

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P177356

Luminaire Tested: **VAL-E01-LED-E-U-GL2-HSS-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P177356
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VAL-E01-LED-E-U-GL2-HSS-8030
Description: VALET TUNNEL LED LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE II W/ GLARE CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1501.1 lumens
Efficiency: N/A
Efficacy: 60.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

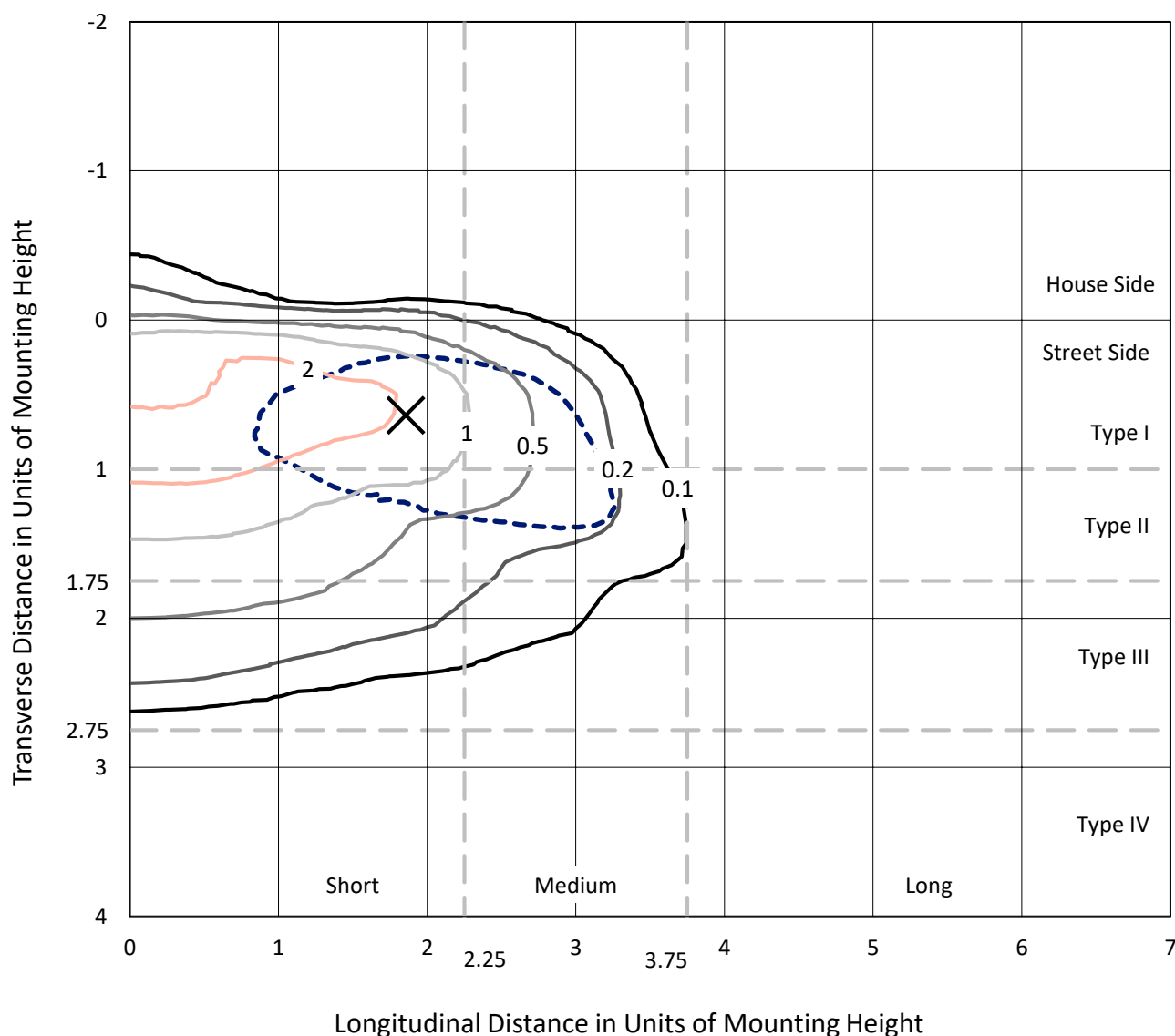


REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

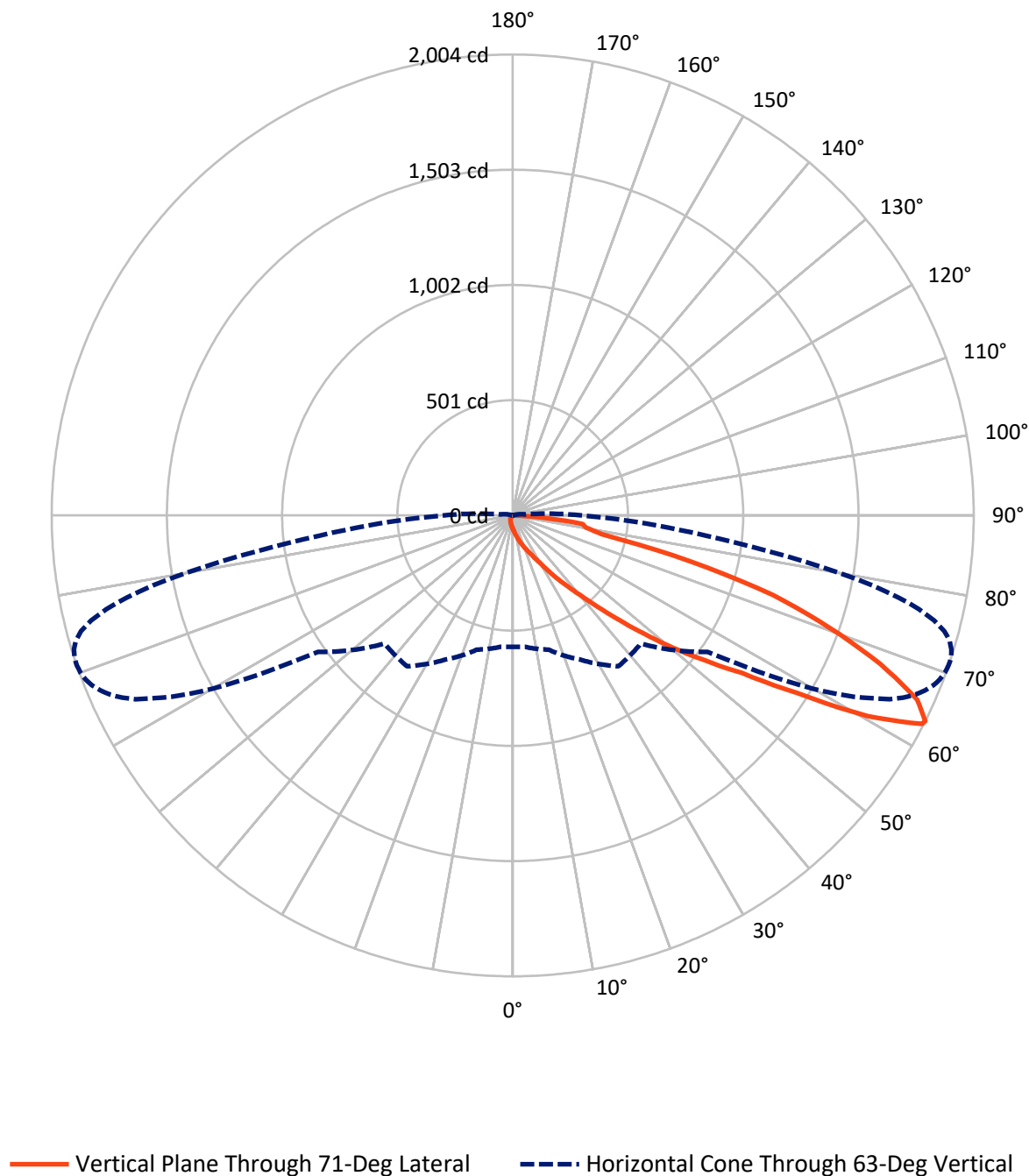


Based on 10 foot mounting height. Maximum calculated value = 3.2 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

Luminous Intensity Polar Plot



REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

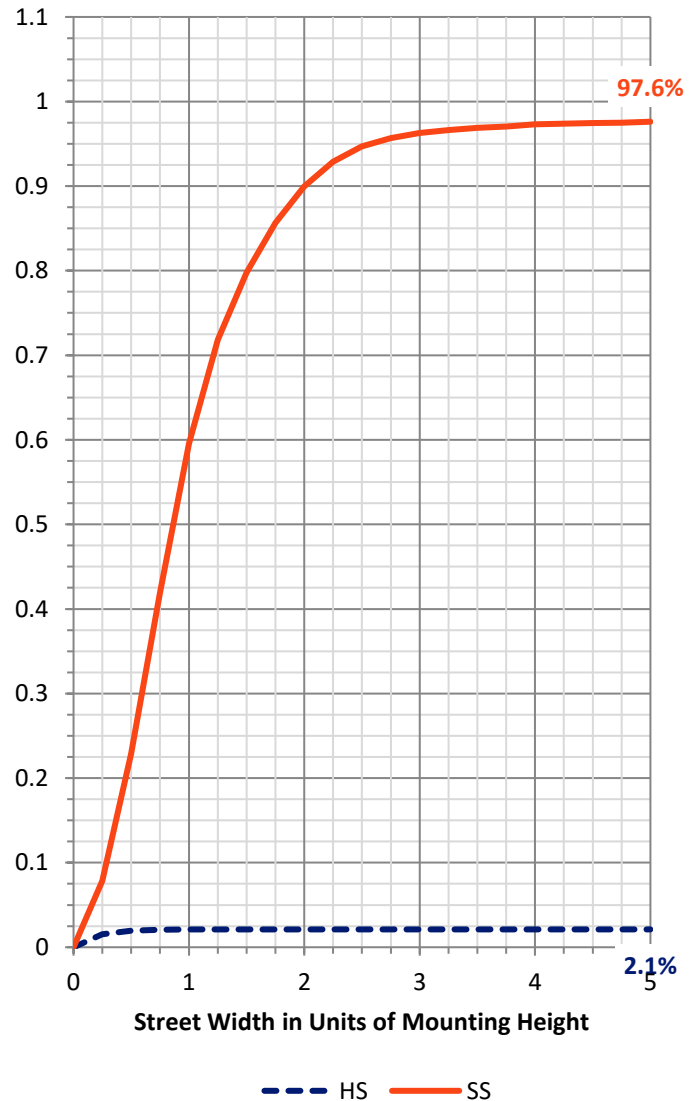
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	31.9	0.0	31.9
	% Fixture	2.1	0.0	2.1
Street Side	Lumens	1469.2	0.0	1469.2
	% Fixture	97.9	0.0	97.9
Total	Lumens	1501.1	0.0	1501.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.4	0.4
10°-20°	24.7	1.6
20°-30°	50.1	3.3
30°-40°	122.5	8.2
40°-50°	273.9	18.2
50°-60°	385.2	25.7
60°-70°	452.9	30.2
70°-80°	163.5	10.9
80°-90°	21.9	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1501.1	100.0
0°-180°	1501.1	100.0

Coefficient of Utilization



REPORT NUMBER: P177356

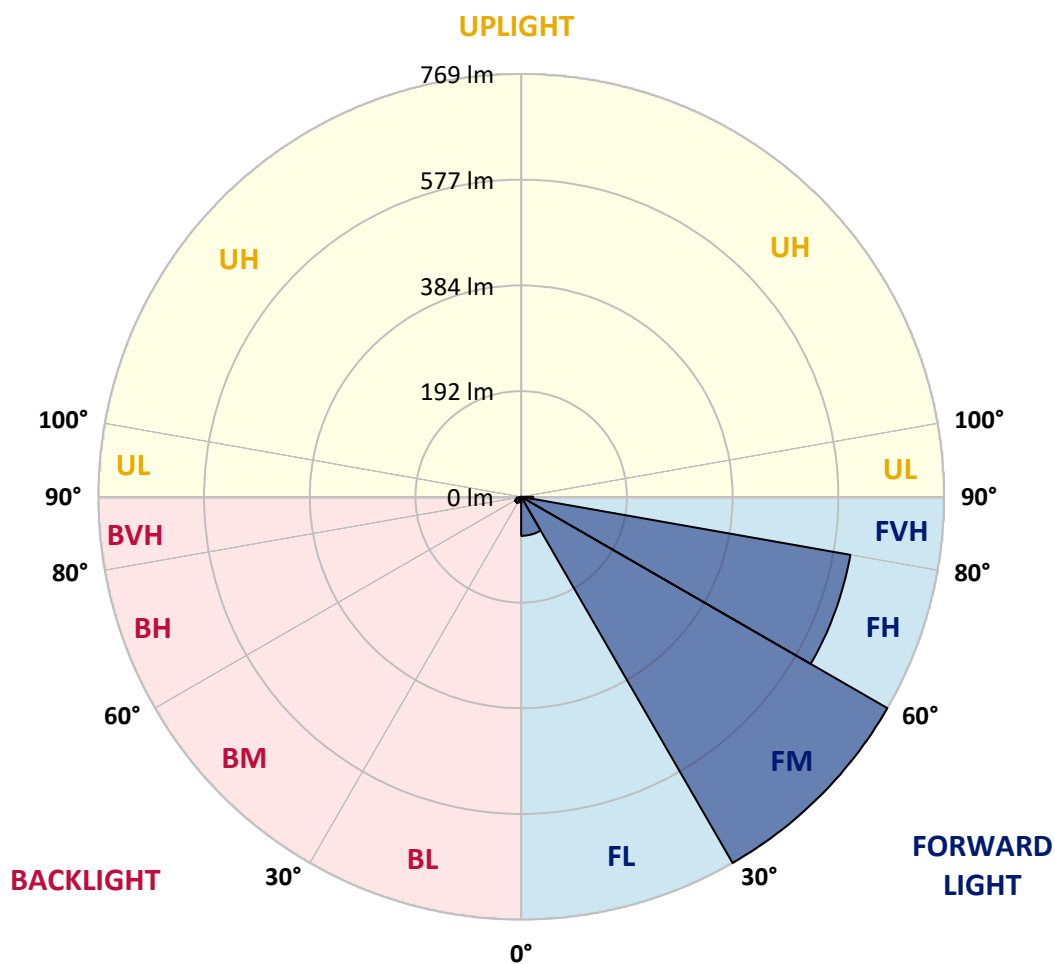
CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	70.9	4.7			
FM	(30°-60°)	768.7	51.2			
FH	(60°-80°)	607.7	40.5			G0/660
FVH	(80°-90°)	21.8	1.5			G1/100
BL	(0°-30°)	10.2	0.7	B0/110		
BM	(30°-60°)	12.8	0.9	B0/220		
BH	(60°-80°)	8.7	0.6	B0/110		G0/110
BVH	(80°-90°)	0.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type II Short





REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6
2.5°	75.3	76.1	75.6	74.2	72.6	70.4	68.5	68.5	68.2	67.4	67.7
5°	98.8	99.1	98.0	94.7	91.7	87.0	81.9	81.3	80.8	80.0	79.7
7.5°	121.7	122.8	121.7	118.2	112.1	105.1	96.9	96.1	94.4	94.4	93.3
10°	145.2	145.2	144.1	140.0	134.5	124.4	114.1	112.7	110.8	110.2	108.6
12.5°	161.8	161.8	161.3	159.1	154.7	145.7	133.2	131.8	129.4	128.5	126.6
15°	168.4	168.4	168.6	170.6	170.8	166.7	153.6	152.5	150.1	147.9	147.1
17.5°	172.5	172.2	172.2	174.9	179.8	182.6	174.1	173.0	170.3	169.2	166.5
20°	181.5	180.9	179.3	179.3	183.9	193.5	193.5	193.2	190.2	189.4	188.0
22.5°	194.8	194.3	189.4	185.3	187.5	199.5	210.7	210.1	209.0	207.9	207.1
25°	216.7	214.8	206.3	194.3	192.4	205.2	223.8	225.1	226.0	226.0	226.5
27.5°	249.7	247.2	232.2	209.8	201.4	214.5	238.2	241.0	243.4	244.0	246.4
30°	295.5	291.2	269.6	236.9	217.5	228.1	259.5	262.5	266.1	267.2	271.0
32.5°	370.8	368.4	347.7	298.5	257.1	254.9	289.3	293.1	297.7	299.6	304.3
35°	485.5	486.0	469.1	424.9	367.6	337.6	342.5	345.7	347.4	353.1	355.6
37.5°	563.2	564.6	568.4	551.0	510.0	479.5	441.0	444.5	436.1	436.9	437.2
40°	605.8	610.2	632.6	649.5	646.2	628.5	597.6	599.5	583.7	580.2	563.0
42.5°	634.2	639.9	675.7	728.1	754.8	770.9	763.8	763.0	750.7	746.1	731.6
45°	651.9	657.1	702.1	779.4	841.0	888.0	907.4	909.5	899.2	894.5	882.5
47.5°	651.1	657.1	705.4	798.5	889.3	964.4	1019.0	1021.7	1028.0	1023.9	1024.7
50°	615.1	620.8	669.4	766.0	875.2	999.3	1099.2	1107.9	1118.0	1124.8	1128.1
52.5°	571.4	575.5	618.6	710.3	814.6	984.9	1146.7	1161.7	1176.7	1189.5	1198.5
55°	555.3	560.0	593.8	669.9	766.0	924.3	1168.8	1190.9	1212.2	1233.2	1250.4
57.5°	563.8	568.2	592.4	650.8	737.1	860.4	1175.1	1209.4	1244.4	1278.5	1312.3
60°	594.9	599.5	620.3	668.6	729.4	823.6	1150.5	1207.5	1265.6	1325.2	1381.1
62.5°	582.6	584.5	615.1	699.7	784.0	792.2	1061.3	1140.9	1229.6	1321.3	1411.6
63°	570.9	573.1	604.2	691.2	800.7	787.6	1033.7	1117.7	1211.3	1310.1	1408.4
65°	517.7	517.9	541.7	610.4	782.1	795.7	910.9	991.1	1098.6	1217.1	1341.2
67.5°	386.4	384.5	407.4	459.8	614.0	796.0	781.8	826.8	901.6	1006.7	1118.0
70°	137.0	134.0	171.1	243.7	382.6	651.1	671.9	674.9	695.6	752.4	822.2
72.5°	44.5	45.3	54.6	89.2	176.3	438.3	608.3	599.0	593.5	593.3	602.5
75°	17.7	18.0	21.8	39.6	79.1	211.2	532.7	537.9	539.8	542.5	545.5
77.5°	8.5	9.3	12.3	22.1	39.3	104.5	381.2	425.2	450.3	469.6	481.4
80°	3.0	3.5	6.8	13.6	18.3	48.0	200.9	242.3	279.2	326.6	367.6
82.5°	0.0	0.0	1.4	9.6	10.1	19.4	82.4	96.6	110.5	143.3	183.9
85°	0.0	0.0	0.0	2.7	3.0	3.3	27.8	33.6	37.7	43.9	50.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	1.6	4.1	6.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6
2.5°	67.1	66.9	66.9	66.3	66.0	65.5	65.2	64.4	64.1	64.1	64.1
5°	79.4	78.3	77.8	76.4	75.6	75.3	74.0	73.4	72.6	72.9	71.5
7.5°	93.1	91.2	90.3	88.4	87.9	86.0	85.4	84.0	83.2	81.6	81.0
10°	108.1	105.6	104.2	101.2	100.4	99.1	97.4	95.8	94.4	92.8	92.0
12.5°	125.2	123.1	122.0	117.9	116.0	114.1	111.9	109.7	107.5	106.2	104.2
15°	145.5	141.9	140.8	137.0	133.7	131.3	128.3	125.5	123.9	121.2	119.3
17.5°	165.4	161.8	161.0	155.3	151.7	150.1	146.8	143.3	140.3	137.5	134.5
20°	185.3	182.8	180.6	175.2	171.4	168.6	164.3	160.7	158.3	154.5	150.6
22.5°	205.2	202.8	201.1	195.4	191.8	188.0	184.2	180.4	176.8	172.2	167.8
25°	225.7	224.0	223.2	218.0	214.8	211.2	207.4	203.0	198.7	193.5	188.8
27.5°	247.0	247.5	245.9	244.8	241.2	238.8	232.8	229.8	226.5	220.2	214.5
30°	274.0	275.6	275.1	275.9	273.7	272.1	267.4	263.6	259.8	253.8	247.2
32.5°	308.1	310.3	311.4	314.4	313.3	312.7	311.4	305.9	303.2	292.8	290.1
35°	360.8	359.7	364.3	366.8	365.7	365.1	363.5	360.5	357.2	349.8	343.0
37.5°	429.3	430.4	432.0	427.1	423.8	423.5	418.6	415.6	411.0	402.8	394.6
40°	554.8	548.0	540.3	519.6	510.6	505.4	490.9	486.8	478.9	467.7	459.3
42.5°	718.0	711.1	688.2	653.6	635.0	609.4	597.6	583.2	572.0	553.7	543.9
45°	880.1	860.4	857.7	817.3	794.4	760.5	739.5	715.2	689.9	665.8	648.4
47.5°	1016.8	1012.4	999.0	974.5	953.2	924.8	897.8	860.4	834.2	800.1	768.7
50°	1126.2	1125.9	1121.0	1106.8	1089.1	1066.2	1042.4	1010.8	981.0	939.3	905.7
52.5°	1208.1	1212.4	1214.1	1209.7	1202.9	1182.7	1170.7	1144.2	1119.1	1083.6	1047.3
55°	1268.1	1284.2	1292.4	1301.7	1299.8	1292.7	1292.1	1274.9	1263.5	1235.4	1209.7
57.5°	1342.3	1368.8	1394.2	1439.2	1440.8	1456.7	1464.9	1473.1	1475.2	1464.0	1455.6
60°	1436.8	1490.8	1538.8	1633.0	1657.5	1696.3	1721.4	1748.7	1771.9	1773.8	1773.2
62.5°	1503.3	1586.6	1664.1	1803.8	1851.5	1896.3	1929.9	1956.3	1972.4	1988.8	1996.4
63°	1505.2	1596.4	1678.8	1822.9	1873.1	1915.7	1947.6	1972.2	1989.1	1998.9	2003.8
65°	1459.1	1569.7	1667.9	1811.4	1858.6	1901.5	1918.1	1934.2	1942.4	1946.2	1931.8
67.5°	1236.7	1344.8	1459.4	1619.9	1660.2	1711.5	1725.2	1733.4	1737.2	1736.4	1724.1
70°	924.8	1015.4	1142.8	1326.2	1379.7	1429.9	1461.0	1474.4	1478.8	1477.4	1459.1
72.5°	645.7	698.9	803.9	1008.0	1080.9	1145.3	1183.8	1203.7	1207.8	1199.6	1182.7
75°	542.2	545.0	568.7	680.3	748.5	817.3	860.7	873.2	865.1	840.2	797.1
77.5°	484.1	490.1	490.1	506.7	520.1	539.2	543.3	512.8	477.3	431.4	394.3
80°	406.1	427.1	441.8	454.1	455.5	451.6	441.5	424.3	397.0	362.1	323.4
82.5°	246.7	288.2	305.1	368.4	399.5	420.5	418.9	396.0	375.2	338.9	305.9
85°	62.2	67.1	72.9	94.7	106.2	129.6	144.4	151.2	153.6	141.1	127.7
87.5°	6.0	4.1	6.8	5.2	7.4	5.5	7.4	6.8	8.5	9.0	9.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6
2.5°	63.6	63.3	63.0	62.8	62.5	62.2	61.7	61.7	61.1	60.9	60.6
5°	70.7	70.1	69.9	69.3	68.5	67.9	67.1	66.0	65.2	65.0	64.4
7.5°	79.7	78.3	77.8	77.0	75.9	74.2	73.1	72.3	70.9	70.1	68.5
10°	89.8	88.4	86.8	85.1	83.5	81.6	80.2	79.1	77.0	75.9	74.0
12.5°	102.6	100.1	98.2	96.1	93.9	91.7	90.1	86.8	84.9	82.4	80.8
15°	115.7	113.5	111.3	108.6	105.3	101.8	100.1	97.1	94.7	90.9	88.7
17.5°	131.5	127.4	124.2	120.9	117.9	114.6	111.3	106.7	103.2	99.9	95.5
20°	147.1	142.2	138.6	134.3	129.9	124.7	120.9	117.6	112.7	108.3	103.7
22.5°	163.7	158.8	153.1	148.7	142.7	138.6	133.4	128.0	123.1	117.3	111.6
25°	183.9	178.7	172.2	166.5	159.6	153.9	147.6	141.4	135.4	128.8	121.4
27.5°	208.8	203.3	196.2	189.4	180.4	173.3	167.3	158.8	151.2	143.0	134.5
30°	240.1	234.1	225.4	215.6	206.6	198.7	190.2	179.0	170.6	160.7	149.8
32.5°	281.1	274.0	262.2	253.0	241.8	231.4	219.7	208.5	196.5	183.7	171.1
35°	332.7	326.1	312.5	298.8	286.5	274.2	259.5	246.7	229.8	214.2	198.1
37.5°	386.1	374.4	361.9	347.1	331.8	317.1	299.1	281.4	262.0	245.1	224.9
40°	447.3	433.1	422.7	406.9	385.3	364.3	347.7	325.6	301.3	278.6	254.9
42.5°	531.0	515.2	496.7	472.6	457.1	432.5	411.0	384.8	352.8	327.5	298.8
45°	627.9	606.4	588.3	565.2	546.3	515.8	490.6	455.7	423.8	390.5	355.6
47.5°	738.4	711.7	685.5	662.6	632.6	602.5	570.6	533.5	492.6	456.0	414.5
50°	865.3	827.4	791.1	761.6	720.4	685.8	651.1	609.4	564.1	522.0	474.8
52.5°	1006.4	962.5	914.4	869.1	821.4	776.9	735.2	687.1	636.6	585.3	532.7
55°	1176.7	1143.7	1087.2	1029.6	965.7	906.3	852.5	793.0	731.6	664.2	608.8
57.5°	1443.3	1427.2	1380.0	1322.4	1239.2	1166.9	1075.7	1002.9	913.9	821.1	749.6
60°	1804.6	1784.7	1758.2	1711.5	1645.5	1547.3	1446.9	1333.6	1198.2	1069.7	947.7
62.5°	1997.3	1990.2	1968.6	1936.4	1874.7	1797.2	1696.0	1571.6	1418.7	1262.6	1107.1
63°	2003.0	1994.0	1975.4	1942.7	1888.4	1813.3	1714.0	1593.1	1443.6	1284.5	1125.7
65°	1925.5	1922.0	1903.1	1867.4	1830.3	1773.0	1696.0	1592.0	1466.5	1316.1	1158.1
67.5°	1707.7	1697.1	1668.2	1657.2	1631.3	1591.5	1532.8	1461.3	1371.5	1253.4	1116.9
70°	1444.4	1428.6	1392.3	1372.9	1341.2	1316.1	1280.4	1229.4	1174.0	1091.6	989.8
72.5°	1165.2	1132.5	1099.2	1048.7	1004.5	959.8	920.2	884.1	823.3	790.0	712.8
75°	756.7	697.2	640.2	563.8	495.0	434.2	375.0	344.9	282.4	257.1	220.8
77.5°	359.1	325.8	281.1	246.4	202.2	165.1	134.8	101.2	79.4	62.2	47.5
80°	289.8	261.7	234.7	203.3	170.0	135.6	104.0	77.8	55.1	38.2	27.0
82.5°	258.4	227.9	194.6	173.0	150.4	123.1	101.0	82.4	60.9	44.5	30.3
85°	100.4	84.6	65.2	53.2	41.5	34.1	30.8	21.3	16.6	13.1	10.1
87.5°	8.7	7.1	5.7	3.8	4.1	2.2	2.4	1.6	1.4	1.4	1.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6
2.5°	60.3	60.0	59.8	59.2	59.2	58.7	58.4	58.1	56.8	53.8	51.3
5°	63.3	62.8	62.2	61.4	60.9	60.0	59.5	58.7	55.7	49.9	45.0
7.5°	67.7	66.6	65.8	64.1	63.3	62.2	61.4	60.0	55.1	46.4	39.6
10°	72.9	70.9	69.6	67.7	66.0	64.7	63.3	61.4	54.6	42.6	34.7
12.5°	79.1	77.0	74.2	72.0	69.9	67.9	66.0	63.6	53.8	39.3	30.8
15°	85.4	82.1	80.2	77.2	74.2	71.5	68.8	66.6	54.0	35.8	27.6
17.5°	92.5	89.2	85.1	81.9	78.6	75.0	71.8	67.4	52.7	33.0	25.1
20°	99.3	94.7	90.9	86.8	82.1	77.8	73.7	69.9	51.6	30.3	22.9
22.5°	106.7	101.2	96.3	91.2	85.4	80.5	75.6	70.7	49.7	27.8	21.0
25°	115.7	109.4	102.3	96.1	90.1	84.0	77.8	71.8	47.8	25.7	19.6
27.5°	126.6	118.4	111.3	103.4	95.0	87.3	80.5	74.0	45.8	24.0	18.3
30°	140.5	131.0	120.9	110.8	101.8	93.1	83.5	75.3	43.9	22.4	16.9
32.5°	159.1	147.1	134.8	123.1	111.1	99.9	89.8	79.1	42.8	21.0	15.5
35°	183.7	168.1	153.1	138.3	123.9	110.2	97.1	85.1	42.8	19.4	13.9
37.5°	206.8	188.8	169.7	151.4	134.3	118.4	102.9	88.4	40.7	18.0	12.6
40°	232.0	210.4	188.0	166.5	145.7	126.1	108.3	91.7	38.8	16.4	11.2
42.5°	270.4	243.1	214.0	188.8	164.0	139.7	117.6	98.0	36.3	14.7	9.8
45°	320.9	286.3	251.9	221.3	189.7	159.9	133.7	109.4	35.8	13.4	8.5
47.5°	375.0	334.0	293.6	254.6	217.5	182.8	151.4	122.3	35.8	12.0	7.4
50°	428.7	377.4	334.3	289.0	247.2	206.3	168.9	135.6	36.0	10.9	6.0
52.5°	477.3	422.4	374.1	321.7	275.6	228.1	187.5	148.7	35.5	9.6	4.9
55°	544.7	480.3	424.3	366.5	312.5	259.0	212.9	168.4	35.8	8.5	4.1
57.5°	668.8	593.3	525.9	450.0	387.8	318.7	262.8	208.8	39.0	7.1	3.0
60°	847.0	748.8	654.1	561.6	482.5	400.3	327.7	264.2	45.8	5.7	2.2
62.5°	966.8	838.3	725.3	623.3	531.3	445.4	366.2	293.9	50.5	4.6	1.4
63°	979.1	846.2	732.7	627.4	533.5	447.5	367.8	296.1	50.8	4.4	1.4
65°	1002.3	859.9	736.8	628.2	531.3	444.5	366.8	295.8	51.3	3.5	1.1
67.5°	975.8	838.9	713.1	604.7	512.2	426.8	353.1	284.9	51.0	2.4	0.8
70°	872.7	759.2	648.7	547.7	463.6	386.4	321.5	259.8	46.9	1.6	0.5
72.5°	640.7	563.5	477.8	405.0	349.3	290.1	247.5	195.1	36.3	1.1	0.3
75°	189.9	173.0	145.5	128.3	113.2	93.6	83.2	65.0	18.6	0.5	0.0
77.5°	37.9	34.4	30.8	28.1	26.5	22.7	21.6	17.7	7.6	0.3	0.0
80°	19.9	16.4	13.9	12.3	10.6	8.7	7.4	6.0	1.4	0.0	0.0
82.5°	19.1	12.8	9.3	7.6	6.5	5.2	4.1	3.0	0.8	0.0	0.0
85°	7.1	5.5	4.1	3.3	2.7	2.4	1.9	1.6	0.0	0.0	0.0
87.5°	1.1	0.8	0.8	0.5	0.5	0.3	0.3	0.3	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P177356

CATALOG NUMBER: VAL-E01-LED-E-U-GL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	125°	135°	145°	155°	165°	175°	180°
0°	57.6	57.6	57.6	57.6	57.6	57.6	57.6
2.5°	48.9	46.7	45.6	44.2	44.2	43.9	44.5
5°	40.7	37.7	35.5	33.8	34.1	33.3	33.6
7.5°	34.4	31.4	29.5	28.4	28.1	27.8	27.8
10°	29.7	27.0	25.4	24.6	24.3	24.3	24.3
12.5°	26.5	23.7	22.4	21.8	21.8	21.6	21.6
15°	23.7	21.6	20.2	19.6	19.6	19.4	19.6
17.5°	21.6	19.4	18.3	17.7	17.7	17.5	17.5
20°	19.6	17.7	16.6	15.8	15.8	15.5	15.8
22.5°	18.0	16.1	14.7	14.2	13.9	13.6	13.9
25°	16.4	14.5	13.1	12.3	12.0	12.0	11.7
27.5°	15.0	13.1	11.5	10.6	10.4	10.4	10.1
30°	13.6	11.5	9.8	9.0	8.7	8.7	8.7
32.5°	12.3	9.8	8.5	7.6	7.4	7.4	7.4
35°	10.9	8.5	7.1	6.3	6.0	6.0	6.0
37.5°	9.3	7.1	5.5	4.9	4.6	4.4	4.4
40°	7.9	5.5	4.1	3.5	3.0	3.0	3.0
42.5°	6.5	4.4	3.0	2.2	1.9	1.6	1.9
45°	5.5	3.3	1.9	1.1	0.8	0.8	0.8
47.5°	4.4	2.2	0.8	0.3	0.3	0.3	0.3
50°	3.3	1.4	0.3	0.0	0.0	0.3	0.3
52.5°	2.4	0.8	0.0	0.0	0.0	0.0	0.0
55°	1.4	0.3	0.0	0.0	0.0	0.0	0.0
57.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
63°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)