

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL68902

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[ISSUE DATE]06/21/11

[MANUFAC]BEGHELLI

[LUMCAT] EMERGENCY REMOTE HEADS - LED R1 12 LED

[LUMINAIRE] BRH & BRH-WP-HO MOLDED WHITE PLASTIC HOUSING, TWO MOLDED WHITE PLASTIC SWIVEL

[MORE]HEAD ASSEMBLIES, EACH HEAD ASSEMBLY CONSISTS OF: MOLDED WHITE

[MORE]PLASTIC HOUSING, ONE CIRCUIT BOARD WITH 12 LEDS, MOLDED

[MORE]PLASTIC REFLECTOR WITH SPECULAR FINISH AND ONE APERTURE PER

[MORE]LED, CLEAR PRISMATIC PLASTIC LENS. ONLY ONE HEAD ASSEMBLY

[MORE]ENERGIZED FOR THIS TEST.

[LAMP]TWELVE WHITE LIGHT EMITTING DIODES (LEDs) EACH WITH CLEAR

[MORE]CYLINDRICAL INTEGRAL LENS WITH HEMISPHERICAL END, VERTICAL

[MORE]BASE-UP POSITION.

[OTHER]TOTAL INPUT WATTS = 0.788 AT 3.60 VOLTS DC

[ MOUNTING]SURFACE

[ NOTE]DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT CLIENT

[MORE]REQUESTED INPUT VOLTAGE (3.6VDC) TO THE LAMP ASSEMBLY.

[OTHER]TEST PROCEDURE: IESNA LM-79-08

[OTHER]TEST DISTANCE = 25.25 FEET

[ ABSOLUTE]LUMENS]65.4

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	65
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	0.788
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.68
Spacing Criterion (90-270)	0.72
Spacing Criterion (Diagonal)	0.76
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.29 ft
Luminous Width (90-270)	0.29 ft
Luminous Height	0.04 ft

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	360	491	1189
55	146	239	476
65	114	125	275
75	96	84	159
85	55	88	110

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES**

**CANDELA TABULATION**

	<u><b>0.0</b></u>	<u><b>22.5</b></u>	<u><b>45.0</b></u>	<u><b>67.5</b></u>	<u><b>90.0</b></u>
<b>0.0</b>	95.7	95.7	95.7	95.7	95.7
<b>0.5</b>	95.7	95.7	95.7	95.7	95.7
<b>1.0</b>	97.4	97.1	96.4	95.7	95.4
<b>1.5</b>	100.1	99.5	97.6	95.4	94.5
<b>2.0</b>	102.8	101.7	98.6	94.9	93.3
<b>2.5</b>	104.4	103.0	99.2	94.4	91.8
<b>3.0</b>	104.6	103.2	99.2	94.0	90.7
<b>3.5</b>	103.7	102.3	98.9	93.8	89.5
<b>4.0</b>	102.1	101.0	98.3	93.6	88.8
<b>4.5</b>	100.6	99.5	97.9	93.9	88.6
<b>5.0</b>	100.0	98.6	97.5	94.7	88.6
<b>5.5</b>	100.8	98.6	97.2	95.5	88.8
<b>6.0</b>	102.5	99.8	97.2	96.4	89.1
<b>6.5</b>	104.8	101.8	97.4	97.2	89.9
<b>7.0</b>	106.4	103.3	97.8	98.3	90.8
<b>7.5</b>	106.9	103.8	98.2	99.3	91.6
<b>8.0</b>	106.4	103.4	98.4	99.7	92.6
<b>8.5</b>	105.1	102.0	98.5	100.0	93.5
<b>9.0</b>	103.1	99.8	98.3	100.0	94.6
<b>9.5</b>	100.6	97.1	97.7	99.7	95.1
<b>10.0</b>	97.5	93.9	96.6	99.0	95.5
<b>11.0</b>	89.7	86.6	93.5	96.0	93.7
<b>12.0</b>	81.7	78.8	89.9	92.8	90.7
<b>13.0</b>	74.2	71.3	85.7	89.9	88.9
<b>14.0</b>	68.8	64.7	81.4	87.7	88.2
<b>15.0</b>	65.9	60.4	76.8	86.7	86.7
<b>16.0</b>	64.6	58.3	72.0	85.2	82.8
<b>17.0</b>	62.5	56.7	66.8	81.5	75.8
<b>18.0</b>	59.1	54.7	60.8	76.4	68.2
<b>19.0</b>	55.5	52.5	55.2	69.6	61.1
<b>20.0</b>	51.7	49.6	51.8	61.9	54.4
<b>22.5</b>	40.6	41.7	48.4	45.0	41.4
<b>25.0</b>	33.3	33.8	43.1	35.8	37.1
<b>27.5</b>	26.0	27.1	34.9	32.1	37.2
<b>30.0</b>	18.9	20.3	27.6	30.7	31.2
<b>32.5</b>	16.0	14.6	19.2	25.7	25.4
<b>35.0</b>	15.1	12.0	16.4	20.5	21.4
<b>37.5</b>	11.0	10.3	12.3	16.8	22.0
<b>40.0</b>	7.0	7.7	8.0	16.2	16.2
<b>42.5</b>	3.1	6.4	5.2	13.9	11.5
<b>45.0</b>	2.3	3.3	3.3	9.7	7.6
<b>47.5</b>	1.5	2.3	2.4	5.8	6.6
<b>50.0</b>	1.2	1.4	1.8	4.0	5.3
<b>52.5</b>	1.0	1.1	1.4	3.1	3.8
<b>55.0</b>	0.8	0.9	1.4	2.4	2.6
<b>57.5</b>	0.7	0.8	1.1	1.6	1.9
<b>60.0</b>	0.6	0.7	0.8	1.2	1.6
<b>62.5</b>	0.5	0.6	0.7	1.0	1.3
<b>65.0</b>	0.5	0.5	0.6	0.8	1.2
<b>67.5</b>	0.4	0.4	0.5	0.7	1.1
<b>70.0</b>	0.4	0.4	0.5	0.6	1.0
<b>72.5</b>	0.3	0.4	0.4	0.5	0.6
<b>75.0</b>	0.3	0.3	0.3	0.4	0.5
<b>77.5</b>	0.2	0.3	0.3	0.4	0.4

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES****CANDELA TABULATION - (Cont.)**

<b>80.0</b>	0.2	0.2	0.3	0.3	0.3
<b>82.5</b>	0.2	0.2	0.2	0.2	0.3
<b>85.0</b>	0.1	0.1	0.2	0.2	0.2
<b>87.5</b>	0.1	0.1	0.1	0.1	0.2
<b>90.0</b>	0.0	0.0	0.1	0.1	0.2
<b>92.5</b>	0.0	0.0	0.1	0.1	0.2
<b>95.0</b>	0.0	0.0	0.0	0.0	0.1
<b>97.5</b>	0.0	0.0	0.0	0.0	0.1
<b>100.0</b>	0.0	0.0	0.0	0.0	0.0
<b>102.5</b>	0.0	0.0	0.0	0.0	0.0
<b>105.0</b>	0.0	0.0	0.0	0.0	0.0
<b>107.5</b>	0.0	0.0	0.0	0.0	0.0
<b>110.0</b>	0.0	0.0	0.0	0.0	0.0
<b>115.0</b>	0.0	0.0	0.0	0.0	0.0
<b>120.0</b>	0.0	0.0	0.0	0.0	0.0
<b>125.0</b>	0.0	0.0	0.0	0.0	0.0
<b>130.0</b>	0.0	0.0	0.0	0.0	0.0
<b>135.0</b>	0.0	0.0	0.0	0.0	0.0
<b>140.0</b>	0.0	0.0	0.0	0.0	0.0
<b>145.0</b>	0.0	0.0	0.0	0.0	0.0
<b>150.0</b>	0.0	0.0	0.0	0.0	0.0
<b>155.0</b>	0.0	0.0	0.0	0.0	0.0
<b>160.0</b>	0.0	0.0	0.0	0.0	0.0
<b>165.0</b>	0.0	0.0	0.0	0.0	0.0
<b>170.0</b>	0.0	0.0	0.0	0.0	0.0
<b>175.0</b>	0.0	0.0	0.0	0.0	0.0
<b>180.0</b>	0.0	0.0	0.0	0.0	0.0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	30.13	N.A.	46.10
0-30	47.40	N.A.	72.50
0-40	58.10	N.A.	88.80
0-60	64.09	N.A.	98.00
0-80	65.19	N.A.	99.70
0-90	65.37	N.A.	99.90
10-90	55.98	N.A.	85.60
20-40	27.97	N.A.	42.80
20-50	32.51	N.A.	49.70
40-70	6.70	N.A.	10.20
60-80	1.10	N.A.	1.70
70-80	0.40	N.A.	0.60
80-90	0.18	N.A.	0.30
90-110	0.04	N.A.	0.10
90-120	0.04	N.A.	0.10
90-130	0.04	N.A.	0.10
90-150	0.04	N.A.	0.10
90-180	0.04	N.A.	0.10
110-180	0.00	N.A.	0.00
0-180	65.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	9.39
10-20	20.74
20-30	17.27
30-40	10.70
40-50	4.53
50-60	1.46
60-70	0.70
70-80	0.40
80-90	0.18
90-100	0.04
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101
1	114	111	109	106	112	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	99	96	106	102	98	95	99	96	93	96	93	91	93	91	89	87
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81
4	98	91	85	81	96	89	84	80	87	83	79	85	82	79	83	80	78	76
5	93	85	79	75	92	84	79	75	82	78	74	81	77	73	79	76	73	71
6	89	80	74	70	88	79	74	70	78	73	69	76	72	69	75	71	68	67
7	85	76	70	66	84	75	70	66	74	69	65	73	68	65	71	68	65	63
8	81	72	66	62	80	71	66	62	70	65	61	69	65	61	68	64	61	60
9	77	68	62	58	76	68	62	58	67	62	58	66	61	58	65	61	58	56
10	74	65	59	55	73	64	59	55	64	59	55	63	58	55	62	58	55	54

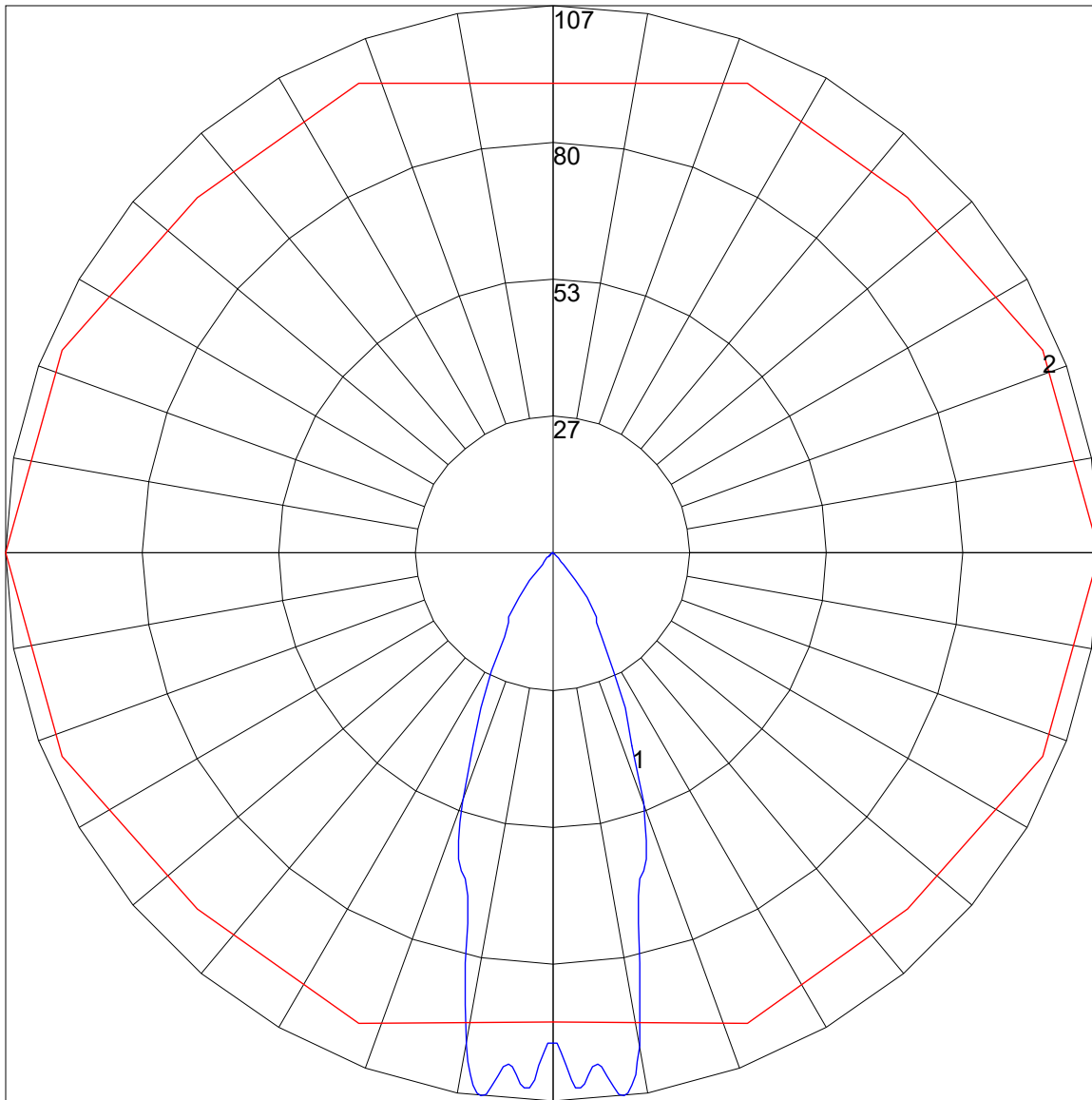
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BRH-HO & BRH-WP-HO (12 LED SQ HEAD).IES**

**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	0.0	0.0	0.0	0.0	0.0	2.2	3.3	2.6	3.6	3.9
	3H	0.0	0.0	0.0	0.0	0.0	3.4	4.3	3.8	4.6	5.0
	4H	0.0	0.0	0.0	0.0	0.3	3.7	4.5	4.1	4.9	5.3
	6H	0.0	0.0	0.0	0.3	0.7	3.9	4.7	4.3	5.0	5.4
	8H	0.0	0.1	0.0	0.5	0.9	4.0	4.7	4.4	5.1	5.5
	12H	0.0	0.1	0.0	0.5	1.0	4.1	4.8	4.5	5.1	5.6
4H	2H	0.0	0.0	0.0	0.0	0.0	2.1	3.0	2.5	3.3	3.7
	3H	0.0	0.0	0.0	0.1	0.5	3.4	4.1	3.9	4.5	5.0
	4H	0.0	0.3	0.1	0.7	1.1	3.8	4.4	4.3	4.9	5.3
	6H	0.2	0.7	0.6	1.1	1.6	4.2	4.7	4.7	5.2	5.6
	8H	0.4	0.9	0.9	1.4	1.8	4.3	4.8	4.8	5.3	5.7
	12H	0.6	1.0	1.1	1.5	2.0	4.4	4.9	4.9	5.3	5.8
8H	4H	0.0	0.4	0.4	0.9	1.4	3.8	4.3	4.3	4.7	5.2
	6H	0.6	1.0	1.1	1.5	2.0	4.3	4.6	4.8	5.1	5.6
	8H	1.0	1.3	1.5	1.8	2.3	4.4	4.8	5.0	5.3	5.8
	12H	1.2	1.5	1.7	2.0	2.6	4.6	4.9	5.2	5.4	6.0
12H	4H	0.0	0.4	0.5	0.9	1.4	3.8	4.2	4.3	4.7	5.1
	6H	0.7	1.1	1.3	1.5	2.1	4.2	4.6	4.8	5.0	5.6
	8H	1.1	1.4	1.7	1.9	2.5	4.5	4.8	5.0	5.3	5.8

Maximum UGR = 6.0

POLAR GRAPH



Maximum Candela = 106.9 Located At Horizontal Angle = 0, Vertical Angle = 7.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (7.5) (Through Max. Cd.)