

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P670610

Luminaire Tested: MWP20FSUNVDBZ-15W-3000K

Issue Date: 4/5/2023

Test Information

Test Method: LM-79-2019
Report Number: P670610
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (2022-07-24)
Test Lab: INNOVATION CENTER
Issue Date: 4/5/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: MWP20FSUNVDBZ-15W-3000K
Description: MINI WALL PACK
Light Source: 3000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2006 lumens
Efficiency: N/A
Efficacy: 130.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.51' x L: 0.44' x H: 0.31')
IES Classification: Type IV - Short
BUG Rating: B1 - U3 - G2

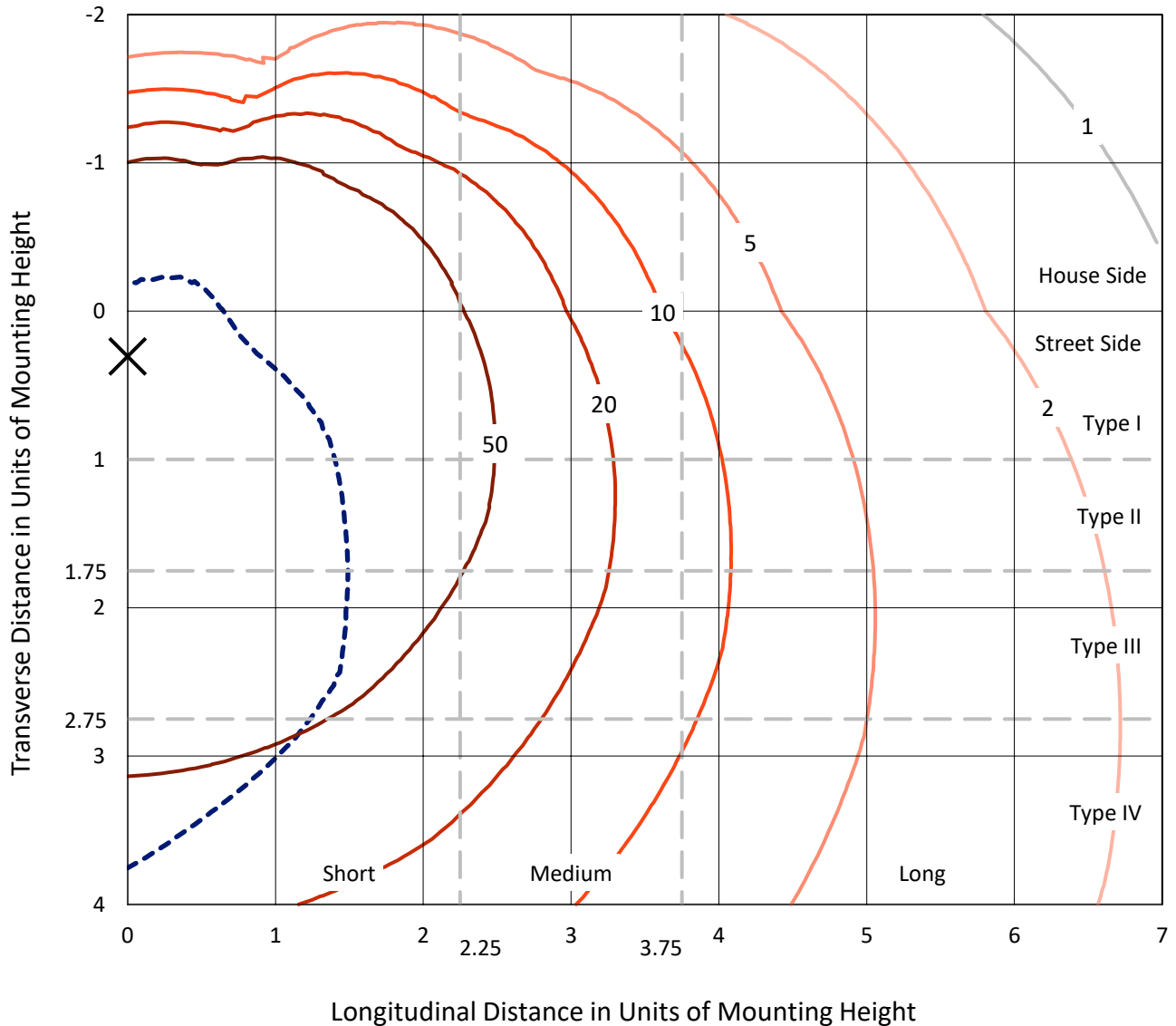
Input Watts (W): 15.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

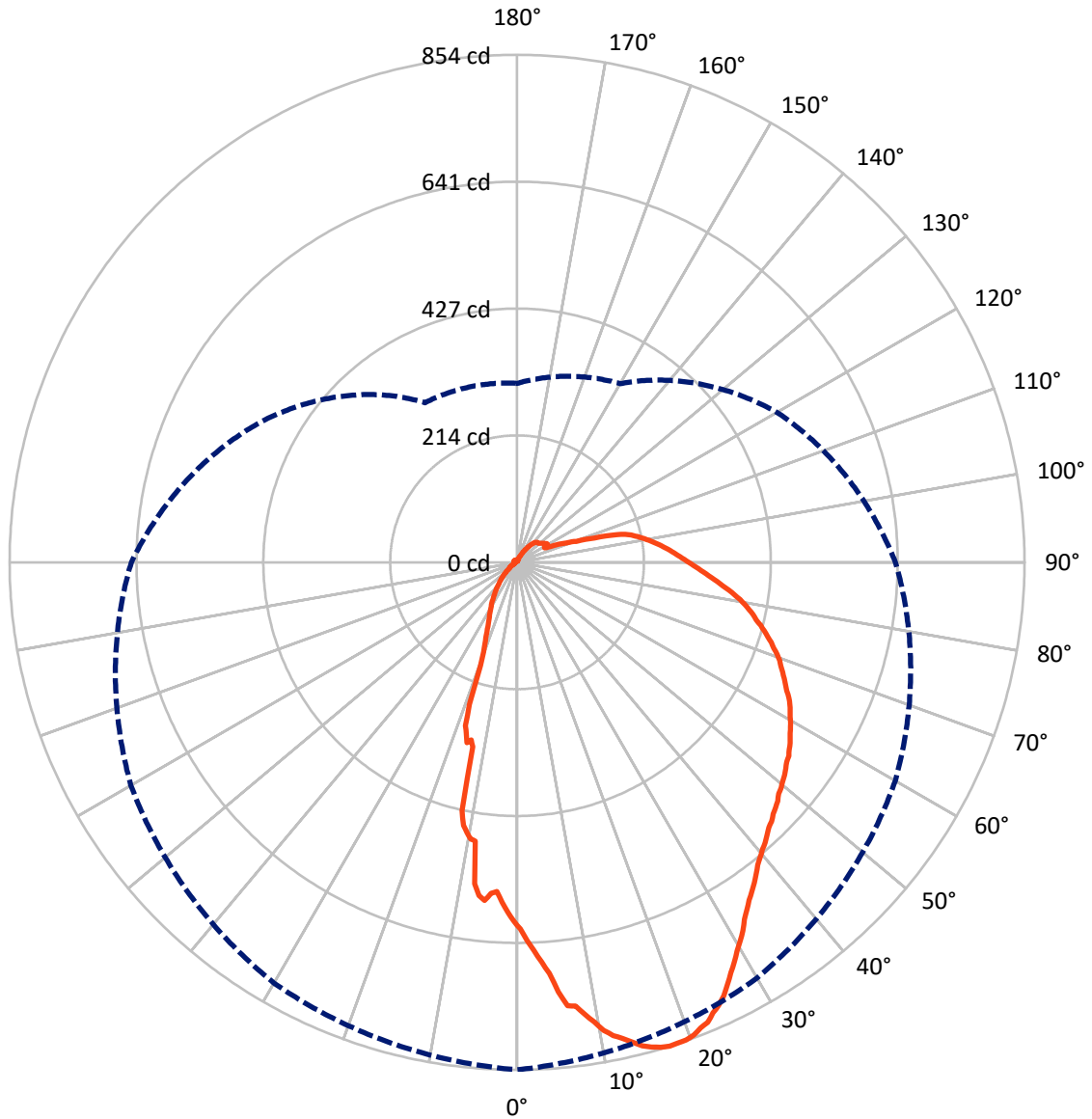
× Max cd
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 3071.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 17-Deg Vertical

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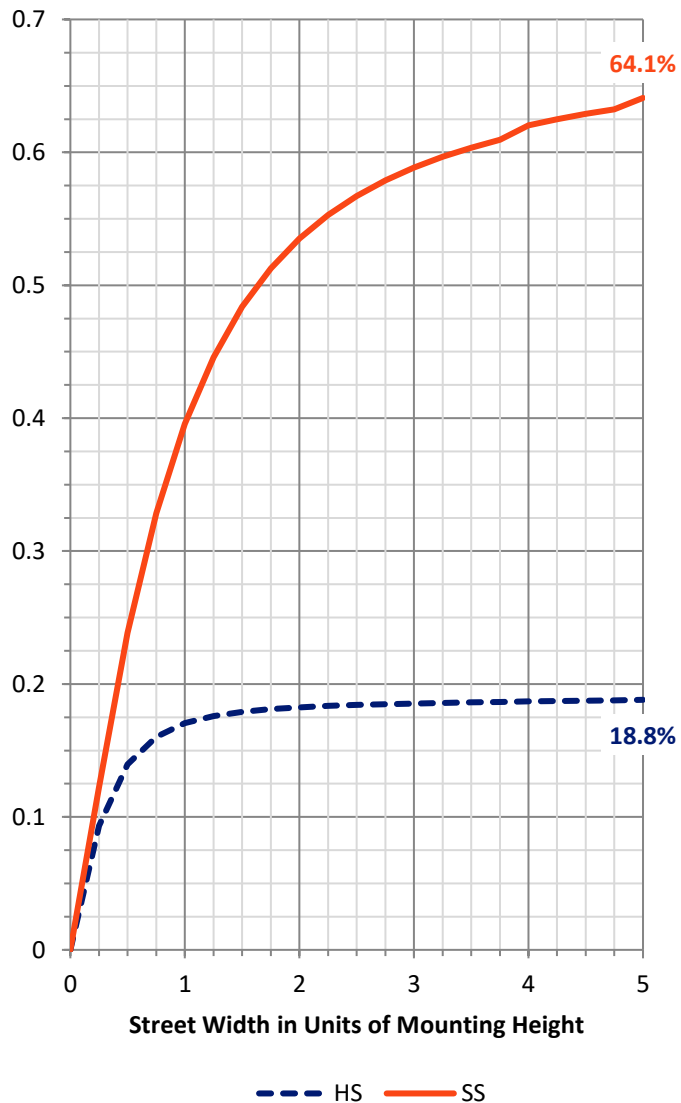
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	385.4	35.5	420.9
	% Fixture	19.2	1.8	21.0
Street Side	Lumens	1370.0	215.1	1585.1
	% Fixture	68.3	10.7	79.0
Total	Lumens	1755.5	250.5	2006.0
	% Fixture	87.5	12.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	3.1
10°-20°	173.9	8.7
20°-30°	230.3	11.5
30°-40°	239.4	11.9
40°-50°	245.6	12.2
50°-60°	245.3	12.2
60°-70°	225.4	11.2
70°-80°	188.7	9.4
80°-90°	145.6	7.3
90°-100°	108.6	5.4
100°-110°	67.6	3.4
110°-120°	31.5	1.6
120°-130°	20.0	1.0
130°-140°	12.6	0.6
140°-150°	6.6	0.3
150°-160°	2.4	0.1
160°-170°	1.0	0.0
170°-180°	0.3	0.0
0°-90°	1755.5	87.5
0°-180°	2006.0	100.0

Coefficient of Utilization

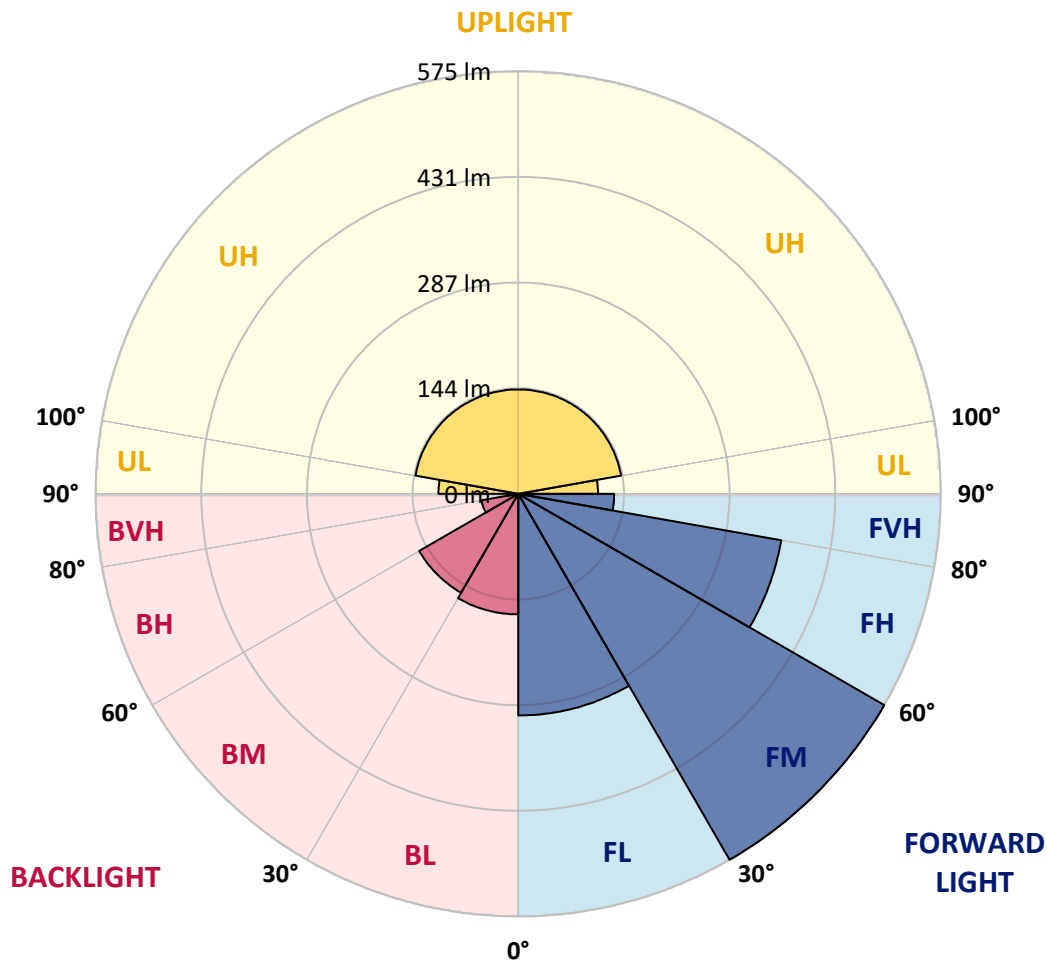


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	301.5	15.0			
FM (30°-60°)	574.8	28.7			
FH (60°-80°)	363.3	18.1			G0/660
FVH (80°-90°)	130.4	6.5			G2/225
BL (0°-30°)	164.0	8.2	B1/500		
BM (30°-60°)	155.5	7.8	B0/220		
BH (60°-80°)	50.8	2.5	B0/110		G0/110
BVH (80°-90°)	15.2	0.8			G1/100
UL (90°-100°)	108.6	5.4		U3/500	
UH (100°-180°)	142.0	7.1		U3/500	

BUG Rating: B1-U3-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8
1°	636.7	626.2	611.3	624.9	615.4	608.0	604.0	597.5	593.6	628.2	633.8
2°	653.7	644.3	623.7	626.8	606.5	595.0	589.3	584.0	584.0	630.4	646.5
3°	673.9	661.4	638.1	632.0	601.3	581.0	572.8	570.4	575.7	636.0	659.5
4°	693.9	680.4	652.8	634.1	595.5	566.6	554.9	553.0	565.2	643.1	673.4
5°	726.2	699.5	666.3	638.1	589.0	551.5	559.0	537.4	557.6	648.2	688.1
6°	751.2	736.2	680.9	643.9	581.5	566.2	571.7	550.0	549.7	655.0	703.5
7°	753.0	751.0	692.9	647.1	574.8	577.5	564.3	556.5	542.3	661.2	714.7
8°	768.8	752.8	706.2	652.0	567.2	569.6	545.7	551.9	534.3	662.2	726.4
9°	784.0	763.0	718.7	655.0	565.6	560.5	474.3	531.1	529.4	667.3	739.2
10°	801.0	775.8	738.5	654.8	581.8	504.9	472.2	499.0	544.5	669.7	751.2
11°	812.7	787.9	745.3	656.2	583.3	484.1	462.6	450.1	558.3	671.0	766.8
12°	820.7	794.2	747.1	656.5	575.0	490.9	451.8	460.9	548.5	670.4	769.8
13°	830.5	800.0	744.0	655.9	564.4	472.2	427.8	442.3	541.2	670.9	766.4
14°	840.7	804.2	742.4	653.5	546.7	449.3	319.1	416.8	516.3	667.7	760.3
15°	846.4	808.6	742.3	651.7	537.7	426.1	309.0	379.8	505.5	662.5	755.8
16°	851.2	809.8	740.2	643.9	519.4	347.8	314.9	323.4	488.5	656.0	755.6
17°	854.0	807.5	734.9	636.6	504.8	347.1	301.1	310.1	484.4	649.2	750.4
18°	853.0	809.4	730.2	629.0	497.3	338.1	288.5	312.1	479.8	640.0	742.3
19°	852.6	804.5	721.0	618.5	491.9	319.3	252.4	295.8	474.6	628.6	733.4
20°	849.4	800.7	710.9	608.8	480.9	301.3	184.2	274.0	469.1	615.6	723.9
21°	842.2	792.2	700.3	596.9	470.5	278.1	160.9	245.7	463.6	605.7	712.3
22°	838.1	785.0	686.5	581.3	460.7	246.2	148.2	216.6	454.0	591.1	698.8
23°	826.7	773.4	676.0	569.1	446.8	218.1	137.2	200.5	443.9	573.4	685.6
24°	819.1	765.2	661.5	553.4	432.2	202.9	127.4	187.8	432.5	560.4	673.2
25°	808.1	753.5	647.0	538.5	419.4	189.6	118.9	176.9	419.4	544.6	658.0
26°	794.0	742.3	634.8	523.1	404.1	176.5	111.7	165.7	402.8	527.0	644.6
27°	778.8	729.0	620.6	508.2	387.4	163.1	105.6	154.0	385.7	509.6	629.9
28°	766.0	716.5	606.5	492.6	369.9	151.1	100.2	142.3	369.0	494.5	615.6
29°	751.7	702.4	594.1	477.5	354.9	139.0	95.2	130.9	352.6	478.8	603.6
30°	739.9	689.0	581.1	462.9	339.4	128.7	90.2	122.2	336.0	463.0	588.7
31°	727.3	675.7	569.4	448.7	322.9	119.5	85.9	114.7	319.6	448.1	577.3
32°	712.0	664.4	557.4	434.3	307.7	111.6	81.5	108.3	303.3	434.2	565.8
33°	701.2	649.7	546.7	419.8	292.7	104.9	77.5	102.7	286.7	420.5	554.6
34°	689.7	638.5	536.9	408.2	279.5	98.9	73.1	97.4	271.0	407.4	542.9
35°	680.3	628.9	526.0	394.0	266.1	93.5	68.9	92.5	255.9	395.3	531.5
36°	670.9	619.9	516.9	383.5	253.1	88.6	64.9	87.5	243.1	384.2	525.1
37°	661.1	609.6	510.6	374.1	241.1	84.1	61.2	82.8	230.5	373.7	516.8
38°	650.6	601.4	502.8	364.9	229.8	79.6	57.4	78.3	219.3	365.8	508.3
39°	643.2	594.2	496.7	357.1	219.9	75.4	53.9	73.7	209.9	359.3	503.5
40°	635.9	588.2	491.9	351.0	210.4	71.1	50.5	69.2	201.7	352.6	498.4
41°	629.8	581.1	486.3	345.8	202.1	67.1	47.1	65.0	193.9	346.8	492.0
42°	622.8	576.2	482.3	339.4	194.9	63.0	44.0	60.8	187.2	341.4	488.0
43°	615.2	570.2	479.0	335.2	188.2	59.4	41.0	56.9	180.7	336.9	484.0
44°	611.2	565.2	475.2	329.8	182.3	55.5	38.6	53.2	174.5	332.9	482.2



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CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	604.4	560.3	473.8	325.8	175.9	52.3	35.9	50.0	168.1	326.9	476.8
46°	599.7	556.4	469.1	320.5	169.7	48.8	33.4	46.8	162.4	320.9	473.6
47°	594.9	552.2	467.4	314.6	163.6	45.4	30.7	43.8	156.3	316.8	468.2
48°	587.6	547.9	463.6	310.1	157.3	42.4	28.0	40.9	150.7	310.8	464.6
49°	584.3	543.4	460.8	305.6	152.1	38.4	25.0	37.8	144.9	305.7	460.6
50°	579.4	540.2	457.9	300.5	145.5	35.7	22.6	35.1	139.9	300.2	455.9
51°	575.3	536.0	451.3	294.2	140.0	32.2	20.2	32.3	134.5	293.7	453.4
52°	569.8	532.0	448.0	289.1	134.3	29.4	18.5	29.8	128.7	287.6	449.0
53°	564.5	527.7	443.9	283.3	128.4	26.6	16.8	27.5	123.1	281.7	443.4
54°	561.6	523.5	438.2	277.1	123.1	24.4	15.7	25.5	117.9	274.4	439.3
55°	555.8	519.0	432.4	270.8	117.4	22.0	14.7	23.5	112.7	268.6	432.8
56°	550.9	514.7	427.5	263.3	112.1	20.1	13.8	21.8	107.4	261.9	428.6
57°	544.6	509.3	421.9	257.0	106.6	18.5	12.7	20.2	102.2	254.3	421.0
58°	539.6	503.5	417.3	250.8	101.4	16.8	11.5	18.6	97.2	247.1	414.2
59°	534.2	500.8	411.3	244.5	96.1	15.6	10.4	17.3	92.3	240.0	407.2
60°	528.0	494.4	405.6	237.8	90.9	14.4	9.3	16.0	87.9	232.8	400.9
61°	522.7	488.9	399.3	230.8	86.0	13.5	8.4	14.9	83.3	224.5	394.8
62°	517.7	483.1	393.3	224.3	81.5	12.8	7.6	13.9	79.3	217.5	389.2
63°	511.3	477.3	386.4	217.1	77.3	12.1	6.8	13.0	75.2	210.2	383.6
64°	502.8	472.0	378.4	209.8	73.0	11.4	6.1	12.2	71.1	202.3	376.4
65°	496.6	465.2	371.9	202.1	68.8	10.8	5.5	11.5	67.3	194.5	369.9
66°	490.4	458.8	364.7	193.0	65.1	10.3	5.0	10.8	63.8	187.1	363.6
67°	483.6	452.0	357.6	186.8	61.9	9.7	4.6	10.1	60.7	179.3	355.7
68°	477.3	443.7	349.5	178.7	58.8	9.1	4.4	9.5	57.6	172.0	347.9
69°	471.5	436.8	341.1	171.3	56.0	8.5	4.2	9.0	54.9	164.0	340.7
70°	464.3	428.5	332.2	163.4	53.5	8.1	4.1	8.6	52.5	157.4	333.2
71°	455.7	420.0	323.2	156.2	51.2	7.9	3.9	8.4	50.5	150.3	323.7
72°	448.4	413.6	314.2	149.0	49.1	7.7	3.8	8.3	48.5	143.2	314.3
73°	439.9	405.1	305.7	141.8	47.3	7.6	3.6	8.1	46.7	136.2	304.9
74°	431.3	396.5	297.7	135.1	45.5	7.4	3.5	8.0	44.9	130.2	295.9
75°	423.5	389.2	289.0	128.9	43.8	7.3	3.4	7.8	43.3	124.4	287.3
76°	413.8	381.0	280.4	123.3	42.3	7.2	3.4	7.7	41.9	118.5	278.4
77°	407.0	373.7	272.8	117.7	40.9	7.1	3.3	7.6	40.5	113.5	270.6
78°	398.6	364.6	265.2	112.9	39.6	7.0	3.3	7.5	39.2	108.6	263.7
79°	389.6	357.5	257.0	107.6	38.4	6.9	3.2	7.5	38.2	104.1	255.1
80°	380.4	348.2	249.6	103.2	37.4	6.8	3.2	7.4	37.1	99.3	247.2
81°	369.9	338.9	241.3	98.6	36.3	6.8	3.2	7.4	36.2	95.5	238.6
82°	359.8	328.6	233.4	94.4	35.4	6.8	3.2	7.4	35.3	91.4	230.2
83°	348.6	319.1	225.3	90.8	34.6	6.8	3.2	7.4	34.6	87.7	221.9
84°	338.5	310.4	216.9	87.0	33.7	6.8	3.2	7.4	33.8	84.5	214.1
85°	328.0	300.3	209.1	83.7	32.9	6.8	3.3	7.4	33.1	81.4	207.6
86°	318.7	291.0	202.2	80.4	32.1	6.8	3.3	7.5	32.4	78.3	200.0
87°	309.6	282.6	195.7	77.2	31.3	6.8	3.4	7.5	31.7	75.4	193.9
88°	301.0	274.5	188.9	74.3	30.7	6.8	3.4	7.6	31.1	72.5	186.9
89°	293.4	267.6	183.6	71.4	30.0	6.9	3.5	7.6	30.5	69.6	181.0



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	285.0	260.5	177.3	68.6	29.2	7.0	3.6	7.7	29.8	66.9	175.8
91°	277.9	252.8	172.0	66.1	28.5	7.0	3.7	7.7	29.3	64.7	170.7
92°	270.9	246.2	167.1	63.7	28.0	7.1	3.8	7.8	28.8	62.5	165.6
93°	264.5	239.9	161.6	61.5	27.4	7.2	3.9	7.9	28.0	60.3	160.0
94°	258.2	233.0	156.9	59.2	26.6	7.0	3.9	7.7	27.3	58.3	155.6
95°	251.0	227.1	151.7	57.1	26.0	6.7	3.8	7.6	26.8	56.1	150.8
96°	244.7	220.7	146.7	55.2	25.5	6.7	3.8	7.6	26.2	54.0	145.6
97°	238.2	214.7	141.6	53.2	25.0	6.6	3.9	7.6	25.7	52.0	140.4
98°	231.4	208.6	136.8	51.1	24.4	6.6	3.9	7.6	25.2	50.0	135.7
99°	224.7	203.1	132.0	49.2	24.0	6.6	4.0	7.6	24.8	48.1	130.9
100°	218.2	196.2	127.0	47.3	23.4	6.6	4.1	7.6	24.3	46.2	126.1
101°	211.1	190.1	121.9	45.2	22.9	6.5	4.1	7.5	23.8	44.1	121.3
102°	204.2	181.8	116.4	43.2	22.4	6.5	4.1	7.4	23.2	42.3	116.6
103°	197.3	167.4	109.6	41.2	21.8	6.5	4.2	7.3	22.6	40.3	111.7
104°	187.9	150.5	101.7	39.0	21.2	6.6	4.3	7.3	22.0	38.3	106.7
105°	174.2	131.4	91.3	36.8	20.5	6.6	4.4	7.3	21.4	36.4	101.8
106°	156.3	117.1	81.1	34.8	19.7	6.6	4.6	7.3	20.8	34.4	96.5
107°	136.6	107.5	72.2	32.3	18.8	6.5	4.8	7.3	20.0	32.1	90.7
108°	122.0	102.2	63.5	30.2	18.0	6.5	5.1	7.3	19.3	30.1	84.4
109°	105.6	97.4	57.6	27.8	17.2	6.4	5.3	7.2	18.5	28.3	76.6
110°	98.7	90.4	53.3	25.7	16.4	6.3	5.5	7.1	17.9	26.7	70.0
111°	89.1	79.4	50.9	23.7	15.6	6.3	5.6	7.1	17.2	25.3	64.4
112°	82.3	70.6	49.2	22.1	14.8	6.2	5.7	7.1	16.5	24.1	60.1
113°	76.0	63.3	47.1	20.4	14.1	6.2	5.7	7.0	15.9	22.8	56.5
114°	68.5	61.1	45.6	19.1	13.5	6.1	5.8	7.0	15.3	21.6	52.8
115°	61.1	61.9	44.2	18.0	12.8	6.0	5.7	6.9	14.8	20.5	48.6
116°	55.8	64.9	42.3	17.0	12.1	5.9	5.7	6.8	14.2	19.4	45.0
117°	52.2	67.3	39.6	16.0	11.6	5.8	5.6	6.7	13.7	18.4	41.1
118°	52.5	66.9	36.6	15.3	11.1	5.8	5.5	6.7	13.3	17.6	37.5
119°	58.5	65.5	33.9	14.5	10.7	5.9	5.4	6.6	12.9	17.0	34.5
120°	59.4	63.7	31.2	13.8	10.4	5.9	5.3	6.5	12.5	16.4	31.7
121°	59.6	61.6	28.9	13.3	10.0	5.8	5.0	6.5	12.1	15.9	29.3
122°	58.9	59.4	26.8	13.0	9.6	5.7	4.8	6.3	11.6	15.5	27.2
123°	57.3	57.1	24.9	12.5	9.1	5.7	4.7	6.2	11.2	15.0	25.3
124°	56.0	55.0	23.0	12.3	8.7	5.5	4.9	6.1	10.9	14.6	23.5
125°	55.1	53.3	21.4	11.9	8.4	5.4	4.9	6.0	10.7	14.2	21.8
126°	54.1	51.5	20.4	11.5	8.1	5.3	4.8	5.9	10.4	13.8	20.1
127°	52.6	50.0	19.4	11.2	7.8	5.2	4.7	5.9	10.2	13.4	18.6
128°	51.4	48.7	18.1	10.9	7.5	5.1	4.6	5.8	9.9	13.1	17.2
129°	50.0	47.5	16.8	10.7	7.2	5.1	4.7	5.7	9.6	12.8	15.8
130°	49.0	46.4	15.8	10.5	6.9	5.0	4.4	5.5	9.4	12.5	14.6
131°	48.3	45.3	14.8	10.2	6.5	5.0	4.4	5.3	9.1	12.3	13.4
132°	47.9	44.1	14.0	10.0	6.3	5.0	4.3	5.4	8.9	12.2	12.3
133°	47.9	42.7	13.2	9.9	6.2	5.1	4.3	5.4	8.7	12.0	11.3
134°	47.6	41.2	12.5	9.7	6.1	5.2	4.3	5.5	8.5	11.7	10.5



REPORT NUMBER: P670610
 CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
135°	47.1	39.5	11.9	9.4	6.3	5.1	4.4	5.4	8.3	11.6	9.9
136°	46.3	37.7	11.3	9.3	6.4	5.0	4.5	5.3	8.1	11.4	9.4
137°	45.2	35.6	10.7	9.2	6.5	5.0	4.5	5.3	7.7	11.2	8.8
138°	43.9	33.3	9.9	9.2	6.5	4.9	4.4	5.4	7.4	11.1	8.3
139°	42.2	31.2	9.2	9.5	6.4	4.9	4.2	5.3	7.0	11.0	7.9
140°	40.3	29.0	8.6	9.6	6.1	4.8	4.1	5.3	6.7	10.7	7.5
141°	38.0	27.0	8.0	9.7	5.9	4.8	4.0	5.2	6.5	10.5	7.2
142°	35.6	25.1	7.5	9.8	5.8	4.8	4.0	5.2	6.2	10.4	6.9
143°	33.1	23.2	7.1	9.8	5.7	4.8	4.1	5.3	6.0	10.2	6.8
144°	30.8	21.3	6.8	9.7	5.7	4.8	4.1	5.2	5.8	10.1	6.8
145°	28.5	19.2	6.7	9.7	5.6	4.7	4.1	5.1	5.6	10.1	6.9
146°	26.3	17.3	6.7	9.8	5.5	4.6	4.1	4.9	5.3	10.2	7.1
147°	24.1	15.7	6.9	9.9	5.4	4.4	4.3	4.7	5.0	10.4	7.3
148°	21.9	14.2	6.9	10.2	5.2	4.3	4.3	4.3	4.6	10.5	7.3
149°	19.7	12.7	6.5	10.2	5.0	4.3	4.3	4.1	4.3	10.4	7.0
150°	17.7	10.8	5.9	10.0	4.7	4.2	4.3	4.1	4.1	10.2	6.5
151°	15.6	9.4	5.3	9.8	4.5	4.1	4.3	4.1	4.0	9.8	6.0
152°	14.1	8.0	4.9	9.3	4.3	4.0	4.2	4.2	4.0	9.2	5.5
153°	12.5	6.7	4.8	8.7	4.2	4.1	4.2	4.2	3.9	8.6	5.3
154°	11.1	5.3	4.8	8.0	4.2	4.1	4.2	4.2	4.0	7.8	5.2
155°	9.9	3.5	4.5	7.1	4.1	4.0	4.3	4.0	4.0	6.9	4.7
156°	8.7	2.6	3.9	6.2	4.0	4.0	4.2	3.9	3.9	6.0	4.0
157°	7.2	2.2	3.1	5.5	3.8	4.0	4.1	3.9	3.8	5.2	3.3
158°	4.5	2.2	2.8	4.9	3.7	4.0	4.1	3.8	3.8	4.6	3.0
159°	2.9	2.2	2.7	4.3	3.7	4.0	4.1	3.8	3.7	4.0	2.9
160°	2.2	2.2	2.5	3.6	3.7	4.0	4.1	3.8	3.6	3.4	2.8
161°	2.2	2.3	2.4	3.4	3.7	4.0	3.9	3.8	3.6	3.3	2.7
162°	2.3	2.3	2.4	3.5	3.7	3.9	3.9	3.7	3.5	3.3	2.8
163°	2.4	2.5	2.5	3.3	3.7	3.9	3.8	3.7	3.4	3.3	2.8
164°	2.5	2.7	2.5	3.4	3.8	3.9	3.8	3.7	3.4	3.4	2.9
165°	2.6	2.9	2.6	3.6	3.8	3.8	3.8	3.7	3.4	3.7	3.0
166°	2.8	3.4	2.6	3.9	3.8	3.8	3.8	3.7	3.4	4.0	3.0
167°	2.9	3.8	2.8	4.2	3.9	3.8	3.7	3.7	3.4	4.2	3.1
168°	2.7	3.9	3.0	4.2	3.9	3.8	3.7	3.7	3.5	4.1	3.3
169°	2.6	3.9	3.2	4.1	3.9	3.8	3.7	3.7	3.5	4.1	3.5
170°	2.7	3.7	3.2	4.2	3.9	3.8	3.7	3.7	3.5	4.1	3.4
171°	2.8	3.4	3.4	4.2	3.8	3.8	3.6	3.7	3.6	4.1	3.6
172°	2.8	3.0	3.4	4.3	3.7	3.8	3.6	3.7	3.7	4.2	3.7
173°	2.8	2.7	3.2	4.2	3.7	3.7	3.6	3.5	3.7	4.1	3.7
174°	2.8	2.7	3.0	4.0	3.7	3.6	3.6	3.6	3.4	3.8	3.5
175°	2.9	2.8	2.8	3.7	3.7	3.6	3.5	3.5	3.2	3.6	3.4
176°	3.0	2.8	2.8	3.6	3.7	3.6	3.4	3.4	3.2	3.6	3.4
177°	3.0	2.9	2.9	3.6	3.7	3.5	3.4	3.3	3.3	3.6	3.5
178°	3.1	2.9	2.9	3.7	3.6	3.5	3.3	3.2	3.2	3.7	3.5
179°	3.2	3.0	2.9	3.6	3.6	3.5	3.3	3.1	3.0	3.6	3.5



REPORT NUMBER: P670610
CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
180°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2



REPORT NUMBER: P670610
CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
0°	616.8	616.8
1°	638.5	636.7
2°	656.3	653.7
3°	674.3	673.9
4°	693.5	693.9
5°	712.9	726.2
6°	742.7	751.2
7°	761.5	753.0
8°	763.6	768.8
9°	774.7	784.0
10°	784.6	801.0
11°	795.2	812.7
12°	805.4	820.7
13°	809.9	830.5
14°	815.9	840.7
15°	818.5	846.4
16°	818.7	851.2
17°	817.7	854.0
18°	815.1	853.0
19°	811.3	852.6
20°	804.9	849.4
21°	795.7	842.2
22°	786.9	838.1
23°	778.5	826.7
24°	766.3	819.1
25°	754.4	808.1
26°	742.4	794.0
27°	728.7	778.8
28°	714.3	766.0
29°	698.9	751.7
30°	685.5	739.9
31°	672.0	727.3
32°	658.9	712.0
33°	646.7	701.2
34°	636.5	689.7
35°	625.4	680.3
36°	615.7	670.9
37°	606.6	661.1
38°	598.7	650.6
39°	591.1	643.2
40°	586.2	635.9
41°	581.1	629.8
42°	573.0	622.8
43°	569.6	615.2
44°	563.0	611.2



REPORT NUMBER: P670610
CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	559.3	604.4
46°	553.7	599.7
47°	549.1	594.9
48°	545.4	587.6
49°	541.8	584.3
50°	540.1	579.4
51°	536.1	575.3
52°	534.1	569.8
53°	529.2	564.5
54°	524.2	561.6
55°	519.5	555.8
56°	513.1	550.9
57°	508.1	544.6
58°	503.1	539.6
59°	498.2	534.2
60°	491.7	528.0
61°	488.5	522.7
62°	482.2	517.7
63°	476.9	511.3
64°	472.1	502.8
65°	465.7	496.6
66°	459.1	490.4
67°	452.5	483.6
68°	446.1	477.3
69°	438.9	471.5
70°	431.7	464.3
71°	423.3	455.7
72°	414.5	448.4
73°	404.9	439.9
74°	395.9	431.3
75°	388.1	423.5
76°	381.3	413.8
77°	374.5	407.0
78°	366.9	398.6
79°	358.2	389.6
80°	348.4	380.4
81°	339.1	369.9
82°	328.8	359.8
83°	317.5	348.6
84°	307.9	338.5
85°	298.5	328.0
86°	289.5	318.7
87°	281.1	309.6
88°	272.5	301.0
89°	265.9	293.4



REPORT NUMBER: P670610
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CANDELA DISTRIBUTION (continued):

	330°	360°
90°	258.9	285.0
91°	251.7	277.9
92°	245.4	270.9
93°	239.3	264.5
94°	233.0	258.2
95°	227.5	251.0
96°	221.6	244.7
97°	215.2	238.2
98°	209.4	231.4
99°	203.2	224.7
100°	196.3	218.2
101°	190.0	211.1
102°	180.1	204.2
103°	165.4	197.3
104°	147.5	187.9
105°	127.3	174.2
106°	114.4	156.3
107°	104.6	136.6
108°	100.1	122.0
109°	95.0	105.6
110°	89.0	98.7
111°	79.0	89.1
112°	68.7	82.3
113°	60.9	76.0
114°	59.6	68.5
115°	61.7	61.1
116°	63.1	55.8
117°	64.6	52.2
118°	64.4	52.5
119°	62.3	58.5
120°	60.1	59.4
121°	57.7	59.6
122°	55.6	58.9
123°	53.7	57.3
124°	51.8	56.0
125°	50.0	55.1
126°	48.4	54.1
127°	47.3	52.6
128°	46.4	51.4
129°	45.7	50.0
130°	44.8	49.0
131°	43.7	48.3
132°	42.3	47.9
133°	40.7	47.9
134°	39.1	47.6



REPORT NUMBER: P670610
CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
135°	37.4	47.1
136°	35.3	46.3
137°	32.9	45.2
138°	30.7	43.9
139°	28.5	42.2
140°	26.5	40.3
141°	24.6	38.0
142°	22.7	35.6
143°	20.9	33.1
144°	19.1	30.8
145°	17.3	28.5
146°	15.6	26.3
147°	14.1	24.1
148°	12.7	21.9
149°	11.2	19.7
150°	9.5	17.7
151°	8.2	15.6
152°	6.9	14.1
153°	5.8	12.5
154°	4.3	11.1
155°	3.0	9.9
156°	2.4	8.7
157°	2.2	7.2
158°	2.2	4.5
159°	2.3	2.9
160°	2.3	2.2
161°	2.4	2.2
162°	2.5	2.3
163°	2.7	2.4
164°	3.0	2.5
165°	3.3	2.6
166°	3.6	2.8
167°	4.0	2.9
168°	4.2	2.7
169°	4.2	2.6
170°	3.9	2.7
171°	3.6	2.8
172°	3.3	2.8
173°	3.1	2.8
174°	3.1	2.8
175°	3.2	2.9
176°	3.2	3.0
177°	3.3	3.0
178°	3.3	3.1
179°	3.4	3.2



REPORT NUMBER: P670610
CATALOG NUMBER: MWP20FSUNVDBZ-15W-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
180°	3.2	3.2

(END OF REPORT)