

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: ITL83572

PAGE: 1 OF 7

ISSUE DATE: 11/26/14

REVISED: 11/10/15

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: K2-LED-X45-NSP-12, SM-AP-LED-X45-NSP-12, AP-LED-X45-NSP-12, TY2-LED-X45-NSP-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 PLASTIC REFLECTOR WITH 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, 34.7 WATTS, 0.292 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.

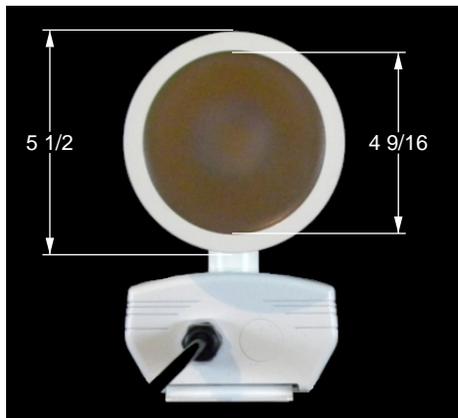
TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

AXIAL CANDLEPOWER

FLOODLIGHT CHARACTERISTICS

IES TYPE	3H X 3V	DEG	HORIZ.	DEG	VERT.
MAXIMUM CANDLEPOWER	20780. AT 0.0 H, 0.0 V	90.0	0.	90.0	0.
HORIZONTAL BEAM ANGLE (50%)	15.9 deg	85.0	9.	85.0	3.
VERTICAL BEAM ANGLE (50%)	15.6 deg	75.0	16.	75.0	9.
HORIZONTAL FIELD ANGLE (10%)	34.4 deg	65.0	25.	65.0	14.
VERTICAL FIELD ANGLE (10%)	34.3 deg	55.0	32.	55.0	30.
BEAM LUMENS (% FIXTURE)	926. (32.9 %)	47.5	42.	47.5	38.
FIELD LUMENS (% FIXTURE)	1907. (67.7 %)	42.5	67.	42.5	57.
TOTAL LUMENS (% FIXTURE)	2816. (100.0 %)	37.5	155.	37.5	139.
EFFICACY = 81.2 lm/W		33.0	353.	33.0	334.
		29.0	674.	29.0	632.
		25.5	954.	25.5	908.
		22.5	1191.	22.5	1123.
		19.5	1554.	19.5	1431.
		17.0	2106.	17.0	1923.
		15.0	2939.	15.0	2648.
		13.0	4207.	13.0	3846.
		11.0	6027.	11.0	5641.
		9.0	8601.	9.0	8158.
		7.0	11989.	7.0	11482.
		5.0	15669.	5.0	15152.
		3.0	18897.	3.0	18518.
		1.0	20602.	1.0	20470.
		0.0	20780.	0.0	20780.
		-1.0	20602.	-1.0	20654.
		-3.0	18897.	-3.0	19163.
		-5.0	15669.	-5.0	15700.
		-7.0	11989.	-7.0	11911.
		-9.0	8601.	-9.0	8708.
		-11.0	6027.	-11.0	6178.
		-13.0	4207.	-13.0	4376.
		-15.0	2939.	-15.0	3108.
		-17.0	2106.	-17.0	2256.
		-19.5	1554.	-19.5	1631.
		-22.5	1191.	-22.5	1247.
		-25.5	954.	-25.5	1006.
		-29.0	674.	-29.0	720.
		-33.0	353.	-33.0	393.
		-37.5	155.	-37.5	171.
		-42.5	67.	-42.5	71.
		-47.5	42.	-47.5	41.
		-55.0	32.	-55.0	32.
		-65.0	25.	-65.0	25.
		-75.0	16.	-75.0	16.
		-85.0	9.	-85.0	8.
		-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.



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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	3.	3.	4.	5.	6.	7.	8.	8.	8.	8.	8.	8.	8.	8.	8.	8.	7.	7.	5.	4.	2.	1.	0.
75.0	9.	10.	11.	11.	12.	13.	15.	15.	15.	15.	15.	15.	14.	14.	14.	13.	12.	12.	10.	9.	7.	2.	0.
65.0	14.	14.	17.	18.	20.	22.	23.	23.	23.	23.	23.	23.	22.	22.	21.	20.	19.	17.	15.	12.	9.	4.	0.
55.0	30.	30.	30.	30.	30.	30.	30.	30.	29.	29.	29.	29.	29.	28.	27.	26.	24.	23.	19.	15.	11.	5.	0.
47.5	38.	38.	38.	38.	38.	38.	37.	37.	36.	36.	35.	34.	33.	32.	31.	29.	28.	26.	23.	17.	12.	6.	0.
42.5	57.	56.	55.	55.	54.	53.	52.	50.	48.	46.	44.	42.	39.	37.	34.	32.	30.	28.	24.	19.	13.	6.	0.
37.5	139.	138.	134.	131.	123.	116.	108.	99.	90.	82.	70.	62.	53.	45.	39.	35.	31.	29.	26.	20.	13.	7.	0.
33.0	334.	334.	318.	303.	286.	264.	240.	217.	190.	166.	137.	108.	83.	62.	47.	38.	34.	31.	27.	21.	14.	7.	0.
29.0	632.	631.	609.	587.	557.	523.	479.	426.	366.	310.	249.	187.	137.	92.	62.	45.	37.	32.	28.	22.	14.	8.	0.
25.5	908.	905.	892.	867.	835.	800.	746.	681.	601.	520.	417.	302.	214.	139.	85.	54.	40.	33.	29.	23.	15.	8.	0.
22.5	1123.	1124.	1105.	1083.	1047.	1007.	950.	886.	810.	722.	600.	444.	309.	194.	112.	64.	43.	35.	29.	23.	15.	8.	0.
19.5	1431.	1428.	1390.	1345.	1283.	1219.	1146.	1069.	990.	907.	784.	608.	428.	261.	146.	76.	46.	36.	30.	23.	15.	8.	0.
17.0	1923.	1918.	1832.	1736.	1617.	1487.	1364.	1241.	1134.	1036.	911.	736.	537.	330.	178.	88.	49.	37.	30.	24.	16.	8.	0.
15.0	2648.	2637.	2484.	2298.	2070.	1837.	1619.	1423.	1272.	1143.	1005.	834.	623.	388.	206.	99.	52.	38.	31.	24.	16.	8.	0.
13.0	3846.	3824.	3554.	3211.	2792.	2359.	1992.	1672.	1441.	1262.	1095.	917.	705.	445.	234.	111.	55.	39.	31.	24.	16.	8.	0.
11.0	5641.	5608.	5161.	4577.	3861.	3162.	2517.	2010.	1652.	1389.	1179.	982.	774.	502.	261.	121.	58.	39.	31.	24.	16.	8.	0.
9.0	8158.	8101.	7533.	6427.	5292.	4194.	3202.	2443.	1907.	1530.	1265.	1039.	829.	552.	288.	131.	60.	40.	31.	25.	16.	9.	0.
7.0	11482.	11379.	10449.	8733.	7018.	5414.	3994.	2907.	2189.	1693.	1345.	1089.	873.	596.	312.	140.	63.	41.	32.	25.	16.	9.	0.
5.0	15152.	15001.	13622.	11313.	8889.	6675.	4797.	3405.	2472.	1848.	1421.	1130.	911.	630.	329.	147.	64.	41.	32.	25.	16.	9.	0.
3.0	18518.	18344.	16675.	13908.	10707.	7763.	5482.	3836.	2717.	1981.	1486.	1162.	937.	652.	344.	153.	66.	42.	32.	25.	16.	9.	0.
1.0	20470.	20278.	18546.	15411.	11778.	8461.	5924.	4127.	2892.	2078.	1538.	1184.	950.	669.	351.	155.	67.	42.	32.	25.	16.	9.	0.
0.0	20780.	20602.	18897.	15669.	11989.	8601.	6027.	4207.	2939.	2106.	1554.	1191.	954.	674.	353.	155.	67.	42.	32.	25.	16.	9.	0.
-1.0	20654.	20481.	18751.	15547.	11933.	8585.	6037.	4234.	2958.	2123.	1559.	1194.	955.	674.	352.	156.	67.	42.	32.	25.	16.	9.	0.
-3.0	19163.	18819.	17216.	14285.	11094.	8089.	5790.	4109.	2904.	2106.	1539.	1187.	947.	664.	350.	156.	67.	42.	32.	25.	16.	9.	0.
-5.0	15700.	15739.	14397.	12102.	9595.	7138.	5237.	3804.	2741.	2019.	1503.	1164.	926.	646.	338.	154.	66.	42.	32.	25.	16.	9.	0.
-7.0	11911.	11880.	10989.	9597.	7805.	6043.	4518.	3371.	2492.	1885.	1439.	1125.	896.	614.	321.	148.	65.	41.	32.	25.	16.	9.	0.
-9.0	8708.	8637.	8097.	7239.	5991.	4870.	3740.	2887.	2202.	1725.	1357.	1075.	854.	574.	300.	140.	63.	41.	32.	25.	16.	9.	0.
-11.0	6178.	6137.	5828.	5251.	4509.	3740.	2997.	2373.	1911.	1553.	1266.	1021.	798.	526.	275.	131.	61.	40.	32.	25.	16.	9.	0.
-13.0	4376.	4353.	4176.	3810.	3350.	2849.	2376.	1965.	1648.	1393.	1173.	954.	734.	474.	250.	121.	58.	40.	31.	24.	16.	8.	0.
-15.0	3108.	3097.	2992.	2768.	2497.	2198.	1903.	1641.	1431.	1248.	1074.	875.	660.	417.	224.	110.	55.	39.	31.	24.	16.	8.	0.
-17.0	2256.	2251.	2194.	2069.	1916.	1742.	1562.	1396.	1256.	1122.	975.	787.	577.	357.	196.	100.	53.	38.	31.	24.	16.	8.	0.
-19.5	1631.	1629.	1601.	1527.	1460.	1375.	1272.	1173.	1078.	976.	843.	658.	468.	287.	164.	87.	49.	37.	31.	24.	16.	8.	0.
-22.5	1247.	1245.	1222.	1192.	1157.	1100.	1042.	969.	883.	788.	658.	492.	343.	216.	129.	72.	45.	36.	30.	23.	15.	8.	0.
-25.5	1006.	1004.	985.	961.	935.	881.	820.	756.	670.	585.	470.	344.	243.	160.	98.	60.	42.	35.	29.	23.	15.	8.	0.
-29.0	720.	712.	697.	676.	643.	599.	544.	490.	418.	361.	290.	218.	159.	108.	71.	49.	39.	34.	29.	22.	15.	8.	0.
-33.0	393.	383.	375.	358.	335.	307.	280.	253.	224.	197.	164.	127.	97.	70.	50.	41.	35.	32.	28.	21.	14.	7.	0.
-37.5	171.	166.	162.	158.	152.	144.	135.	122.	109.	98.	84.	70.	58.	48.	41.	37.	33.	30.	27.	20.	14.	7.	0.
-42.5	71.	70.	70.	68.	67.	64.	61.	57.	54.	50.	47.	44.	41.	38.	36.	33.	31.	29.	25.	19.	13.	6.	0.
-47.5	41.	41.	41.	40.	40.	40.	39.	38.	38.	37.	36.	35.	35.	34.	32.	31.	29.	27.	23.	18.	12.	6.	0.
-55.0	32.	31.	31.	31.	31.	31.	31.	31.	31.	30.	30.	30.	30.	29.	28.	27.	25.	23.	20.	15.	11.	5.	0.
-65.0	25.	25.	25.	25.	25.	25.	24.	24.	24.	24.	24.	24.	23.	23.	22.	21.	19.	18.	15.	12.	10.	4.	0.
-75.0	16.	16.	16.	16.	16.	16.	16.	16.	16.	16.	16.	16.	15.	15.	14.	14.	13.	12.	11.	10.	7.	2.	0.
-85.0	8.	8.	9.	9.	9.	9.	9.	9.	9.	9.	8.	8.	8.	8.	8.	8.	8.	7.	6.	4.	2.	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 = 10390. CP = 50% OF MAX
FIELD EDGE = 2078. 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																								
29.0																								
25.5																								
22.5																								
19.5																								
17.0																								
15.0	2648.	2637.	2484.	2298.																				
13.0	3846.	3824.	3554.	3211.	2792.	2359.																		
11.0	5641.	5608.	5161.	4577.	3861.	3162.	2517.																	
9.0	8158.	8101.	7533.	6427.	5292.	4194.	3202.	2443.																
7.0	11482.	11379.	10449.	8733.	7018.	5414.	3994.	2907.	2189.															
5.0	15152.	15001.	13622.	11313.	8889.	6675.	4797.	3405.	2472.															
3.0	18518.	18344.	16675.	13908.	10707.	7763.	5482.	3836.	2717.															
1.0	20470.	20278.	18546.	15411.	11778.	8461.	5924.	4127.	2892.	2078.														
0.0	20780.	20602.	18897.	15669.	11989.	8601.	6027.	4207.	2939.	2106.														
-1.0	20654.	20481.	18751.	15547.	11933.	8585.	6037.	4234.	2958.	2123.														
-3.0	19163.	18819.	17216.	14285.	11094.	8089.	5790.	4109.	2904.	2106.														
-5.0	15700.	15739.	14397.	12102.	9595.	7138.	5237.	3804.	2741.															
-7.0	11911.	11880.	10989.	9597.	7805.	6043.	4518.	3371.	2492.															
-9.0	8708.	8637.	8097.	7239.	5991.	4870.	3740.	2887.	2202.															
-11.0	6178.	6137.	5828.	5251.	4509.	3740.	2997.	2373.																
-13.0	4376.	4353.	4176.	3810.	3350.	2849.	2376.																	
-15.0	3108.	3097.	2992.	2768.	2497.	2198.																		
-17.0	2256.	2251.	2194.																					
-19.5																								
-22.5																								
-25.5																								
-29.0																								
-33.0																								
-37.5																								
-42.5																								
-47.5																								
-55.0																								
-65.0																								
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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.	0.	1.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.
45	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.
35	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
31	2.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	14.
27	2.	2.	2.	2.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	16.
24	2.	2.	2.	2.	2.	2.	2.	1.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	21.
21	3.	3.	2.	2.	2.	2.	2.	2.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	26.
18	2.	2.	2.	2.	2.	2.	1.	1.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	21.
16	3.	3.	3.	3.	2.	2.	2.	1.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	26.
14	5.	4.	4.	3.	3.	2.	2.	2.	1.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	33.
12	7.	6.	6.	5.	4.	3.	2.	2.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	43.
10	10.	9.	8.	6.	5.	4.	3.	2.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	57.
8	14.	13.	11.	8.	7.	5.	3.	3.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	73.
6	18.	17.	14.	11.	8.	6.	4.	3.	2.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	91.
4	22.	20.	17.	13.	9.	7.	5.	3.	2.	3.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	107.
2	25.	23.	19.	14.	10.	7.	5.	3.	2.	3.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	117.
0	25.	23.	19.	14.	10.	7.	5.	3.	2.	3.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	119.
-2	23.	21.	17.	13.	10.	7.	5.	3.	2.	3.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	111.
-4	19.	18.	15.	12.	9.	6.	5.	3.	2.	3.	2.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	97.
-6	14.	13.	12.	9.	7.	5.	4.	3.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	79.
-8	11.	10.	9.	7.	6.	4.	3.	3.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	63.
-10	7.	7.	6.	5.	5.	4.	3.	2.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	49.
-12	5.	5.	5.	4.	3.	3.	2.	2.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	38.
-14	4.	4.	3.	3.	3.	2.	2.	2.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	30.
-16	3.	3.	3.	2.	2.	2.	2.	1.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	24.
-18	3.	3.	3.	3.	2.	2.	2.	2.	2.	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	29.
-21	2.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	23.
-24	2.	2.	2.	2.	2.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	18.
-27	2.	2.	2.	2.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	16.
-31	1.	1.	1.	1.	1.	1.	1.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	9.
-35	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	6.
-40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4.
-45	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.
-50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.
-60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4.
-70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.
-80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
-90	238.	221.	190.	155.	122.	94.	73.	58.	46.	55.	43.	33.	29.	16.	11.	6.	5.	7.	4.	2.	0.	1408.	

LUMEN TOTAL THIS PAGE = 1408.



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REPORT NUMBER: ITL83572
ISSUE DATE: 11/26/14
PREPARED FOR: B-K LIGHTING, INC.

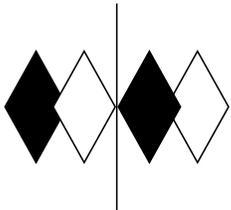
PAGE: 5 OF 7
REVISED: 11/10/15

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.	
80																								0.
70																								0.
60																								0.
50																								0.
45																								0.
40																								0.
35																								0.
31																								0.
27																								0.
24																								0.
21																								0.
18																								0.
16																								0.
14		3.	3.	3.																				9.
12		5.	4.	4.	3.	3.																		19.
10		7.	6.	6.	5.	4.	3.																	30.
8		10.	9.	8.	6.	5.	4.	3.																45.
6		14.	13.	11.	8.	7.	5.	3.	3.															63.
4		18.	17.	14.	11.	8.	6.	4.	3.															80.
2		22.	20.	17.	13.	9.	7.	5.	3.															96.
0		25.	23.	19.	14.	10.	7.	5.	3.	2.														108.
-2		25.	23.	19.	14.	10.	7.	5.	3.	2.														110.
-4		23.	21.	17.	13.	10.	7.	5.	3.	2.														102.
-6		19.	18.	15.	12.	9.	6.	5.	3.															86.
-8		14.	13.	12.	9.	7.	5.	4.	3.															69.
-10		11.	10.	9.	7.	6.	4.	3.	3.															53.
-12		7.	7.	6.	5.	5.	4.	3.																37.
-14		5.	5.	5.	4.	3.	3.																	25.
-16		4.	4.	3.	3.	3.																		16.
-18		3.	3.																					5.
-21																								0.
-24																								0.
-27																								0.
-31																								0.
-35																								0.
-40																								0.
-45																								0.
-50																								0.
-60																								0.
-70																								0.
-80																								0.
-90	215.	198.	166.	130.	98.	68.	45.	28.	7.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	954.

LUMEN TOTAL THIS PAGE = 954.

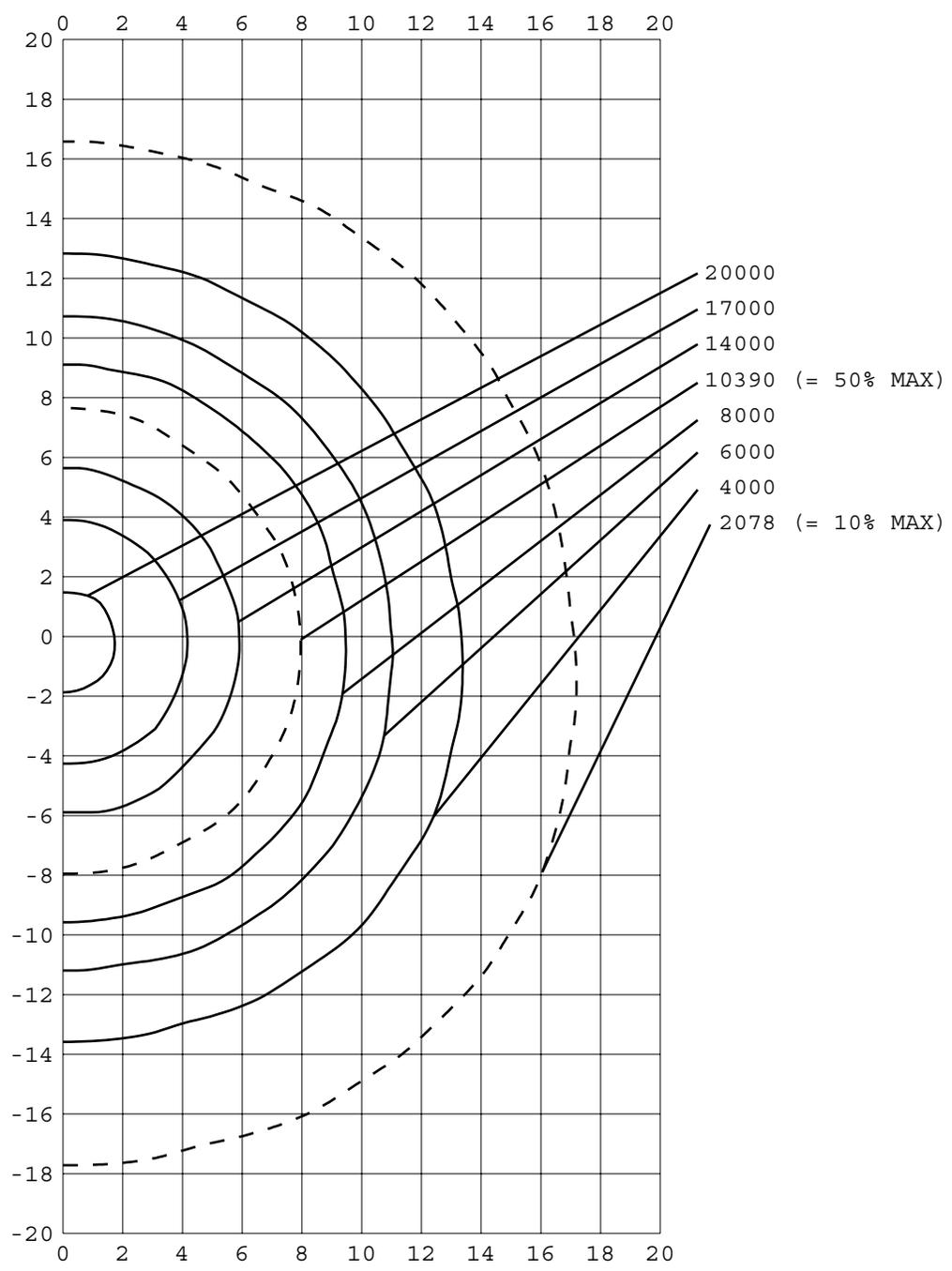


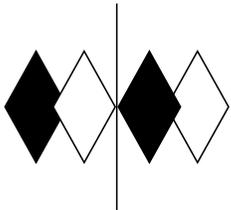
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PAGE: 6 OF 7
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AVERAGE OF RIGHT AND LEFT SIDES





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