	3.2	2.9	2.7	2.4	3.1	2.6	2.0	1.8	1.0									40.5
8	4.3	4.2	4.1	3.9	3.7	3.4	3.1	2.8	2.5	3.3	2.7	2.1	1.9	1.1									43.2
6	4.5	4.5	4.3	4.1	3.9	3.6	3.3	3.0	2.7	3.4	2.8	2.2	2.1	1.2									45.6
4	4.8	4.7	4.5	4.3	4.0	3.7	3.4	3.1	2.8	3.6	2.9	2.3	2.2	1.2									47.5
2	5.0	4.9	4.7	4.4	4.1	3.8	3.5	3.2	2.8	3.6	3.0	2.4	2.2	1.3									48.9
0	5.1	5.0	4.8	4.5	4.2	3.9	3.5	3.2	2.9	3.7	3.0	2.4	2.2	1.3									49.7
-2	5.1	5.0	4.8	4.5	4.2	3.9	3.6	3.2	2.9	3.7	3.0	2.4	2.2	1.3									49.7
-4	5.0	4.9	4.7	4.5	4.2	3.8	3.5	3.2	2.8	3.7	3.0	2.4	2.2	1.3									49.1
-6	4.8	4.7	4.6	4.3	4.1	3.8	3.4	3.1	2.8	3.6	2.9	2.3	2.2	1.2									47.8
-8	4.6	4.5	4.4	4.2	3.9	3.6	3.3	3.0	2.7	3.5	2.9	2.3	2.1	1.2									46.0
-10	4.4	4.3	4.1	3.9	3.7	3.4	3.2	2.9	2.6	3.3	2.7	2.1	1.9	1.1									43.8
-12	4.1	4.0	3.9	3.7	3.5	3.2	3.0	2.7	2.4	3.2	2.6	2.0	1.8	1.0									41.1
-14	3.8	3.7	3.6	3.4	3.2	3.0	2.8	2.5	2.3	3.0	2.4	1.9	1.7	1.0									38.2
-16	3.4	3.4	3.3	3.1	3.0	2.8	2.6	2.3	2.1	2.8	2.2	1.7	1.5	0.9									35.1
-18	3.1	3.1	3.0	2.9	2.7	2.5	2.3	2.1	1.9	2.5	2.0	1.5	1.3										31.1
-21	4.1	4.0	3.9	3.8	3.6	3.3	3.1	2.9	2.6	3.3	2.6	1.9	1.7										40.7
-24	3.4	3.4	3.3	3.2	3.0	2.8	2.6	2.4	2.1	2.6	2.0	1.5	1.4										33.7
-27	2.8	2.8	2.7	2.6	2.4	2.2	2.1	1.8	1.6	2.0	1.5	1.2											25.7
-31	2.7	2.7	2.6	2.4	2.3	2.1	1.9	1.7	1.5	1.9	1.5												23.1
-35	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.1															11.3
-40																							0.0
-45																							0.0
-50																							0.0
-60																							0.0
-70																							0.0
-80																							0.0
-90																							0.0
	104.9	103.1	99.7	95.2	89.7	83.2	76.5	69.4	60.3	77.6	62.7	46.2	40.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1026.2

LUMEN TOTAL THIS PAGE = 1026.2

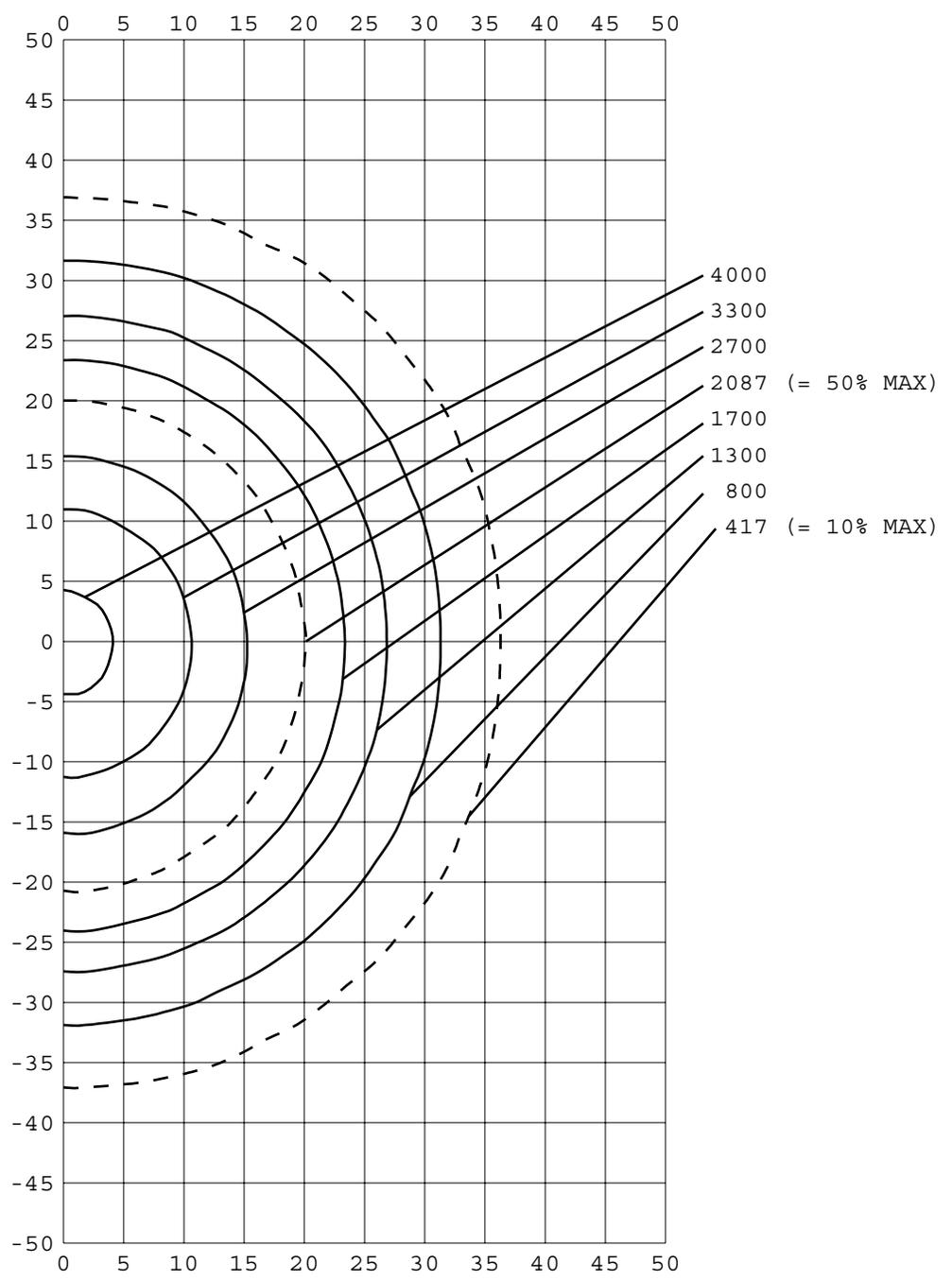


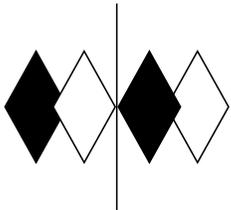
REPORT NUMBER: ITL83835
 ISSUE DATE: 12/31/14
 PREPARED FOR: B-K LIGHTING, INC.

PAGE: 6 OF 7
 REVISED: 11/10/15

ISOCANDELA CURVES

AVERAGE OF RIGHT AND LEFT SIDES





itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



NVLAP LAB CODE: 200925-0

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: ITL83835
ISSUE DATE: 12/31/14
PREPARED FOR: B-K LIGHTING, INC.

PAGE: 7 OF 7
REVISED: 11/10/15

ADDRESS: 40429 BRICKYARD DRIVE
MADERA, CA 93636-9515

THIS ITL REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.