

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: INVUE

Report Number: P95430

Luminaire Tested: **VFS-K-B20-3-LED-E1-WST**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P95430  
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22641)  
Test Lab: INNOVATION CENTER  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: VFS-K-B20-3-LED-E1-WST  
Description: ARCHITECTURAL FLOOD LUMINAIRE  
WIDE SYMMETRIC RECTANGULAR DISTRIBUTION  
WITH 20 LED'S, 350mA DRIVE CURRENT  
Light Source: -  
Ballast/Driver: -

**Summary**

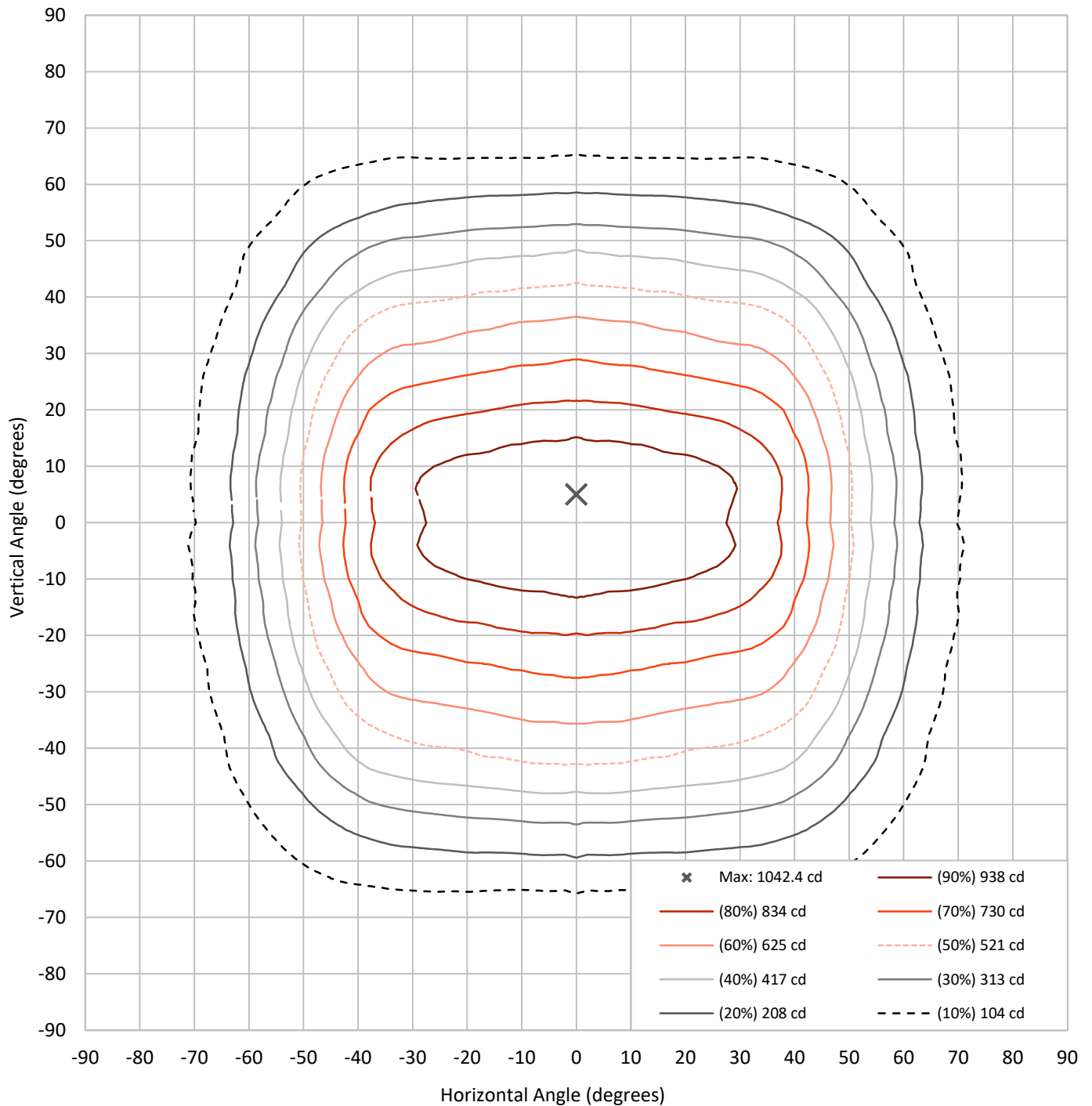
Lumens per Lamp:	N/A	NEMA Type:	7H x 7V
Luminaire Lumens:	2219.4 lumens	Max Intensity:	1042.4 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 5°V
Efficacy:	92.9 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	101.1°H x 85.4°V	Field Angle (10%):	140.9°H x 130.5°V
Beam Lumens:	1552.4 lumens	Field Lumens:	2141.1 lumens
Beam Efficiency:	69.9%	Field Efficiency:	96.5%
Input Watts (W):	23.9		
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:	25 FT		



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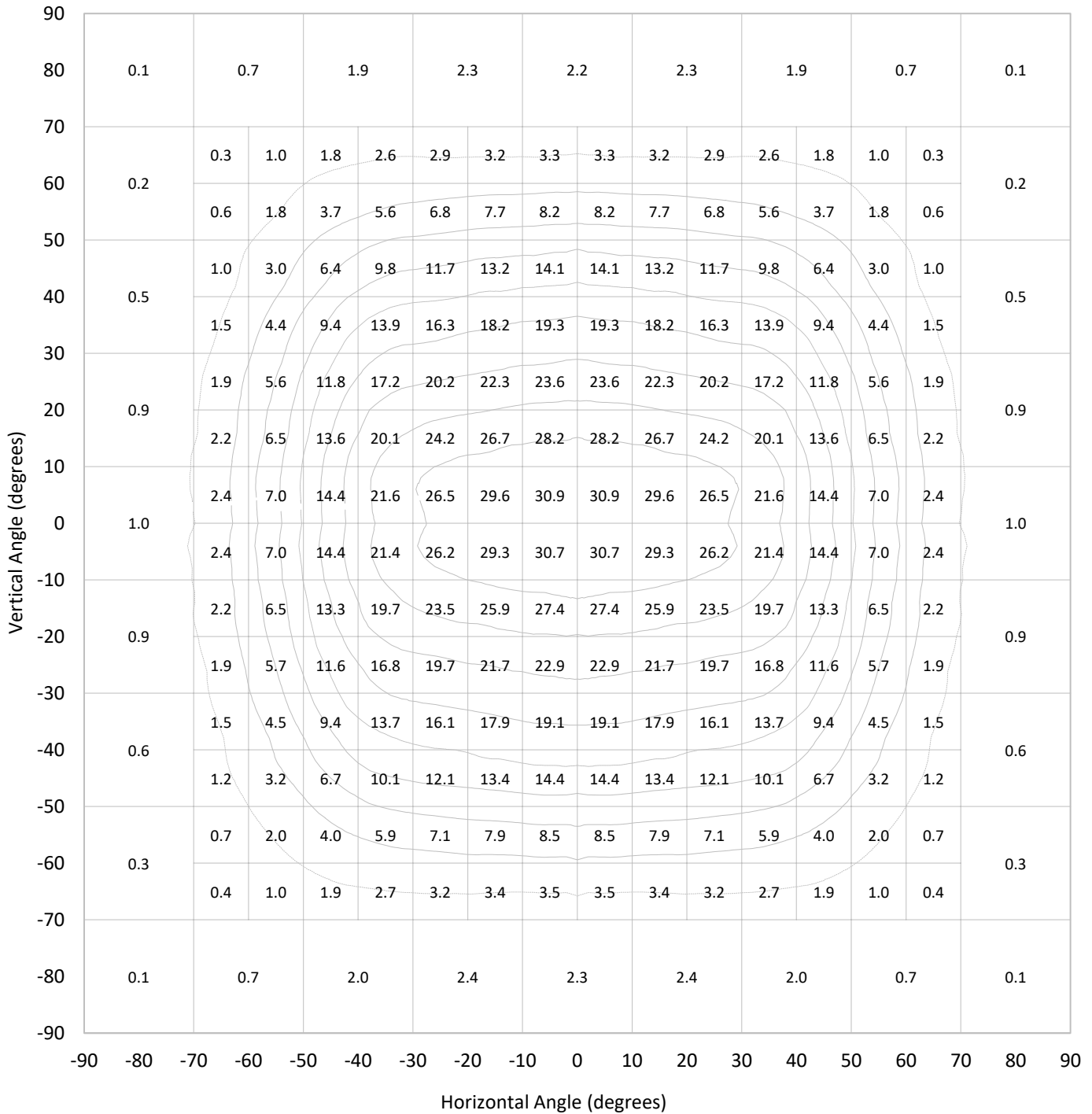
### Iso-Candela Plot





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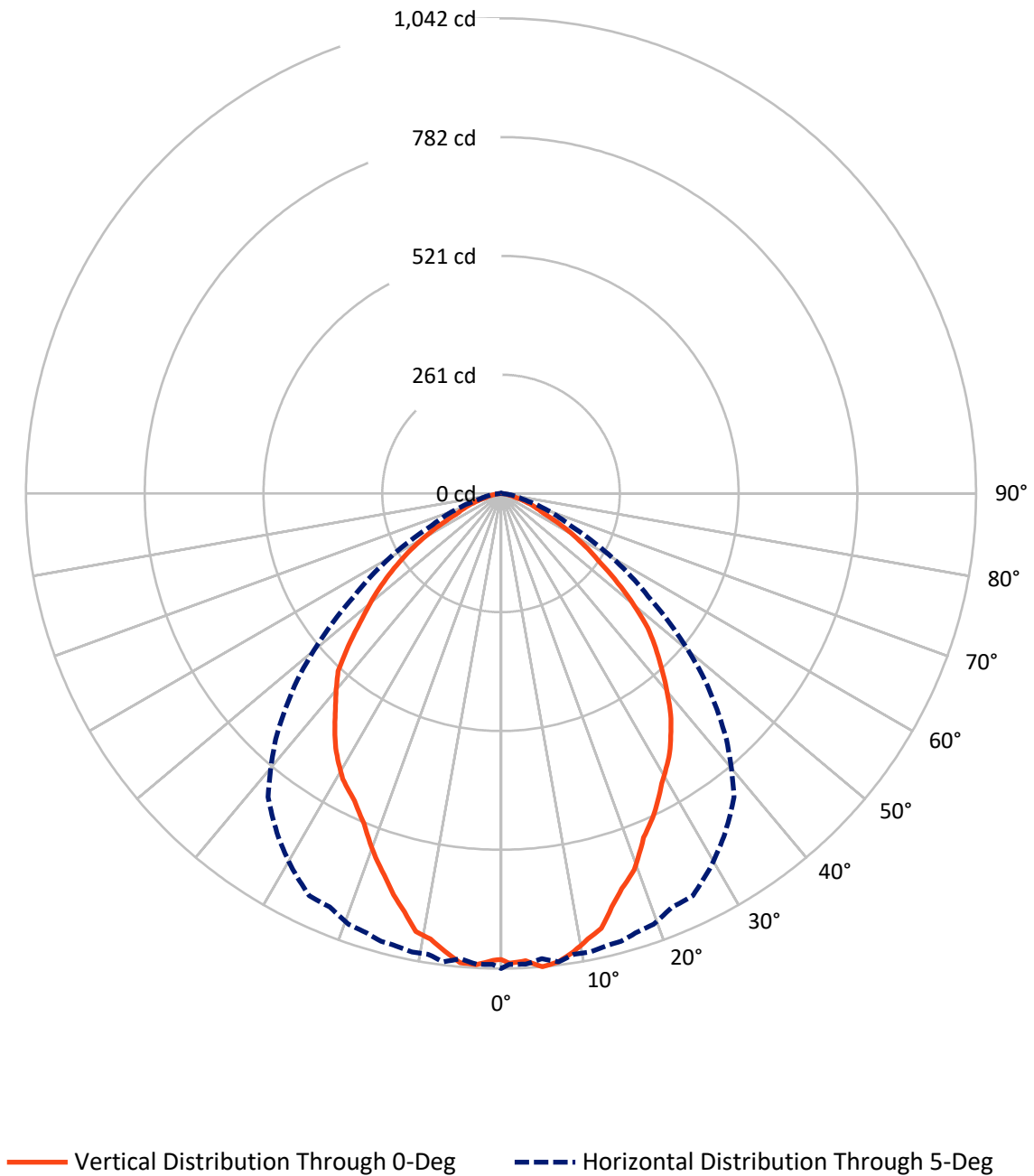
### Lumen Table



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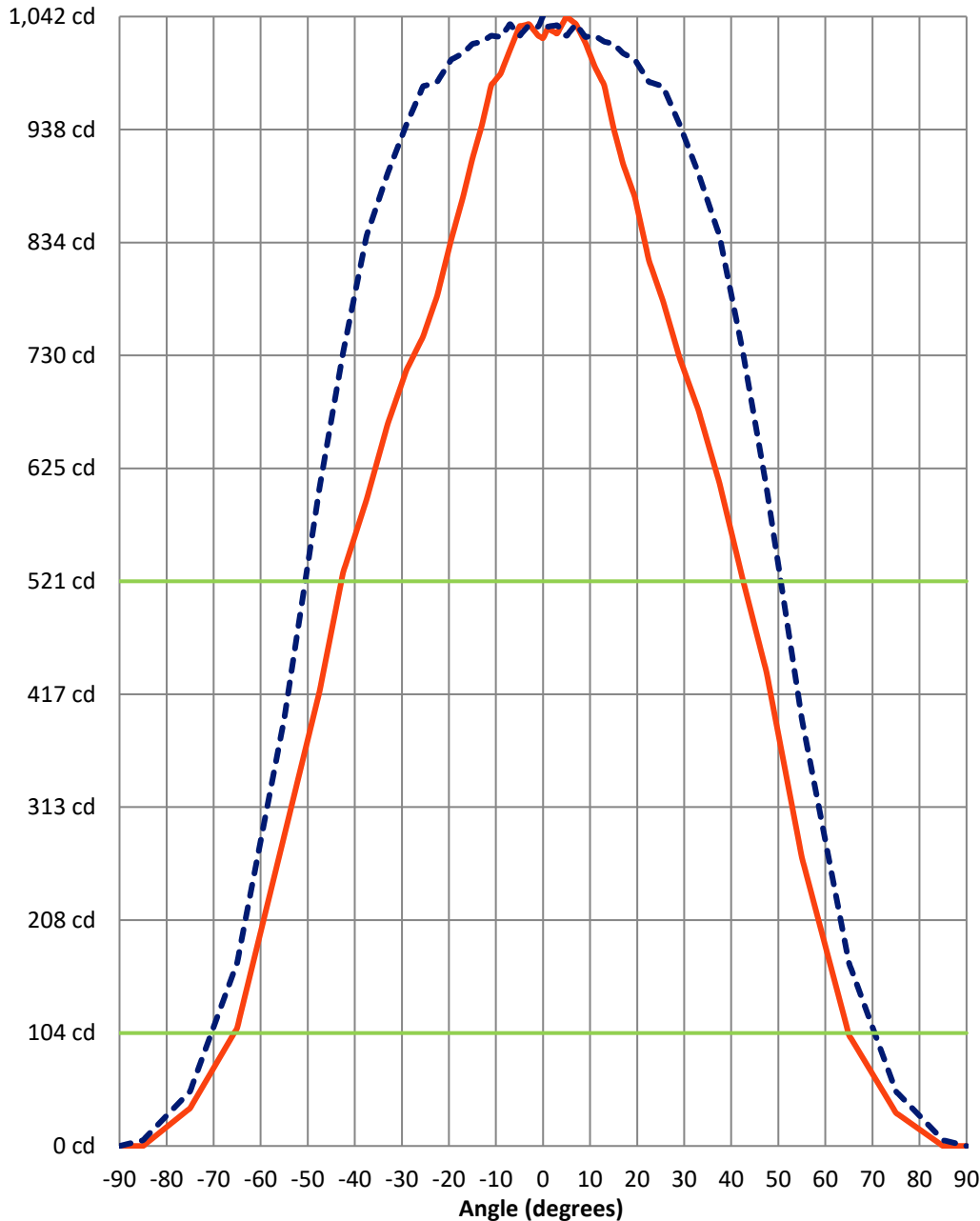
### Luminous Intensity Polar Plot



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### Luminous Intensity Plot



**Beam:**  
 H Angle: 101.1°  
 V Angle: 85.4°  
 Lumens: 1552.4  
 Efficiency: 69.9%

**Field:**  
 H Angle: 140.9°  
 V Angle: 130.5°  
 Lumens: 2141.1  
 Efficiency: 96.5%

**Spill:**  
 Lumens: 78.3  
 Efficiency: 3.5%

— Vertical Distribution through 0-Deg  
 - - - Horizontal Distribution through 5-Deg



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FIELD  
BEAM

**CANDELA DISTRIBUTION:**

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0.0	0.0	0.0	0.0	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	1.1	3.2	5.4	1.1
75°	30.6	23.1	31.7	24.2	26.3	25.2	29.5	27.4	28.5	30.6	29.5
65°	102.6	97.2	102.6	99.4	91.8	98.3	95.1	96.1	96.1	96.1	96.1
55°	266.4	264.2	265.3	265.3	264.2	258.9	258.9	255.6	257.8	254.6	251.3
47.5°	437.1	425.9	424.8	424.8	413.0	414.1	415.1	408.7	406.5	405.5	399.0
42.5°	522.0	515.6	511.3	512.3	507.0	504.8	504.8	491.4	493.5	498.4	480.6
37.5°	611.7	610.6	604.2	602.0	599.9	599.9	595.6	586.4	582.1	580.0	573.6
33°	679.4	678.3	672.9	667.5	666.5	661.1	665.4	657.9	644.4	641.2	638.0
29°	727.7	728.8	725.5	718.0	715.3	713.2	715.3	705.7	699.2	696.0	683.6
25.5°	779.8	772.3	771.2	765.8	768.0	762.6	762.6	756.1	750.8	748.1	741.6
22.5°	817.4	822.7	816.3	812.5	814.1	811.5	805.0	801.8	796.4	790.0	784.6
19.5°	875.9	867.3	869.5	866.2	864.1	860.9	855.5	850.1	843.1	837.8	832.4
17°	906.5	901.1	901.1	905.4	904.4	891.5	893.6	892.6	878.6	871.6	869.5
15°	939.3	933.9	928.5	926.4	931.8	919.9	914.6	913.5	901.1	892.6	891.5
13°	979.0	967.7	963.4	962.4	963.4	958.1	957.0	957.0	940.4	932.8	930.7
11°	996.2	989.8	984.4	977.9	983.3	977.9	974.7	971.0	960.2	953.8	949.5
9°	1018.2	1012.8	1011.8	1005.3	1012.8	1011.8	1003.7	1002.6	995.1	982.2	976.9
7°	1035.4	1032.2	1029.0	1019.3	1024.7	1017.1	1020.4	1017.1	1009.6	1001.6	1001.6
5°	1042.4	1033.3	1034.3	1024.7	1035.4	1023.6	1024.7	1019.3	1017.1	1008.6	1002.6
3°	1026.8	1025.7	1023.6	1019.3	1027.9	1019.3	1019.3	1016.1	1012.8	1002.6	999.4
1°	1031.1	1025.7	1024.7	1011.8	1020.4	1017.1	1022.5	1010.7	1007.5	1000.5	998.3
0°	1022.5	1021.4	1018.2	1006.4	1016.1	1018.2	1012.8	1011.8	1003.7	994.1	995.1
-1°	1024.7	1020.4	1016.1	1011.8	1020.4	1012.8	1016.1	1018.2	1008.6	997.3	991.9
-3°	1035.4	1027.9	1024.7	1029.0	1030.0	1029.0	1021.4	1022.5	1020.4	1006.4	1002.6
-5°	1033.3	1031.1	1026.8	1029.0	1029.0	1031.1	1024.7	1022.5	1012.8	1003.7	995.1
-7°	1011.8	1005.3	1006.4	999.4	1003.7	1000.5	999.4	996.2	994.1	973.6	971.0
-9°	989.8	989.8	987.6	986.5	991.9	984.4	980.1	976.9	974.7	960.2	953.8
-11°	979.0	967.7	964.5	959.1	955.9	959.1	952.7	947.3	943.0	932.8	927.5
-13°	942.0	937.1	939.3	925.3	923.2	923.2	918.9	916.7	904.4	895.8	895.8
-15°	911.4	906.5	910.3	905.4	906.5	904.4	899.0	893.6	882.9	871.6	870.5
-17°	875.9	878.6	880.7	872.7	875.9	874.8	870.5	870.5	858.7	845.8	843.1
-19.5°	836.7	843.1	838.9	833.5	835.6	834.6	826.0	820.6	816.3	809.3	809.3
-22.5°	784.6	794.3	788.9	784.6	785.7	785.7	777.6	774.4	768.0	761.5	759.4
-25.5°	747.0	752.9	745.9	742.7	744.9	737.4	736.3	735.2	724.5	722.3	721.2
-29°	716.4	714.3	713.2	710.0	707.8	704.6	697.1	697.1	679.4	682.6	679.4
-33°	666.5	668.6	661.1	657.9	663.2	656.8	650.9	646.6	638.0	633.7	627.3
-37.5°	596.6	598.8	594.5	591.3	594.5	589.7	584.3	574.6	570.3	567.1	558.5
-42.5°	529.0	533.3	531.1	525.2	531.1	523.1	518.8	510.2	510.2	510.2	498.4
-47.5°	419.4	424.8	426.9	426.9	426.9	420.5	418.4	411.9	409.8	404.4	401.2
-55°	286.2	278.7	273.4	278.7	275.5	276.6	267.4	269.6	264.2	265.3	264.2
-65°	109.0	101.5	101.5	104.7	101.5	100.4	100.4	100.4	102.6	102.6	105.8
-75°	34.9	25.2	32.8	25.2	28.5	31.7	33.8	31.7	32.8	33.8	31.7
-85°	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.1	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



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CATALOG NUMBER: VFS-K-B20-3-LED-E1-WST

**CANDELA DISTRIBUTION (continued):**

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.1	2.1	1.1	3.2	3.2	6.4	5.4	6.4	5.4	5.4	7.5
75°	30.6	29.5	32.8	34.9	32.8	28.5	28.5	20.9	8.6	6.4	6.4
65°	95.1	95.1	98.3	99.4	92.9	84.3	75.2	58.0	19.9	9.7	4.3
55°	244.9	240.6	231.5	225.0	204.1	180.4	154.1	98.3	41.4	9.7	2.1
47.5°	389.9	381.3	372.7	369.5	341.0	292.7	240.6	154.1	70.9	19.9	5.4
42.5°	469.9	464.5	457.6	446.8	418.4	364.6	286.2	181.5	72.0	10.7	0.0
37.5°	562.8	552.6	550.5	539.7	509.1	452.2	357.1	227.2	95.1	29.5	4.3
33°	628.3	614.9	606.3	603.1	575.7	513.4	414.1	259.9	111.2	37.1	5.4
29°	678.3	669.7	666.5	656.8	621.4	555.8	455.4	283.0	123.5	40.3	5.4
25.5°	734.1	724.5	715.3	704.6	668.6	592.4	497.3	311.5	138.6	41.4	5.4
22.5°	776.6	769.0	757.2	743.8	703.5	625.1	518.8	325.4	142.9	41.4	3.2
19.5°	826.0	818.4	806.1	786.8	744.9	650.9	541.9	346.4	147.7	44.6	5.4
17°	860.9	851.2	837.8	812.5	762.6	675.1	556.9	352.8	149.8	44.6	4.3
15°	886.1	868.4	853.4	831.3	779.8	687.4	566.0	353.9	149.8	42.4	1.1
13°	923.2	904.4	889.3	857.6	811.5	711.0	587.5	374.9	162.7	54.8	5.4
11°	942.0	931.8	910.3	870.5	818.4	717.5	598.8	380.2	164.9	54.8	4.3
9°	961.3	951.6	926.4	892.6	837.8	728.8	603.1	391.0	169.2	53.7	6.4
7°	975.8	971.0	945.2	900.1	841.0	734.1	610.6	396.3	176.1	52.6	7.5
5°	982.2	977.9	943.0	897.9	839.9	732.0	607.4	394.2	169.2	50.5	5.4
3°	979.0	964.5	927.5	891.5	835.6	725.5	604.2	391.0	163.8	45.6	3.2
1°	979.0	964.5	927.5	889.3	836.7	729.8	608.5	389.9	168.1	45.6	4.3
0°	968.8	957.0	924.2	879.7	829.2	725.5	602.0	386.7	160.6	41.4	2.1
-1°	968.8	959.1	926.4	885.0	832.4	729.8	607.4	388.8	167.0	45.6	3.2
-3°	980.1	965.6	943.0	897.9	835.6	734.1	618.1	399.0	176.1	59.1	10.7
-5°	976.9	967.7	940.4	896.9	843.1	737.4	619.2	397.4	176.1	59.1	14.0
-7°	952.7	944.1	921.0	885.0	831.3	724.5	600.9	385.6	162.7	48.3	7.5
-9°	942.0	932.8	906.5	869.5	818.4	720.2	600.9	385.6	168.1	51.6	10.7
-11°	916.7	903.3	879.7	853.4	808.2	706.7	588.6	382.4	161.6	51.6	9.7
-13°	880.7	869.5	852.3	828.1	780.9	683.6	570.3	363.6	153.1	43.5	3.2
-15°	864.1	851.2	839.9	822.7	771.2	675.1	563.9	361.4	159.5	52.6	5.4
-17°	839.9	827.0	815.2	796.4	755.1	669.7	553.7	358.2	158.4	52.6	6.4
-19.5°	803.9	791.1	778.7	762.6	724.5	638.0	535.4	347.5	148.8	45.6	4.3
-22.5°	750.8	741.6	736.3	724.5	687.4	612.8	520.9	328.7	141.8	41.4	3.2
-25.5°	713.2	703.5	696.0	686.3	649.8	581.1	487.1	309.3	128.9	36.0	1.1
-29°	670.8	662.2	655.7	652.0	617.1	551.5	454.3	290.5	125.7	39.2	6.4
-33°	621.4	613.8	609.5	594.5	570.3	511.3	417.3	259.9	116.0	33.8	5.4
-37.5°	550.5	547.2	541.9	529.0	500.5	446.8	357.1	226.1	97.2	25.2	1.1
-42.5°	490.3	490.3	482.8	465.6	443.6	387.7	311.5	203.0	91.8	32.8	11.8
-47.5°	397.4	391.0	382.4	367.3	349.6	302.4	244.9	156.3	75.2	19.9	4.3
-55°	257.8	251.3	246.0	240.6	223.9	198.7	162.7	111.2	50.5	14.0	5.4
-65°	103.6	105.8	103.6	101.5	96.1	91.8	78.4	56.9	26.3	7.5	3.2
-75°	34.9	34.9	33.8	36.0	39.2	32.8	27.4	16.6	11.8	5.4	3.2
-85°	1.1	1.1	0.0	1.1	3.2	0.0	1.1	5.4	5.4	1.1	3.2
-90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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CATALOG NUMBER: VFS-K-B20-3-LED-E1-WST

**CANDELA DISTRIBUTION (continued):**

	90°
90°	0.0
85°	0.0
75°	0.0
65°	0.0
55°	0.0
47.5°	0.0
42.5°	0.0
37.5°	0.0
33°	0.0
29°	0.0
25.5°	0.0
22.5°	0.0
19.5°	0.0
17°	0.0
15°	0.0
13°	0.0
11°	0.0
9°	0.0
7°	0.0
5°	0.0
3°	0.0
1°	0.0
0°	0.0
-1°	0.0
-3°	0.0
-5°	0.0
-7°	0.0
-9°	0.0
-11°	0.0
-13°	0.0
-15°	0.0
-17°	0.0
-19.5°	0.0
-22.5°	0.0
-25.5°	0.0
-29°	0.0
-33°	0.0
-37.5°	0.0
-42.5°	0.0
-47.5°	0.0
-55°	0.0
-65°	0.0
-75°	0.0
-85°	0.0
-90°	0.0

(END OF REPORT)