

REPORT NUMBER: ITL83837

PAGE: 1 OF 7

ISSUE DATE: 01/02/15

REVISED: 11/10/15

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: K2-LED-X51-FL-12, SM-AP-LED-X51-FL-12, AP-LED-X51-FL-12,
TY2-LED-X51-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, 59.1 WATTS, 0.495 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.

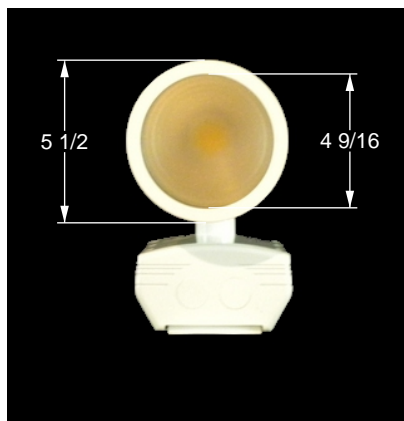
TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

FLOODLIGHT CHARACTERISTICS

AXIAL CANDLEPOWER

IES TYPE 5H X 5V
MAXIMUM CANDLEPOWER 7311. AT 0.0 H, 0.0 V
HORIZONTAL BEAM ANGLE (50%) 45.4 deg
VERTICAL BEAM ANGLE (50%) 45.7 deg
HORIZONTAL FIELD ANGLE (10%) 77.0 deg
VERTICAL FIELD ANGLE (10%) 74.6 deg
BEAM LUMENS (% FIXTURE) 2573. (53.6 %)
FIELD LUMENS (% FIXTURE) 4135. (86.2 %)
TOTAL LUMENS (% FIXTURE) 4799. (100.0 %)
EFFICACY = 81.2 lm/W



Checked *B HYRE*

Approved *R BEATTIE*
Lighting Engineer

DEG	HORIZ.	DEG	VERT.
90.0	0.	90.0	0.
85.0	21.	85.0	6.
75.0	46.	75.0	44.
65.0	86.	65.0	79.
55.0	160.	55.0	143.
47.5	281.	47.5	249.
42.5	455.	42.5	386.
37.5	802.	37.5	679.
33.0	1427.	33.0	1282.
29.0	2234.	29.0	2111.
25.5	3035.	25.5	2945.
22.5	3700.	22.5	3669.
19.5	4398.	19.5	4345.
17.0	4937.	17.0	4904.
15.0	5382.	15.0	5335.
13.0	5816.	13.0	5759.
11.0	6203.	11.0	6166.
9.0	6544.	9.0	6530.
7.0	6841.	7.0	6838.
5.0	7065.	5.0	7064.
3.0	7220.	3.0	7216.
1.0	7302.	1.0	7301.
0.0	7311.	0.0	7311.
-1.0	7302.	-1.0	7299.
-3.0	7220.	-3.0	7213.
-5.0	7065.	-5.0	7068.
-7.0	6841.	-7.0	6861.
-9.0	6544.	-9.0	6587.
-11.0	6203.	-11.0	6260.
-13.0	5816.	-13.0	5887.
-15.0	5382.	-15.0	5479.
-17.0	4937.	-17.0	5044.
-19.5	4398.	-19.5	4476.
-22.5	3700.	-22.5	3804.
-25.5	3035.	-25.5	3103.
-29.0	2234.	-29.0	2266.
-33.0	1427.	-33.0	1398.
-37.5	802.	-37.5	724.
-42.5	455.	-42.5	407.
-47.5	281.	-47.5	267.
-55.0	160.	-55.0	151.
-65.0	86.	-65.0	80.
-75.0	46.	-75.0	44.
-85.0	21.	-85.0	19.
-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.



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



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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.	4.	8.	9.	11.	13.	15.	17.	18.	19.	19.	19.	19.	18.	18.	18.	18.	16.	13.	9.	5.	2.	0.
75.0	44.	43.	43.	43.	43.	43.	43.	43.	43.	43.	42.	41.	40.	39.	37.	35.	33.	31.	27.	23.	16.	5.	0.
65.0	79.	79.	79.	79.	78.	78.	77.	77.	76.	75.	74.	72.	70.	67.	64.	60.	55.	50.	42.	32.	23.	9.	0.
55.0	143.	143.	142.	141.	141.	140.	137.	135.	131.	129.	125.	120.	115.	108.	100.	92.	82.	73.	59.	42.	28.	12.	0.
47.5	249.	248.	247.	245.	241.	237.	233.	227.	219.	211.	202.	189.	177.	162.	145.	126.	110.	94.	73.	51.	32.	14.	0.
42.5	386.	388.	384.	377.	369.	360.	350.	338.	323.	307.	288.	266.	240.	216.	189.	160.	133.	111.	84.	56.	34.	15.	0.
37.5	679.	681.	671.	651.	635.	612.	582.	551.	516.	482.	437.	390.	343.	295.	248.	203.	161.	130.	95.	61.	37.	17.	0.
33.0	1282.	1265.	1241.	1203.	1151.	1085.	1013.	941.	861.	783.	682.	580.	489.	402.	319.	249.	191.	151.	105.	66.	39.	17.	0.
29.0	2111.	2080.	2069.	2018.	1936.	1828.	1702.	1563.	1407.	1255.	1064.	857.	695.	540.	413.	308.	227.	171.	115.	70.	40.	18.	0.
25.5	2945.	2944.	2912.	2858.	2749.	2605.	2438.	2248.	2038.	1828.	1555.	1234.	965.	720.	520.	370.	260.	188.	124.	74.	42.	19.	0.
22.5	3669.	3666.	3630.	3570.	3447.	3287.	3097.	2874.	2631.	2372.	2036.	1634.	1267.	911.	631.	430.	290.	203.	131.	76.	42.	19.	0.
19.5	4345.	4331.	4282.	4209.	4084.	3920.	3711.	3476.	3209.	2921.	2526.	2050.	1601.	1141.	759.	495.	321.	219.	138.	78.	43.	20.	0.
17.0	4904.	4880.	4825.	4743.	4593.	4407.	4183.	3929.	3638.	3337.	2922.	2395.	1887.	1342.	871.	549.	347.	232.	143.	80.	44.	20.	0.
15.0	5335.	5314.	5254.	5167.	5002.	4793.	4546.	4269.	3961.	3645.	3214.	2653.	2100.	1502.	964.	593.	366.	242.	146.	81.	44.	20.	0.
13.0	5759.	5745.	5681.	5582.	5405.	5170.	4896.	4594.	4263.	3922.	3477.	2902.	2307.	1658.	1056.	637.	385.	250.	149.	82.	45.	20.	0.
11.0	6166.	6152.	6080.	5968.	5775.	5524.	5230.	4900.	4540.	4178.	3707.	3107.	2504.	1805.	1145.	678.	403.	258.	152.	83.	45.	20.	0.
9.0	6530.	6510.	6435.	6313.	6104.	5840.	5527.	5183.	4793.	4396.	3906.	3293.	2667.	1936.	1230.	715.	418.	265.	155.	84.	45.	21.	0.
7.0	6838.	6816.	6737.	6604.	6388.	6108.	5781.	5397.	5012.	4594.	4074.	3446.	2802.	2047.	1301.	747.	431.	271.	157.	85.	46.	21.	0.
5.0	7064.	7044.	6966.	6825.	6603.	6317.	5980.	5591.	5187.	4751.	4209.	3563.	2911.	2132.	1358.	772.	441.	275.	158.	85.	46.	21.	0.
3.0	7216.	7203.	7126.	6974.	6751.	6461.	6120.	5725.	5308.	4866.	4310.	3645.	2985.	2192.	1400.	789.	449.	279.	159.	85.	46.	21.	0.
1.0	7301.	7289.	7211.	7055.	6831.	6534.	6191.	5803.	5371.	4926.	4376.	3691.	3027.	2227.	1423.	800.	454.	281.	160.	86.	46.	21.	0.
0.0	7311.	7302.	7220.	7065.	6841.	6544.	6203.	5816.	5382.	4937.	4398.	3700.	3035.	2234.	1427.	802.	455.	281.	160.	86.	46.	21.	0.
-1.0	7299.	7291.	7211.	7055.	6835.	6538.	6199.	5812.	5382.	4936.	4392.	3701.	3033.	2234.	1426.	802.	455.	281.	160.	86.	46.	21.	0.
-3.0	7213.	7211.	7132.	6985.	6765.	6478.	6140.	5760.	5335.	4894.	4335.	3671.	3007.	2211.	1411.	796.	452.	280.	160.	86.	46.	21.	0.
-5.0	7068.	7060.	6990.	6844.	6628.	6349.	6021.	5648.	5230.	4799.	4254.	3603.	2945.	2161.	1378.	781.	446.	278.	159.	85.	46.	21.	0.
-7.0	6861.	6851.	6780.	6634.	6425.	6156.	5839.	5474.	5078.	4660.	4135.	3500.	2849.	2085.	1328.	758.	437.	273.	158.	85.	46.	21.	0.
-9.0	6587.	6593.	6504.	6366.	6164.	5909.	5609.	5256.	4877.	4481.	3978.	3362.	2724.	1984.	1262.	730.	425.	268.	156.	84.	46.	21.	0.
-11.0	6260.	6264.	6196.	6067.	5856.	5612.	5326.	4990.	4638.	4264.	3784.	3188.	2566.	1860.	1184.	696.	411.	262.	154.	84.	45.	20.	0.
-13.0	5887.	5892.	5829.	5710.	5510.	5274.	5004.	4691.	4359.	4016.	3559.	2985.	2383.	1720.	1101.	657.	395.	254.	151.	83.	45.	20.	0.
-15.0	5479.	5486.	5405.	5295.	5124.	4907.	4655.	4367.	4061.	3733.	3305.	2753.	2182.	1568.	1008.	614.	376.	246.	148.	82.	45.	20.	0.
-17.0	5044.	5007.	4979.	4878.	4717.	4520.	4292.	4027.	3746.	3436.	3028.	2501.	1966.	1408.	913.	569.	357.	237.	145.	81.	44.	20.	0.
-19.5	4476.	4449.	4408.	4313.	4194.	4021.	3820.	3579.	3320.	3031.	2649.	2160.	1685.	1205.	794.	514.	331.	225.	140.	79.	44.	20.	0.
-22.5	3804.	3785.	3738.	3660.	3545.	3393.	3219.	3003.	2759.	2492.	2153.	1731.	1341.	968.	662.	447.	300.	209.	134.	77.	43.	19.	0.
-25.5	3103.	3085.	3047.	2975.	2874.	2735.	2557.	2365.	2163.	1946.	1658.	1324.	1036.	766.	549.	386.	269.	194.	127.	74.	42.	19.	0.
-29.0	2266.	2245.	2217.	2157.	2073.	1957.	1827.	1666.	1519.	1358.	1149.	930.	746.	576.	436.	323.	236.	176.	118.	71.	41.	18.	0.
-33.0	1398.	1384.	1367.	1326.	1261.	1184.	1116.	1019.	937.	842.	737.	621.	521.	425.	336.	262.	201.	157.	108.	67.	39.	18.	0.
-37.5	724.	732.	728.	710.	685.	657.	630.	593.	553.	513.	465.	414.	364.	313.	262.	213.	169.	135.	97.	62.	37.	17.	0.
-42.5	407.	411.	410.	402.	394.	386.	372.	361.	344.	327.	307.	281.	256.	227.	198.	167.	139.	115.	86.	57.	34.	15.	0.
-47.5	267.	265.	264.	262.	258.	254.	247.	242.	234.	225.	215.	201.	187.	170.	152.	132.	114.	97.	75.	52.	32.	14.	0.
-55.0	151.	150.	150.	149.	148.	146.	144.	141.	139.	136.	131.	126.	120.	113.	104.	95.	85.	75.	61.	43.	28.	12.	0.
-65.0	80.	80.	80.	80.	80.	80.	79.	79.	78.	77.	76.	74.	72.	69.	66.	61.	56.	51.	43.	32.	24.	9.	0.
-75.0	44.	44.	44.	44.	44.	44.	44.	44.	44.	43.	43.	42.	41.	40.	38.	36.	34.	32.	28.	23.	16.	6.	0.
-85.0	19.	19.	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.	19.	19.	18.	18.	17.	14.	10.	6.	2.	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 = 3656. CP = 50% OF MAX
FIELD EDGE = 731. CP = 10% OF MAX

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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	1282.	1265.	1241.	1203.	1151.	1085.	1013.	941.	861.	783.													
29.0	2111.	2080.	2069.	2018.	1936.	1828.	1702.	1563.	1407.	1255.	1064.	857.											
25.5	2945.	2944.	2912.	2858.	2749.	2605.	2438.	2248.	2038.	1828.	1555.	1234.	965.										
22.5	3669.	3666.	3630.	3570.	3447.	3287.	3097.	2874.	2631.	2372.	2036.	1634.	1267.	911.									
19.5	4345.	4331.	4282.	4209.	4084.	3920.	3711.	3476.	3209.	2921.	2526.	2050.	1601.	1141.	759.								
17.0	4904.	4880.	4825.	4743.	4593.	4407.	4183.	3929.	3638.	3337.	2922.	2395.	1887.	1342.	871.								
15.0	5335.	5314.	5254.	5167.	5002.	4793.	4546.	4269.	3961.	3645.	3214.	2653.	2100.	1502.	964.								
13.0	5759.	5745.	5681.	5582.	5405.	5170.	4896.	4594.	4263.	3922.	3477.	2902.	2307.	1658.	1056.								
11.0	6166.	6152.	6080.	5968.	5775.	5524.	5230.	4900.	4540.	4178.	3707.	3107.	2504.	1805.	1145.								
9.0	6530.	6510.	6435.	6313.	6104.	5840.	5527.	5183.	4793.	4396.	3906.	3293.	2667.	1936.	1230.								
7.0	6838.	6816.	6737.	6604.	6388.	6108.	5781.	5397.	5012.	4594.	4074.	3446.	2802.	2047.	1301.	747.							
5.0	7064.	7044.	6966.	6825.	6603.	6317.	5980.	5591.	5187.	4751.	4209.	3563.	2911.	2132.	1358.	772.							
3.0	7216.	7203.	7126.	6974.	6751.	6461.	6120.	5725.	5308.	4866.	4310.	3645.	2985.	2192.	1400.	789.							
1.0	7301.	7289.	7211.	7055.	6831.	6534.	6191.	5803.	5371.	4926.	4376.	3691.	3027.	2227.	1423.	800.							
0.0	7311.	7302.	7220.	7065.	6841.	6544.	6203.	5816.	5382.	4937.	4398.	3700.	3035.	2234.	1427.	802.							
-1.0	7299.	7291.	7211.	7055.	6835.	6538.	6199.	5812.	5382.	4936.	4392.	3701.	3033.	2234.	1426.	802.							
-3.0	7213.	7211.	7132.	6985.	6765.	6478.	6140.	5760.	5335.	4894.	4335.	3671.	3007.	2211.	1411.	796.							
-5.0	7068.	7060.	6990.	6844.	6628.	6349.	6021.	5648.	5230.	4799.	4254.	3603.	2945.	2161.	1378.	781.							
-7.0	6861.	6851.	6780.	6634.	6425.	6156.	5839.	5474.	5078.	4660.	4135.	3500.	2849.	2085.	1328.	758.							
-9.0	6587.	6593.	6504.	6366.	6164.	5909.	5609.	5256.	4877.	4481.	3978.	3362.	2724.	1984.	1262.								
-11.0	6260.	6264.	6196.	6067.	5856.	5612.	5326.	4990.	4638.	4264.	3784.	3188.	2566.	1860.	1184.								
-13.0	5887.	5892.	5829.	5710.	5510.	5274.	5004.	4691.	4359.	4016.	3559.	2985.	2383.	1720.	1101.								
-15.0	5479.	5486.	5405.	5295.	5124.	4907.	4655.	4367.	4061.	3733.	3305.	2753.	2182.	1568.	1008.								
-17.0	5044.	5007.	4979.	4878.	4717.	4520.	4292.	4027.	3746.	3436.	3028.	2501.	1966.	1408.	913.								
-19.5	4476.	4449.	4408.	4313.	4194.	4021.	3820.	3579.	3320.	3031.	2649.	2160.	1685.	1205.	794.								
-22.5	3804.	3785.	3738.	3660.	3545.	3393.	3219.	3003.	2759.	2492.	2153.	1731.	1341.	968.									
-25.5	3103.	3085.	3047.	2975.	2874.	2735.	2557.	2365.	2163.	1946.	1658.	1324.	1036.	766.									
-29.0	2266.	2245.	2217.	2157.	2073.	1957.	1827.	1666.	1519.	1358.	1149.	930.	746.										
-33.0	1398.	1384.	1367.	1326.	1261.	1184.	1116.	1019.	937.	842.	737.												
-37.5		732.																					
-42.5																							
-47.5																							
-55.0																							
-65.0																							
-75.0																							
-85.0																							
-90.0																							

BEAM EDGE = 3656. CP = 50% OF MAX
FIELD EDGE = 731. CP = 10% OF MAX

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

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	0.0	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	0.1	0.0	0.0	2.5	
80	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.3	0.1	0.0	6.2
70	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.7	0.4	0.2	0.0	10.6
60	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	1.1	1.0	0.9	1.2	1.0	1.1	0.9	0.8	1.0	0.5	0.2	0.0	17.2
50	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.9	0.8	0.7	0.9	0.7	0.8	0.6	0.5	0.6	0.3	0.1	0.0	13.3
45	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	0.9	1.2	1.1	1.0	1.2	1.0	1.0	0.7	0.6	0.7	0.4	0.1	0.0	18.6
40	2.1	2.0	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.9	1.6	1.4	1.6	1.3	1.2	0.9	0.7	0.8	0.4	0.1	0.0	28.1
35	3.1	3.0	2.9	2.8	2.6	2.4	2.2	2.0	1.8	2.3	2.0	1.6	1.7	1.3	1.2	0.9	0.6	0.7	0.3	0.1	0.0	35.8
31	5.1	5.0	4.9	4.7	4.4	4.1	3.7	3.3	2.9	3.7	2.9	2.3	2.3	1.7	1.5	1.0	0.7	0.8	0.4	0.1	0.0	55.5
27	5.4	5.3	5.2	5.0	4.7	4.4	4.0	3.6	3.2	4.0	3.1	2.4	2.3	1.6	1.3	0.9	0.6	0.6	0.3	0.1	0.0	58.0
24	6.7	6.6	6.5	6.3	5.9	5.6	5.1	4.6	4.1	5.3	4.1	3.1	2.9	1.9	1.6	1.0	0.6	0.7	0.3	0.1	0.0	73.1
21	7.9	7.8	7.7	7.4	7.1	6.7	6.2	5.7	5.1	6.5	5.2	4.0	3.6	2.3	1.8	1.1	0.7	0.7	0.3	0.1	0.0	87.8
18	5.9	5.9	5.8	5.6	5.3	5.0	4.7	4.3	3.9	5.0	4.0	3.1	2.9	1.8	1.3	0.8	0.5	0.5	0.2	0.1	0.0	66.5
16	6.5	6.4	6.3	6.0	5.8	5.4	5.1	4.7	4.2	5.5	4.5	3.5	3.2	2.0	1.4	0.8	0.5	0.5	0.2	0.1	0.0	72.6
14	7.0	6.9	6.8	6.5	6.2	5.9	5.5	5.0	4.6	6.0	4.9	3.8	3.5	2.2	1.5	0.9	0.5	0.5	0.2	0.1	0.0	78.5
12	7.5	7.4	7.2	7.0	6.6	6.3	5.8	5.3	4.9	6.4	5.2	4.1	3.8	2.3	1.6	0.9	0.5	0.5	0.2	0.1	0.0	83.9
10	7.9	7.8	7.7	7.4	7.0	6.6	6.2	5.6	5.1	6.7	5.6	4.4	4.1	2.5	1.7	0.9	0.5	0.5	0.2	0.1	0.0	88.7
8	8.3	8.2	8.0	7.7	7.4	6.9	6.4	5.9	5.4	7.0	5.8	4.6	4.4	2.7	1.8	1.0	0.6	0.5	0.2	0.1	0.0	92.8
6	8.6	8.5	8.3	8.0	7.6	7.2	6.6	6.1	5.5	7.3	6.0	4.8	4.5	2.8	1.9	1.0	0.6	0.6	0.2	0.1	0.0	96.0
4	8.8	8.7	8.5	8.2	7.8	7.3	6.8	6.2	5.7	7.4	6.2	4.9	4.7	2.9	1.9	1.0	0.6	0.6	0.2	0.1	0.0	98.3
2	8.9	8.8	8.6	8.3	7.9	7.4	6.9	6.3	5.7	7.5	6.2	5.0	4.7	2.9	1.9	1.0	0.6	0.6	0.2	0.1	0.0	99.5
0	8.9	8.8	8.6	8.3	7.9	7.4	6.9	6.3	5.8	7.6	6.2	5.0	4.8	2.9	1.9	1.0	0.6	0.6	0.2	0.1	0.0	99.6
-2	8.8	8.7	8.5	8.2	7.8	7.3	6.8	6.3	5.7	7.5	6.2	5.0	4.7	2.9	1.9	1.0	0.6	0.6	0.2	0.1	0.0	98.7
-4	8.6	8.5	8.3	8.0	7.6	7.2	6.7	6.2	5.6	7.3	6.1	4.9	4.6	2.8	1.9	1.0	0.6	0.6	0.2	0.1	0.0	96.7
-6	8.3	8.2	8.1	7.8	7.4	7.0	6.5	6.0	5.4	7.1	5.9	4.7	4.4	2.7	1.8	1.0	0.6	0.6	0.2	0.1	0.0	93.8
-8	8.0	7.9	7.7	7.5	7.1	6.7	6.2	5.7	5.2	6.9	5.7	4.5	4.2	2.6	1.8	1.0	0.6	0.5	0.2	0.1	0.0	90.1
-10	7.6	7.5	7.4	7.1	6.8	6.4	5.9	5.5	5.0	6.5	5.4	4.2	4.0	2.4	1.7	0.9	0.5	0.5	0.2	0.1	0.0	85.6
-12	7.2	7.1	6.9	6.7	6.3	6.0	5.6	5.1	4.7	6.1	5.0	3.9	3.7	2.2	1.6	0.9	0.5	0.5	0.2	0.1	0.0	80.4
-14	6.7	6.6	6.4	6.2	5.9	5.6	5.2	4.8	4.3	5.7	4.6	3.6	3.3	2.1	1.5	0.8	0.5	0.5	0.2	0.1	0.0	74.7
-16	6.1	6.1	5.9	5.7	5.4	5.1	4.8	4.4	4.0	5.2	4.2	3.2	3.0	1.9	1.4	0.8	0.5	0.5	0.2	0.1	0.0	68.6
-18	8.1	8.0	7.9	7.6	7.3	6.9	6.4	5.9	5.3	6.8	5.5	4.2	3.9	2.4	1.9	1.1	0.7	0.7	0.3	0.1	0.0	90.9
-21	6.9	6.8	6.7	6.4	6.1	5.8	5.3	4.9	4.4	5.6	4.4	3.3	3.1	2.0	1.6	1.0	0.6	0.7	0.3	0.1	0.0	76.1
-24	5.6	5.6	5.4	5.2	4.9	4.6	4.2	3.8	3.4	4.3	3.4	2.6	2.4	1.7	1.4	0.9	0.6	0.7	0.3	0.1	0.0	61.1
-27	5.5	5.4	5.2	5.0	4.7	4.4	4.0	3.6	3.2	4.0	3.1	2.5	2.5	1.8	1.6	1.1	0.7	0.8	0.4	0.1	0.0	59.4
-31	3.4	3.3	3.2	3.0	2.8	2.7	2.4	2.2	2.0	2.5	2.1	1.7	1.8	1.4	1.3	0.9	0.6	0.8	0.3	0.1	0.0	38.7
-35	2.2	2.2	2.2	2.1	2.0	1.9	1.8	1.6	1.5	2.0	1.7	1.5	1.7	1.3	1.3	0.9	0.7	0.8	0.4	0.1	0.0	30.0
-40	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.0	1.3	1.2	1.1	1.2	1.0	1.0	0.8	0.6	0.8	0.4	0.1	0.0	19.7
-45	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.9	0.8	0.8	0.9	0.8	0.8	0.6	0.5	0.7	0.3	0.1	0.0	14.0
-50	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	1.1	1.1	1.0	1.2	1.1	1.1	1.0	0.8	1.1	0.6	0.2	0.0	18.0
-60	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.8	0.4	0.2	0.0	10.8
-70	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.3	0.1	0.0	6.3
-80	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	0.0	0.0	3.0
-90	209.0	206.5	201.8	194.6	185.4	174.6	162.3	149.0	135.2	176.6	145.3	115.4	111.5	73.3	56.8	35.4	23.3	26.4	12.0	4.4	0.6	2399.5

LUMEN TOTAL THIS PAGE = 2399.5



INDEPENDENT TESTING LABORATORIES, INC.
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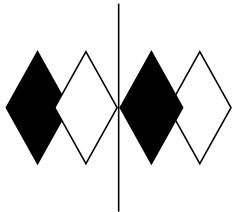
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REVISED: 11/10/15

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	3.1	3.0	2.9	2.8	2.6	2.4	2.2	2.0	1.8														22.9
27	5.1	5.0	4.9	4.7	4.4	4.1	3.7	3.3	2.9	3.7	2.9												44.7
24	5.4	5.3	5.2	5.0	4.7	4.4	4.0	3.6	3.2	4.0	3.1	2.4											50.3
21	6.7	6.6	6.5	6.3	5.9	5.6	5.1	4.6	4.1	5.3	4.1	3.1	2.9										66.9
18	7.9	7.8	7.7	7.4	7.1	6.7	6.2	5.7	5.1	6.5	5.2	4.0	3.6	2.3									83.1
16	5.9	5.9	5.8	5.6	5.3	5.0	4.7	4.3	3.9	5.0	4.0	3.1	2.9	1.8									63.1
14	6.5	6.4	6.3	6.0	5.8	5.4	5.1	4.7	4.2	5.5	4.5	3.5	3.2	2.0									69.0
12	7.0	6.9	6.8	6.5	6.2	5.9	5.5	5.0	4.6	6.0	4.9	3.8	3.5	2.2									74.7
10	7.5	7.4	7.2	7.0	6.6	6.3	5.8	5.3	4.9	6.4	5.2	4.1	3.8	2.3									80.0
8	7.9	7.8	7.7	7.4	7.0	6.6	6.2	5.6	5.1	6.7	5.6	4.4	4.1	2.5									84.7
6	8.3	8.2	8.0	7.7	7.4	6.9	6.4	5.9	5.4	7.0	5.8	4.6	4.4	2.7	1.8								90.4
4	8.6	8.5	8.3	8.0	7.6	7.2	6.6	6.1	5.5	7.3	6.0	4.8	4.5	2.8	1.9								93.6
2	8.8	8.7	8.5	8.2	7.8	7.3	6.8	6.2	5.7	7.4	6.2	4.9	4.7	2.9	1.9								95.8
0	8.9	8.8	8.6	8.3	7.9	7.4	6.9	6.3	5.7	7.5	6.2	5.0	4.7	2.9	1.9								97.0
-2	8.9	8.8	8.6	8.3	7.9	7.4	6.9	6.3	5.8	7.6	6.2	5.0	4.8	2.9	1.9								97.2
-4	8.8	8.7	8.5	8.2	7.8	7.3	6.8	6.3	5.7	7.5	6.2	5.0	4.7	2.9	1.9								96.2
-6	8.6	8.5	8.3	8.0	7.6	7.2	6.7	6.2	5.6	7.3	6.1	4.9	4.6	2.8	1.9								94.3
-8	8.3	8.2	8.1	7.8	7.4	7.0	6.5	6.0	5.4	7.1	5.9	4.7	4.4	2.7	1.8								91.4
-10	8.0	7.9	7.7	7.5	7.1	6.7	6.2	5.7	5.2	6.9	5.7	4.5	4.2	2.6									86.0
-12	7.6	7.5	7.4	7.1	6.8	6.4	5.9	5.5	5.0	6.5	5.4	4.2	4.0	2.4									81.6
-14	7.2	7.1	6.9	6.7	6.3	6.0	5.6	5.1	4.7	6.1	5.0	3.9	3.7	2.2									76.6
-16	6.7	6.6	6.4	6.2	5.9	5.6	5.2	4.8	4.3	5.7	4.6	3.6	3.3	2.1									71.0
-18	6.1	6.1	5.9	5.7	5.4	5.1	4.8	4.4	4.0	5.2	4.2	3.2	3.0	1.9									65.1
-21	8.1	8.0	7.9	7.6	7.3	6.9	6.4	5.9	5.3	6.8	5.5	4.2	3.9	2.4									86.0
-24	6.9	6.8	6.7	6.4	6.1	5.8	5.3	4.9	4.4	5.6	4.4	3.3	3.1										69.7
-27	5.6	5.6	5.4	5.2	4.9	4.6	4.2	3.8	3.4	4.3	3.4	2.6	2.4										55.4
-31	5.5	5.4	5.2	5.0	4.7	4.4	4.0	3.6	3.2	4.0	3.1	2.5											50.5
-35	3.4	3.3	3.2	3.0	2.8	2.7	2.4	2.2	2.0	2.5													27.6
-40	2.2																						2.2
-45																							0.0
-50																							0.0
-60																							0.0
-70																							0.0
-80																							0.0
-90																							0.0
	199.5	194.9	190.4	183.4	174.4	164.0	152.1	139.4	126.1	161.5	129.6	99.3	88.6	49.2	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2067.3

LUMEN TOTAL THIS PAGE = 2067.3



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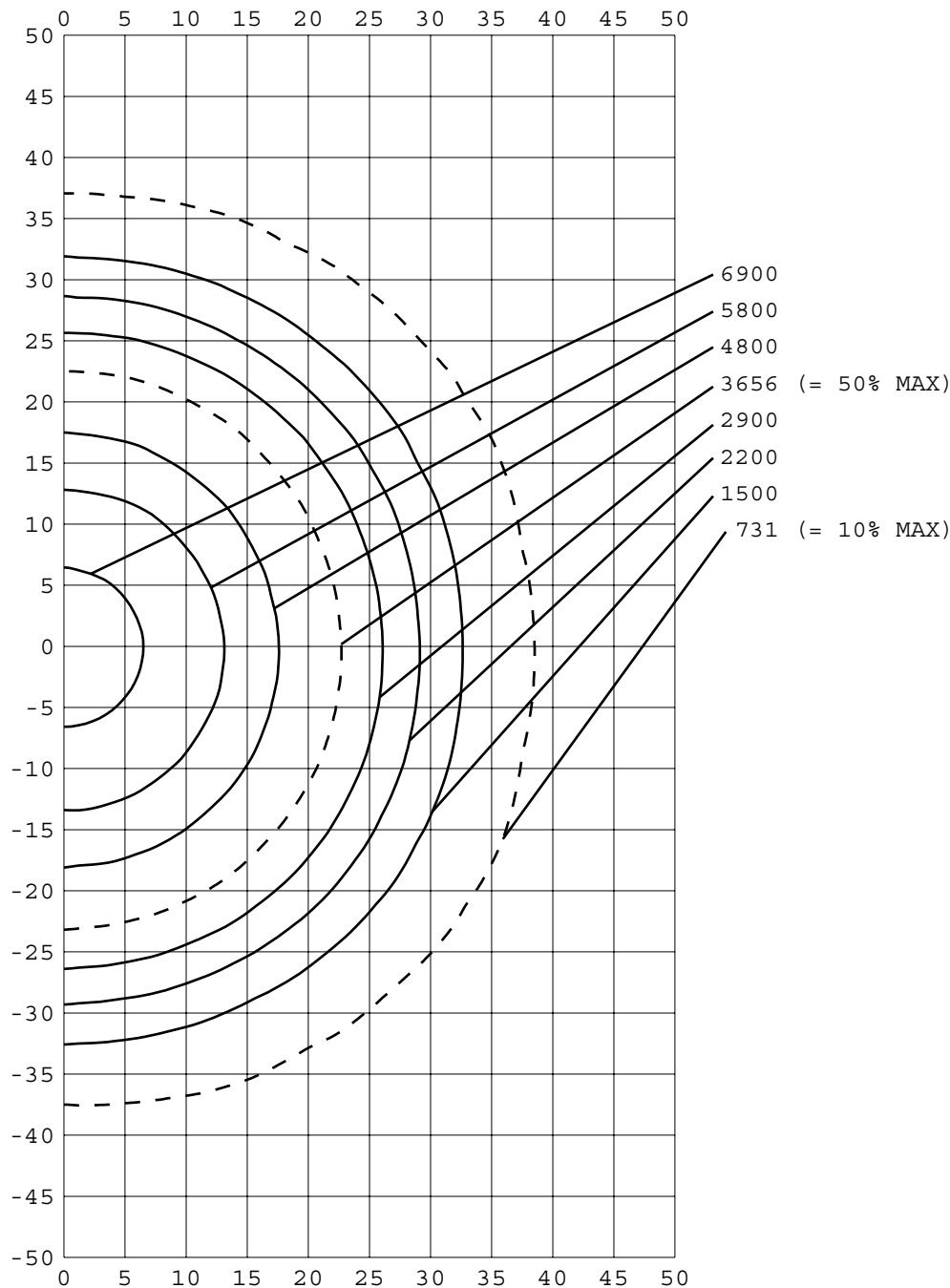
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PAGE: 6 OF 7
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