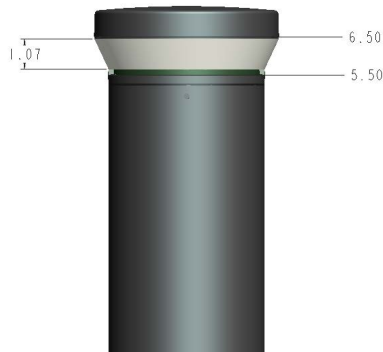


### COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION

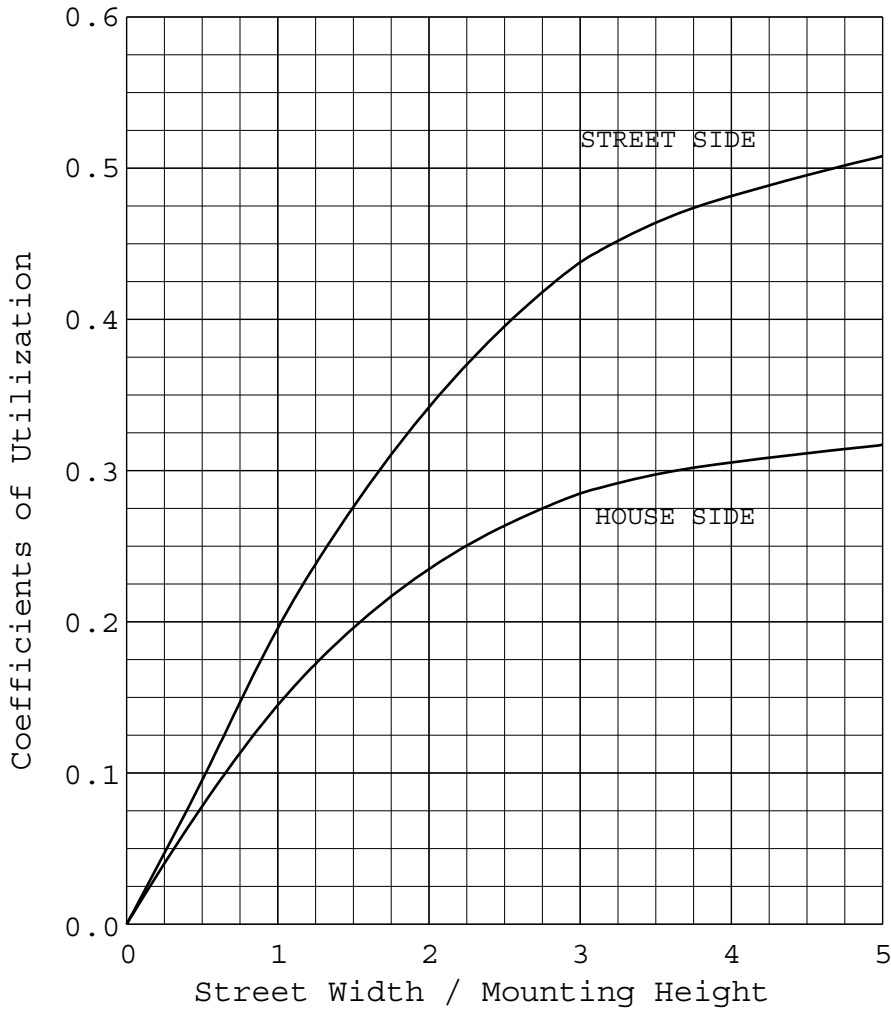


REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17 PAGE: 1 OF 11  
 PREPARED FOR: RAB LIGHTING INC. RC  
 LIGHTING

CATALOG NUMBER: BLEDRI2N, BLEDRI2N/D10,  
 BDLEDRI2N, BDLEDRI2N/D10 (42" ROUND  
 BOLLARD W/LED @ 90-DEGREES)

LUMINAIRE: EXTRUDED BROWN PAINTED  
 CYLINDRICAL METAL LOWER HOUSING, CAST  
 METAL TOP, CAST FINNED METAL HEAT  
 SINK WITH WHITE PAINTED INTERIOR,  
 MOLDED SPECULAR FINISHED PLASTIC  
 REFLECTOR, 2 WHITE CIRCUIT BOARDS  
 EACH WITH 3 LEDS, 2 WHITE CIRCUIT  
 BOARDS EACH WITH 2 LEDS, FROSTED  
 PLASTIC LENS, CAST BROWN PAINTED  
 METAL BOTTOM.

\*(SEE PAGE 2 FOR MORE INFORMATION)\*



	PERCENT LUMENS OF FIXTURE
DOWNWARD STREET SIDE	744. 56.1
DOWNWARD HOUSE SIDE	455. 34.3
DOWNWARD TOTAL	1199. 90.4
UPWARD STREET SIDE	76. 5.7
UPWARD HOUSE SIDE	51. 3.9
UPWARD TOTAL	127. 9.6
TOTAL FLUX	1326. 100.0

TOTAL INPUT WATTS = 12.1

EFFICACY = 109.6 Lm/W

Checked

X.CAO

Approved

D.WANG-MUNSON

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY.  
 THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE  
 LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

REPORT NUMBER: PRORATED FROM RAB03689  
ISSUE DATE: 08/29/17  
PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 2 OF 11

## ADDITIONAL INFORMATION

LAMP: TEN LIGHT EMITTING DIODES (LEDs).

NOTE: THIS REPORT WAS PRORATED FROM RAB03689 WHICH WAS BLED R12Y,  
BLED R12Y/D10, BDLED R12Y, BDLED R12Y/D10. ACTUAL PERFORMANCE MAY  
VARY.

TOTAL INPUT WATTS = 12.1 W AT 277.0 VAC.

LED DRIVER: RDD-15W-032SE-A0350

TEST PROCEDURE: IESNA LM-79-08

LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE

REPORT NUMBER: PRORATED FROM RAB03689

ISSUE DATE: 08/29/17

PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 3 OF 11

BUG Rating:

Zonal Summary

Lumens

% of Fixture

B1 U3 G1

Zone Ratings

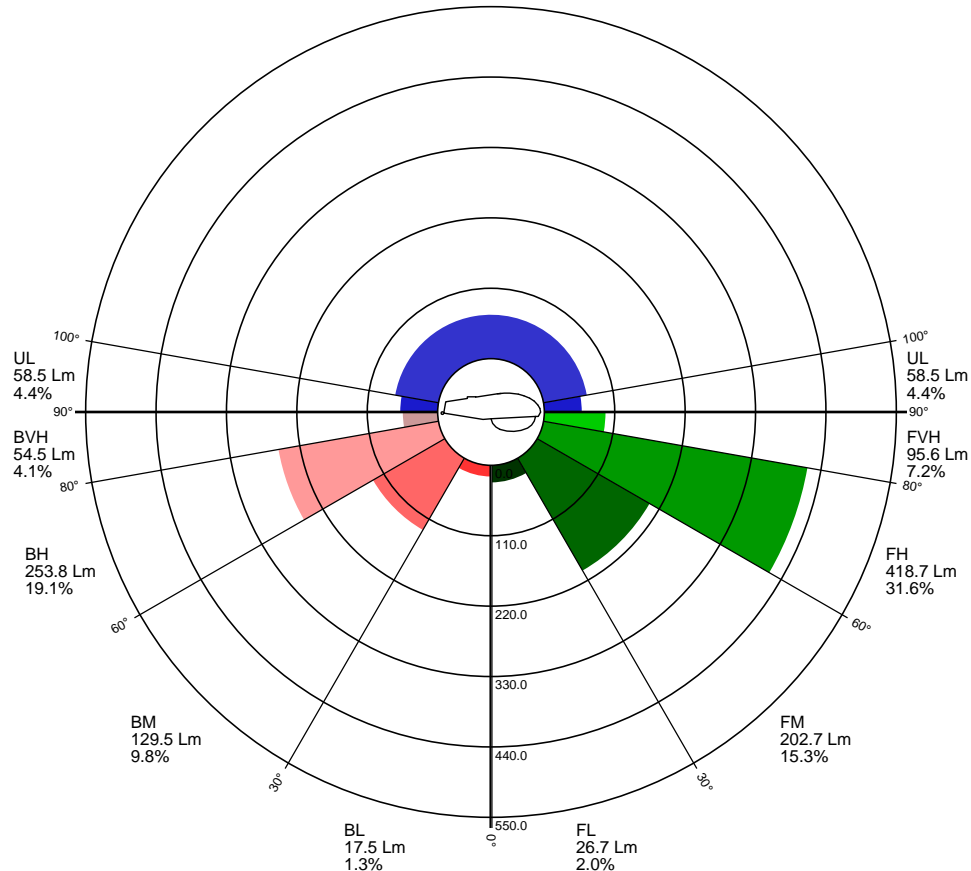
B U G

Forward		744	56.1			
FL	(0° - 30°)	26.7	2.0			
FM	(30° - 60°)	202.7	15.3			
FH	(60° - 80°)	418.7	31.6			G0
FVH	(80° - 90°)	95.6	7.2			G1
Backward		455	34.3			
BL	(0° - 30°)	17.5	1.3	B0		
BM	(30° - 60°)	129.5	9.8	B0		
BH	(60° - 80°)	253.8	19.1	B1		G1
BVH	(80° - 90°)	54.5	4.1			G1
Upward		127	9.6			
UL	(90° - 100°)	58.5	4.4		U3	
UH	(100° - 180°)	68.6	5.2		U3	
Trapped Light		0	0.0			
Total Flux		1326	100.0			

### Zonal Lumen Summary

(Linear scale)

UH  
68.6 Lm  
5.2%

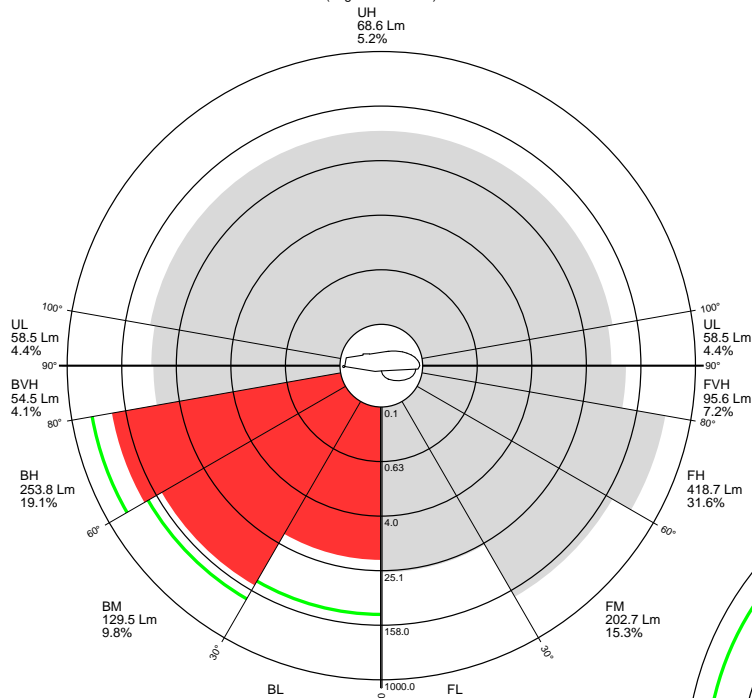


REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 4 OF 11

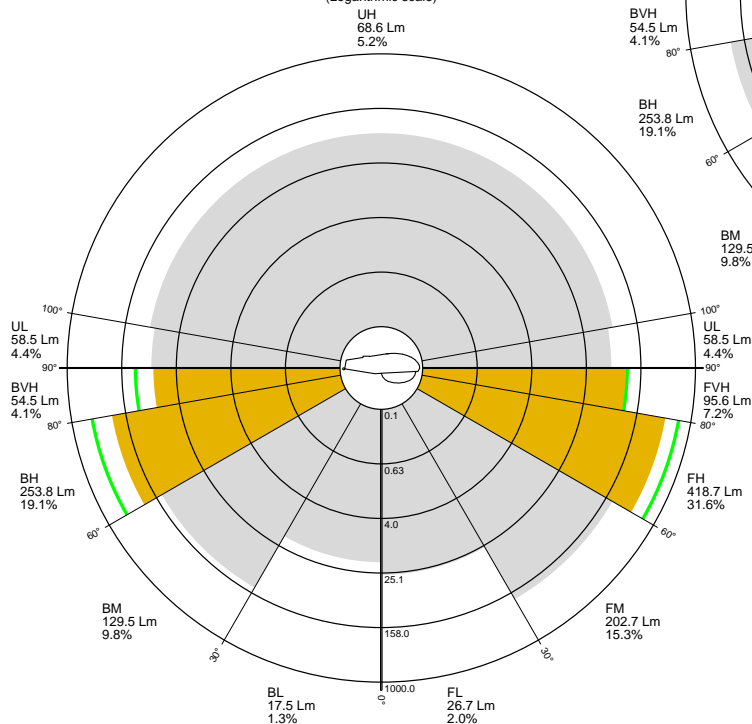
### Backlight Rating Details

(Logarithmic scale)



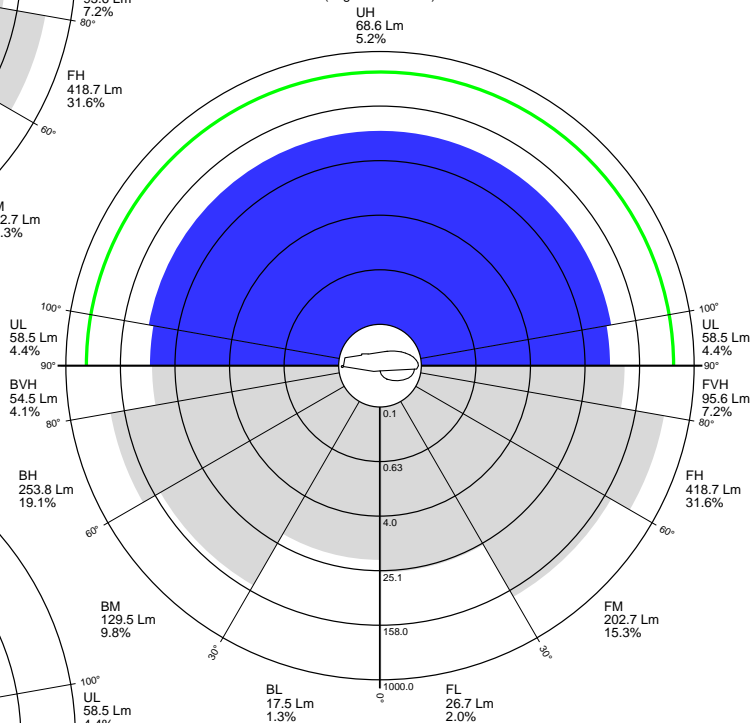
### Glare Rating Details

(Logarithmic scale)

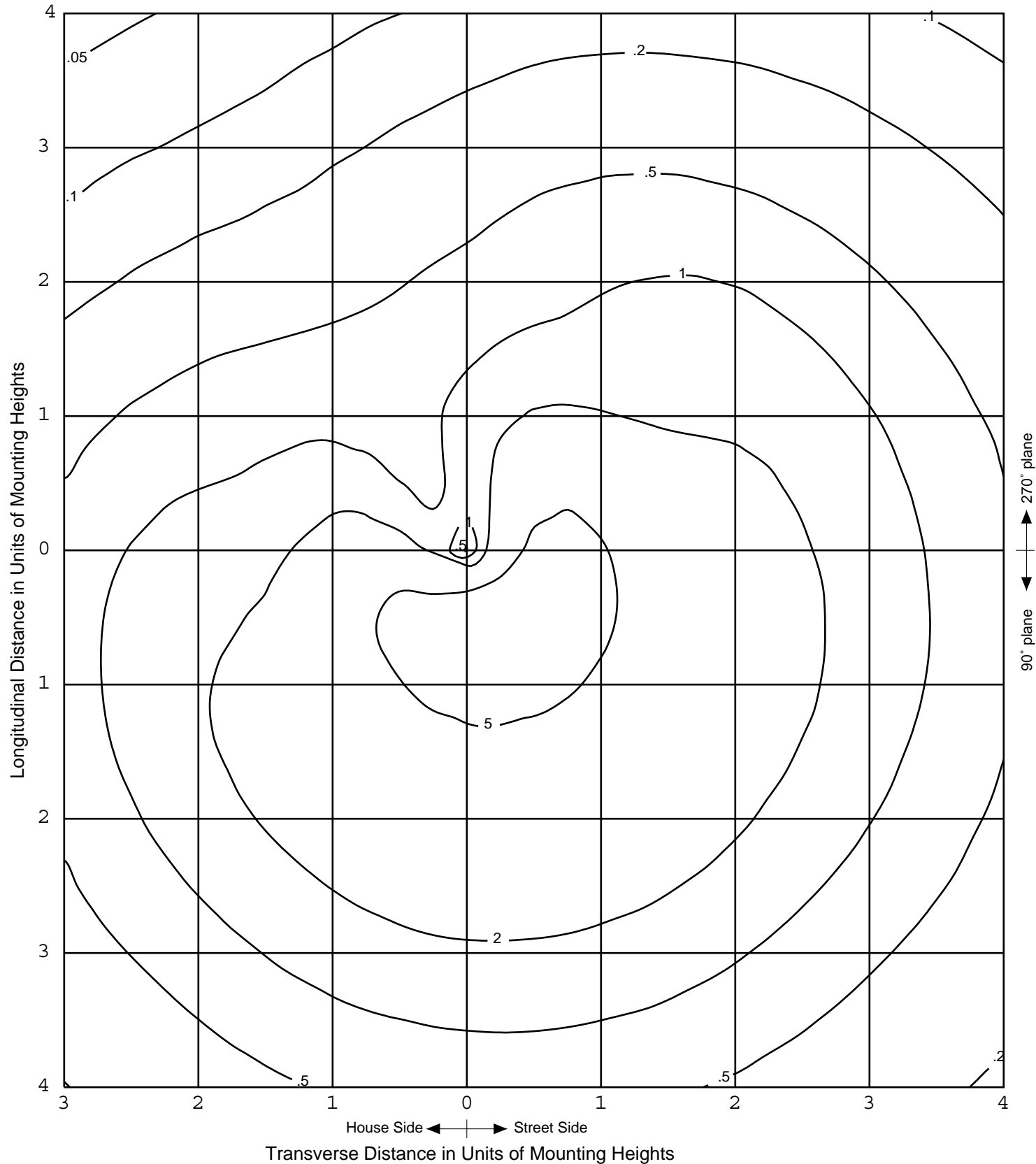


### Uplight Rating Details

(Logarithmic scale)

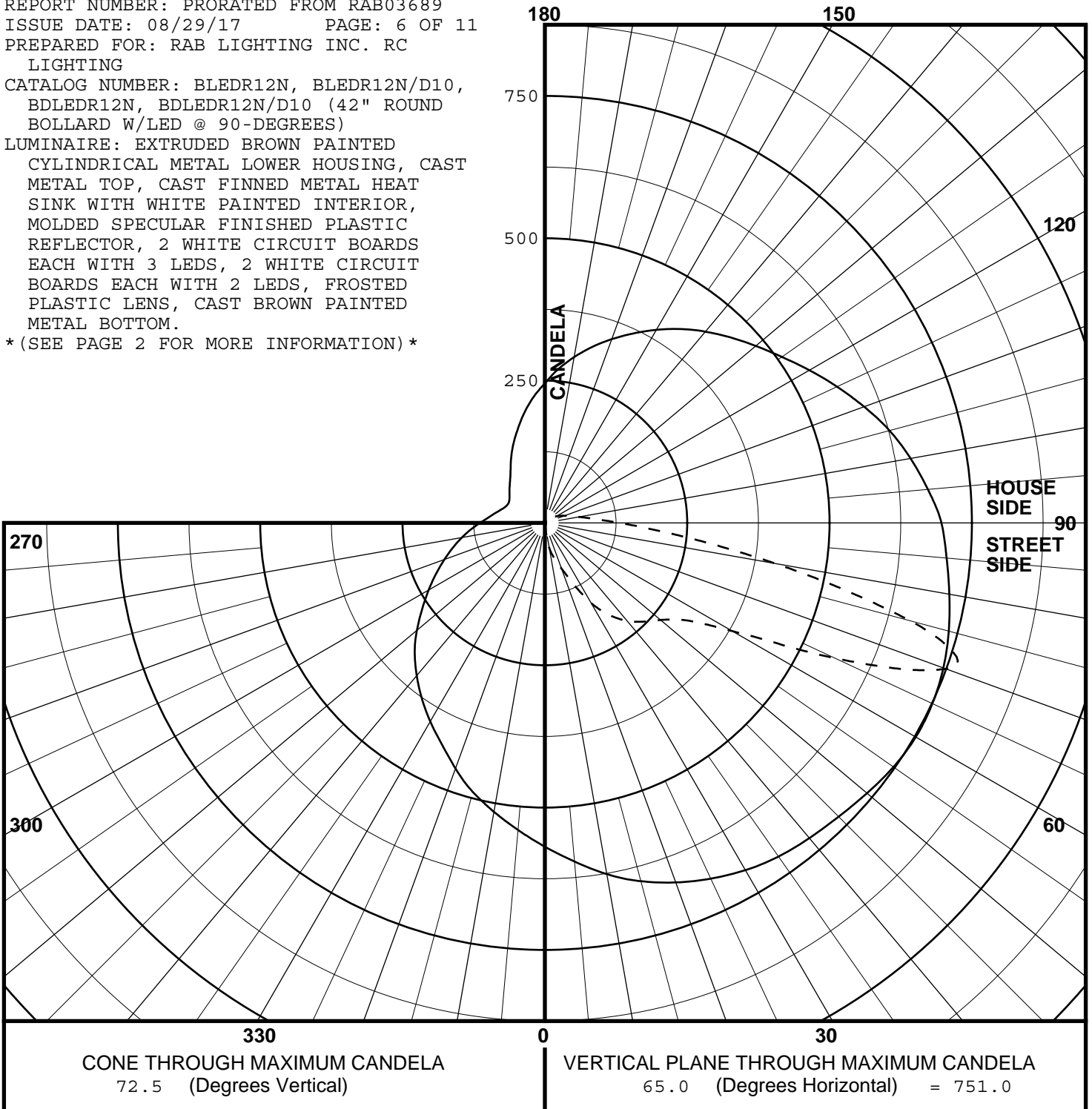


ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION  
Values based on 3.5 foot mounting height.



### MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17 PAGE: 6 OF 11  
 PREPARED FOR: RAB LIGHTING INC. RC  
 LIGHTING  
 CATALOG NUMBER: BLEDR12N, BLEDR12N/D10,  
 BDLEDR12N, BDLEDR12N/D10 (42" ROUND  
 BOLLARD W/LED @ 90-DEGREES)  
 LUMINAIRE: EXTRUDED BROWN PAINTED  
 CYLINDRICAL METAL LOWER HOUSING, CAST  
 METAL TOP, CAST FINNED METAL HEAT  
 SINK WITH WHITE PAINTED INTERIOR,  
 MOLDED SPECULAR FINISHED PLASTIC  
 REFLECTOR, 2 WHITE CIRCUIT BOARDS  
 EACH WITH 3 LEDS, 2 WHITE CIRCUIT  
 BOARDS EACH WITH 2 LEDS, FROSTED  
 PLASTIC LENS, CAST BROWN PAINTED  
 METAL BOTTOM.  
 \*(SEE PAGE 2 FOR MORE INFORMATION)\*



REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 7 OF 11

### CANDELA TABULATION

	STREET SIDE	LATERAL ANGLE								
		0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0 85.0
	180.0	2.	2.	2.	2.	2.	2.	2.	2.	2.
	175.0	0.	0.	0.	1.	1.	1.	2.	2.	4.
	165.0	0.	0.	0.	1.	1.	1.	1.	2.	2.
	155.0	1.	1.	1.	1.	1.	1.	2.	2.	2.
	145.0	4.	4.	4.	5.	5.	5.	5.	5.	5.
	135.0	8.	8.	8.	9.	9.	9.	11.	11.	11.
	125.0	14.	15.	17.	17.	18.	18.	18.	18.	18.
	115.0	24.	25.	26.	27.	28.	28.	28.	30.	28.
	105.0	38.	40.	41.	43.	45.	46.	46.	46.	45.
	95.0	70.	72.	77.	81.	84.	85.	85.	84.	82.
	90.0	109.	114.	123.	127.	131.	131.	133.	131.	127.
	87.5	141.	145.	160.	165.	172.	172.	172.	171.	165.
	85.0	185.	191.	207.	218.	227.	227.	227.	227.	218.
V	82.5	249.	262.	278.	293.	306.	304.	307.	307.	295.
E	80.0	329.	348.	372.	392.	409.	406.	412.	411.	397.
R	77.5	426.	448.	481.	506.	529.	526.	534.	534.	518.
T	75.0	518.	538.	591.	623.	648.	651.	663.	665.	646.
I	72.5<<	569.	597.	651.	689.	715.	730.	747.	751.	734.
C	70.0	552.	580.	629.	670.	696.	726.	745.	750.	740.
A	67.5	483.	509.	546.	586.	612.	647.	665.	668.	666.
L	65.0	403.	424.	448.	481.	506.	534.	548.	563.	557.
	62.5	327.	345.	366.	393.	415.	434.	443.	456.	452.
A	60.0	272.	287.	307.	329.	347.	365.	371.	380.	380.
N	57.5	238.	250.	269.	289.	304.	319.	322.	329.	330.
G	55.0	217.	226.	244.	263.	277.	289.	293.	297.	297.
L	52.5	204.	212.	229.	246.	261.	271.	276.	278.	276.
E	50.0	194.	203.	218.	235.	249.	259.	263.	265.	262.
	47.5	187.	195.	211.	226.	240.	250.	253.	255.	251.
	45.0	182.	190.	204.	219.	232.	242.	244.	245.	242.
	42.5	176.	184.	197.	212.	224.	232.	235.	236.	233.
	40.0	169.	176.	188.	203.	213.	222.	224.	225.	223.
	37.5	161.	168.	180.	192.	201.	208.	212.	212.	212.
	35.0	150.	158.	169.	179.	187.	194.	199.	198.	198.
	30.0	122.	128.	140.	146.	152.	158.	162.	162.	162.
	25.0	88.	92.	101.	107.	110.	115.	118.	118.	120.
	20.0	63.	65.	71.	75.	78.	82.	84.	85.	84.
	15.0	49.	50.	53.	57.	59.	63.	63.	64.	63.
	10.0	34.	34.	38.	40.	41.	44.	45.	45.	45.
	5.0	4.	7.	6.	7.	5.	6.	5.	5.	4.
	0.0	1.	1.	1.	1.	1.	1.	1.	1.	1.

||  
 PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA

REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 8 OF 11

### CANDELA TABULATION

HOUSE SIDE		LATERAL ANGLE									
		90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0
	180.0	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
	175.0	4.	4.	5.	5.	5.	5.	5.	5.	5.	5.
	165.0	2.	2.	4.	4.	4.	4.	4.	4.	4.	4.
	155.0	2.	4.	2.	4.	4.	4.	4.	4.	4.	4.
	145.0	5.	6.	5.	5.	5.	5.	5.	5.	4.	4.
	135.0	11.	11.	9.	9.	9.	8.	8.	7.	6.	5.
	125.0	18.	18.	17.	17.	15.	14.	13.	12.	9.	9.
	115.0	28.	28.	26.	25.	24.	21.	20.	18.	17.	14.
	105.0	44.	44.	41.	39.	36.	33.	31.	27.	25.	23.
	95.0	78.	77.	72.	68.	62.	57.	51.	46.	40.	36.
	90.0	118.	117.	109.	103.	91.	83.	72.	65.	57.	50.
	87.5	154.	153.	137.	131.	118.	105.	92.	82.	71.	62.
	85.0	204.	201.	181.	169.	156.	140.	120.	105.	91.	79.
V	82.5	276.	271.	251.	235.	212.	187.	160.	140.	120.	104.
E	80.0	373.	367.	339.	307.	276.	251.	216.	187.	160.	139.
R	77.5	489.	480.	442.	404.	364.	330.	287.	250.	216.	181.
T	75.0	599.	588.	551.	503.	447.	411.	361.	317.	274.	230.
I	72.5<<	696.	675.	627.	566.	508.	461.	416.	367.	320.	271.
C	70.0	706.	692.	641.	580.	528.	477.	431.	381.	330.	283.
A	67.5	643.	636.	603.	543.	507.	455.	410.	358.	312.	262.
L	65.0	543.	539.	520.	473.	452.	409.	361.	312.	269.	222.
	62.5	443.	442.	430.	407.	386.	345.	304.	261.	224.	184.
A	60.0	378.	371.	361.	341.	322.	288.	253.	218.	187.	155.
N	57.5	323.	317.	308.	290.	272.	243.	216.	187.	162.	136.
G	55.0	288.	282.	271.	253.	236.	212.	190.	166.	146.	124.
L	52.5	265.	258.	246.	229.	211.	192.	173.	152.	135.	116.
E	50.0	250.	244.	231.	212.	195.	178.	161.	142.	127.	110.
	47.5	239.	233.	219.	200.	185.	168.	153.	135.	120.	104.
	45.0	230.	224.	210.	192.	176.	161.	146.	129.	115.	99.
	42.5	222.	216.	201.	185.	169.	153.	139.	123.	109.	95.
	40.0	212.	206.	193.	178.	162.	147.	133.	117.	104.	90.
	37.5	203.	198.	185.	169.	155.	140.	126.	111.	98.	84.
	35.0	191.	186.	175.	160.	147.	131.	118.	104.	91.	77.
	30.0	159.	154.	148.	137.	127.	114.	102.	89.	76.	62.
	25.0	117.	114.	110.	104.	97.	88.	78.	68.	57.	46.
	20.0	82.	81.	78.	73.	69.	62.	56.	49.	41.	36.
	15.0	60.	59.	57.	54.	50.	46.	41.	37.	33.	28.
	10.0	43.	41.	39.	37.	33.	31.	28.	25.	23.	19.
	5.0	5.	5.	4.	5.	6.	4.	6.	5.	5.	4.
	0.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

CONE OF MAXIMUM CANDELA



REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 9 OF 11

### CANDELA TABULATION

HOUSE SIDE		LATERAL ANGLE									
		180.0	185.0	195.0	205.0	215.0	225.0	235.0	245.0	255.0	265.0
	180.0	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
	175.0	5.	5.	5.	4.	4.	4.	2.	2.	1.	1.
	165.0	4.	4.	4.	4.	4.	2.	2.	2.	1.	1.
	155.0	4.	4.	2.	2.	2.	2.	2.	2.	1.	1.
	145.0	4.	4.	2.	2.	2.	2.	2.	1.	1.	1.
	135.0	5.	5.	4.	4.	4.	2.	2.	2.	2.	2.
	125.0	8.	7.	6.	6.	5.	5.	4.	4.	4.	5.
	115.0	13.	12.	11.	9.	8.	7.	7.	7.	7.	7.
	105.0	20.	19.	17.	15.	13.	12.	12.	12.	12.	13.
	95.0	33.	31.	27.	24.	21.	20.	20.	19.	20.	21.
	90.0	46.	44.	38.	33.	31.	28.	27.	27.	28.	30.
	87.5	57.	54.	46.	41.	38.	36.	33.	33.	36.	37.
	85.0	73.	69.	58.	52.	45.	44.	41.	40.	44.	45.
V	82.5	95.	89.	77.	65.	57.	53.	50.	49.	53.	57.
E	80.0	126.	116.	98.	82.	69.	64.	58.	57.	64.	70.
R	77.5	163.	149.	124.	101.	83.	73.	66.	65.	73.	84.
T	75.0	206.	188.	150.	120.	95.	82.	71.	70.	79.	95.
I	72.5<<	245.	223.	176.	137.	105.	88.	76.	73.	83.	101.
C	70.0	259.	235.	188.	145.	113.	91.	77.	75.	84.	98.
A	67.5	240.	216.	176.	137.	110.	90.	76.	73.	81.	92.
L	65.0	203.	181.	149.	120.	99.	83.	72.	69.	73.	83.
	62.5	167.	149.	123.	102.	88.	73.	66.	63.	65.	73.
A	60.0	141.	128.	107.	90.	77.	64.	58.	56.	58.	66.
N	57.5	126.	114.	97.	83.	70.	57.	51.	50.	52.	62.
G	55.0	115.	105.	91.	77.	63.	51.	44.	43.	46.	56.
L	52.5	108.	99.	85.	71.	58.	46.	38.	37.	41.	51.
E	50.0	103.	95.	81.	66.	53.	41.	33.	32.	38.	46.
	47.5	97.	90.	76.	62.	49.	38.	30.	28.	34.	43.
	45.0	92.	85.	71.	57.	44.	34.	27.	26.	31.	39.
	42.5	88.	79.	65.	52.	40.	31.	25.	24.	27.	36.
	40.0	82.	73.	59.	46.	36.	27.	23.	23.	25.	32.
	37.5	76.	68.	54.	41.	31.	25.	20.	20.	23.	28.
	35.0	70.	62.	49.	37.	27.	23.	19.	19.	20.	25.
	30.0	56.	50.	39.	30.	23.	19.	17.	17.	18.	21.
	25.0	43.	38.	31.	24.	20.	17.	15.	15.	15.	18.
	20.0	32.	30.	25.	20.	17.	15.	13.	13.	14.	15.
	15.0	26.	25.	21.	18.	15.	13.	12.	12.	13.	14.
	10.0	17.	15.	13.	9.	8.	6.	5.	5.	6.	7.
	5.0	4.	2.	2.	2.	2.	1.	1.	1.	1.	1.
	0.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

CONE OF MAXIMUM CANDELA

REPORT NUMBER: PRORATED FROM RAB03689  
 ISSUE DATE: 08/29/17  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 10 OF 11

### CANDELA TABULATION

STREET SIDE		LATERAL ANGLE										
		270.0	275.0	285.0	295.0	305.0	315.0	325.0	335.0	345.0	355.0	360.0
	180.0	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
	175.0	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	1.
	145.0	1.	1.	1.	1.	1.	2.	2.	2.	2.	4.	4.
	135.0	2.	2.	2.	4.	4.	5.	5.	6.	7.	7.	8.
	125.0	5.	5.	6.	7.	7.	8.	11.	12.	13.	14.	14.
	115.0	8.	8.	9.	12.	13.	15.	17.	19.	21.	23.	24.
	105.0	14.	14.	17.	19.	21.	25.	28.	31.	34.	37.	38.
	95.0	23.	25.	28.	33.	39.	44.	50.	56.	62.	68.	70.
	90.0	32.	34.	40.	47.	57.	65.	76.	85.	96.	103.	109.
	87.5	40.	43.	50.	59.	72.	83.	97.	109.	123.	134.	141.
	85.0	49.	52.	63.	76.	92.	108.	126.	142.	161.	178.	185.
V	82.5	62.	66.	81.	97.	120.	141.	165.	187.	213.	236.	249.
E	80.0	76.	83.	102.	124.	154.	184.	214.	245.	281.	310.	329.
R	77.5	92.	103.	129.	159.	198.	236.	276.	315.	362.	402.	426.
T	75.0	107.	121.	154.	192.	239.	289.	338.	386.	441.	487.	518.
I	72.5<<	114.	130.	167.	211.	263.	323.	377.	429.	489.	541.	569.
C	70.0	110.	126.	161.	205.	258.	321.	372.	429.	481.	529.	552.
A	67.5	101.	113.	142.	181.	227.	284.	329.	381.	426.	464.	483.
L	65.0	89.	98.	121.	152.	188.	235.	270.	313.	349.	387.	403.
	62.5	79.	86.	104.	128.	156.	190.	218.	252.	281.	314.	327.
A	60.0	72.	78.	95.	114.	136.	161.	184.	211.	233.	261.	272.
N	57.5	66.	72.	88.	105.	124.	145.	163.	186.	205.	229.	238.
G	55.0	60.	68.	82.	98.	116.	133.	152.	172.	190.	208.	217.
L	52.5	56.	62.	77.	94.	109.	126.	142.	162.	179.	197.	204.
E	50.0	51.	58.	72.	89.	104.	120.	136.	154.	172.	187.	194.
	47.5	47.	53.	68.	84.	98.	115.	130.	148.	166.	181.	187.
	45.0	44.	50.	63.	79.	94.	109.	124.	142.	160.	175.	182.
	42.5	39.	45.	58.	73.	89.	103.	118.	136.	153.	169.	176.
	40.0	36.	40.	52.	68.	83.	97.	113.	129.	145.	161.	169.
	37.5	32.	37.	47.	62.	76.	90.	105.	121.	136.	154.	161.
	35.0	28.	32.	43.	54.	69.	83.	97.	113.	127.	143.	150.
	30.0	24.	26.	33.	43.	53.	66.	78.	91.	104.	117.	122.
	25.0	20.	21.	27.	33.	40.	50.	58.	69.	77.	84.	88.
	20.0	17.	19.	23.	27.	32.	37.	44.	50.	54.	60.	63.
	15.0	15.	17.	19.	23.	26.	30.	34.	39.	43.	46.	49.
	10.0	8.	9.	12.	14.	17.	20.	24.	27.	30.	33.	34.
	5.0	1.	1.	1.	2.	2.	4.	4.	6.	5.	6.	4.
	0.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

CONE OF MAXIMUM CANDELA

REPORT NUMBER: PRORATED FROM RAB03689  
ISSUE DATE: 08/29/17  
PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 11 OF 11

### 5-DEGREE ZONAL LUMEN SUMMARY

0- 5	0
5- 10	1
10- 15	4
15- 20	7
20- 25	12
25- 30	20
30- 35	29
35- 40	39
40- 45	48
45- 50	58
50- 55	69
55- 60	89
60- 65	127
65- 70	184
70- 75	205
75- 80	156
80- 85	95
85- 90	55
90- 95	35
95-100	24
100-105	18
105-110	14
110-115	10
115-120	8
120-125	6
125-130	4
130-135	3
135-140	2
140-145	1
145-150	1
150-155	1
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

### 10-DEGREE ZONAL LUMEN SUMMARY

0- 10	1
0- 20	12
0- 30	44
0- 40	112
0- 50	218
0- 60	376
0- 70	687
0- 80	1049
0- 90	1199
0-100	1257
0-110	1289
0-120	1307
0-130	1317
0-140	1322
0-150	1324
0-160	1325
0-170	1326
0-180	1326