

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FSHBHT155KW.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]
[TESTLAB]
[TESTDATE] 2019-12-12
[ISSUEDATE] 2019-12-16 19:10:04
[NEARFIELD]
[LAMPPOSITION] 0,0
[OTHER]
[MANUFAC] BEGHELLI
[LUMINAIRE] FSHBHT155KW
[LAMPCAT] HIGHBAY LUMINAIRE

CHARACTERISTICS

Lumens Per Lamp	23457 (1 lamp)
Total Lamp Lumens	23457
Luminaire Lumens	23493
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	156
Total Luminaire Watts	150.623
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.45 m (Diameter)
Luminous Width (90-270)	0.45 m (Diameter)
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	51490	50877	51072
55	49346	47986	47691
65	41604	40028	39909
75	26209	23716	23095
85	3598	2642	2734

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CANDELA TABULATION

	<u>0</u>	<u>30</u>	<u>60</u>	<u>90</u>	<u>120</u>	<u>150</u>	<u>180</u>	<u>210</u>	<u>240</u>	<u>270</u>
0	8307.913	8307.913	8307.913	8307.913	8307.913	8307.913	8307.913	8307.913	8307.913	8307.913
5	8253.950	8230.390	8211.860	8318.670	8288.340	8269.810	8250.800	8241.420	8228.060	8345.150
10	8160.670	8129.310	8108.390	8215.140	8184.940	8171.990	8156.530	8153.790	8138.340	8256.590
15	8011.660	7973.710	7954.830	8053.570	8024.750	8021.740	8009.950	8010.440	7998.580	8116.870
20	7803.620	7760.220	7742.230	7831.890	7805.560	7809.160	7803.240	7809.180	7799.810	7914.780
25	7538.480	7487.480	7457.290	7555.280	7528.240	7542.770	7531.640	7550.790	7537.320	7653.410
30	7178.980	7151.310	7107.030	7184.560	7187.460	7177.280	7204.500	7202.010	7217.010	7333.130
35	6787.510	6752.360	6704.030	6774.060	6777.200	6781.550	6811.250	6817.100	6831.680	6944.440
40	6325.980	6284.370	6238.650	6297.190	6306.850	6317.000	6347.770	6364.120	6376.170	6492.340
45	5793.070	5746.810	5701.270	5746.010	5759.010	5779.090	5816.940	5840.110	5860.090	5967.310
50	5193.490	5135.670	5095.380	5128.930	5139.890	5173.010	5213.720	5249.560	5263.730	5367.540
55	4503.440	4413.000	4345.680	4352.340	4422.790	4479.840	4536.300	4575.550	4585.240	4693.640
60	3642.050	3569.540	3531.130	3535.870	3544.060	3645.990	3716.870	3760.770	3754.280	3858.310
65	2797.610	2697.400	2685.850	2683.590	2692.540	2792.430	2832.090	2897.830	2918.160	2999.210
70	1910.230	1806.450	1777.240	1778.540	1803.150	1904.590	1965.780	2046.000	2050.160	2117.000
75	1079.290	990.390	962.930	951.080	981.610	1060.890	1103.860	1178.790	1186.460	1230.600
80	393.630	349.130	332.990	318.870	342.240	388.640	423.110	473.290	482.900	511.200
85	49.900	37.260	36.010	37.920	41.860	55.290	64.550	80.320	82.190	88.990
90	0.000	0.000	0.000	7.310	7.140	6.930	6.730	7.110	6.930	1.130
95	0.430	0.350	0.480	9.640	9.400	9.200	8.900	8.730	8.590	0.190
100	1.200	1.170	1.300	12.080	11.860	11.620	11.310	11.110	10.950	0.930
105	2.210	2.190	2.330	14.520	14.250	14.050	13.720	13.560	13.380	1.920
110	3.340	3.380	3.490	16.940	16.690	16.460	16.160	15.960	15.820	3.030
115	4.600	4.680	4.770	19.280	19.020	18.790	18.460	18.300	18.160	4.290
120	6.090	6.140	6.300	21.530	21.220	21.030	20.690	20.560	20.370	5.740
125	8.010	8.130	8.260	23.640	23.310	23.120	22.810	22.670	22.510	7.590
130	10.560	10.740	10.840	25.510	25.200	25.040	24.740	24.620	24.460	10.040
135	13.550	13.720	13.830	27.230	26.890	26.780	26.470	26.380	26.190	13.000
140	16.530	16.690	16.790	28.740	28.420	28.320	28.030	27.960	27.760	15.970
145	19.450	19.550	19.660	30.090	29.760	29.710	29.380	29.370	29.170	18.920
150	22.190	22.270	22.380	31.300	30.970	30.940	30.620	30.630	30.440	21.760
155	24.710	24.760	24.880	32.250	31.920	31.940	31.630	31.690	31.500	24.360
160	26.870	26.870	26.990	32.820	32.480	32.510	32.250	32.310	32.090	26.620
165	28.640	28.570	28.700	33.020	32.790	32.760	32.640	32.580	32.480	28.450
170	29.980	29.880	30.010	33.010	32.820	32.780	32.600	32.650	32.650	29.860
175	30.970	30.810	30.970	32.620	32.470	32.390	32.330	32.290	32.310	30.910
180	31.690	31.690	31.690	31.690	31.690	31.690	31.690	31.690	31.690	31.690

Vert. Angles **Horizontal Angles**

	<u>300</u>	<u>330</u>	<u>360</u>
0	8307.913	8307.913	8307.913
5	8315.320	8281.510	8253.950
10	8227.760	8188.410	8160.670
15	8088.940	8044.170	8011.660
20	7887.720	7839.760	7803.620
25	7626.160	7572.710	7538.480
30	7281.050	7245.590	7178.980
35	6895.840	6850.140	6787.510
40	6445.220	6392.320	6325.980
45	5920.910	5862.720	5793.070
50	5330.760	5257.310	5193.490
55	4654.440	4578.770	4503.440
60	3819.990	3719.580	3642.050

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CANDELA TABULATION - (Cont.)

65	2965.020	2853.390	2797.610
70	2086.660	1985.780	1910.230
75	1209.900	1135.320	1079.290
80	488.360	430.820	393.630
85	79.630	60.620	49.900
90	0.080	0.040	0.000
95	0.310	0.280	0.430
100	1.050	1.010	1.200
105	2.030	2.010	2.210
110	3.150	3.190	3.340
115	4.390	4.420	4.600
120	5.840	5.870	6.090
125	7.680	7.790	8.010
130	10.160	10.310	10.560
135	13.110	13.300	13.550
140	16.070	16.270	16.530
145	19.030	19.200	19.450
150	21.860	21.990	22.190
155	24.480	24.500	24.710
160	26.720	26.670	26.870
165	28.550	28.450	28.640
170	29.940	29.820	29.980
175	30.980	30.800	30.970
180	31.690	31.690	31.690

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	3053.1	13.00	13.00
0-30	6531.85	27.80	27.80
0-40	10791.44	46.00	45.90
0-60	19279.06	82.20	82.10
0-80	23253.43	99.10	99.00
0-90	23398.66	99.80	99.60
10-90	22612.22	96.40	96.30
20-40	7738.34	33.00	32.90
20-50	12219.29	52.10	52.00
40-70	11269.74	48.00	48.00
60-80	3974.37	16.90	16.90
70-80	1192.24	5.10	5.10
80-90	145.22	0.60	0.60
90-110	13.76	0.10	0.10
90-120	25.26	0.10	0.10
90-130	39.15	0.20	0.20
90-150	69.90	0.30	0.30
90-180	94.54	0.40	0.40
110-180	80.78	0.30	0.30
0-180	23493.19	100.20	100.00

Total Luminaire Efficiency = 100.20%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	786.43
10-20	2266.67
20-30	3478.75
30-40	4259.6
40-50	4480.94
50-60	4006.67
60-70	2782.13
70-80	1192.24
80-90	145.22
90-100	5.27
100-110	8.49
110-120	11.51
120-130	13.89
130-140	15.46
140-150	15.29
150-160	12.98
160-170	8.64
170-180	3.01

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	83	72	63	57	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

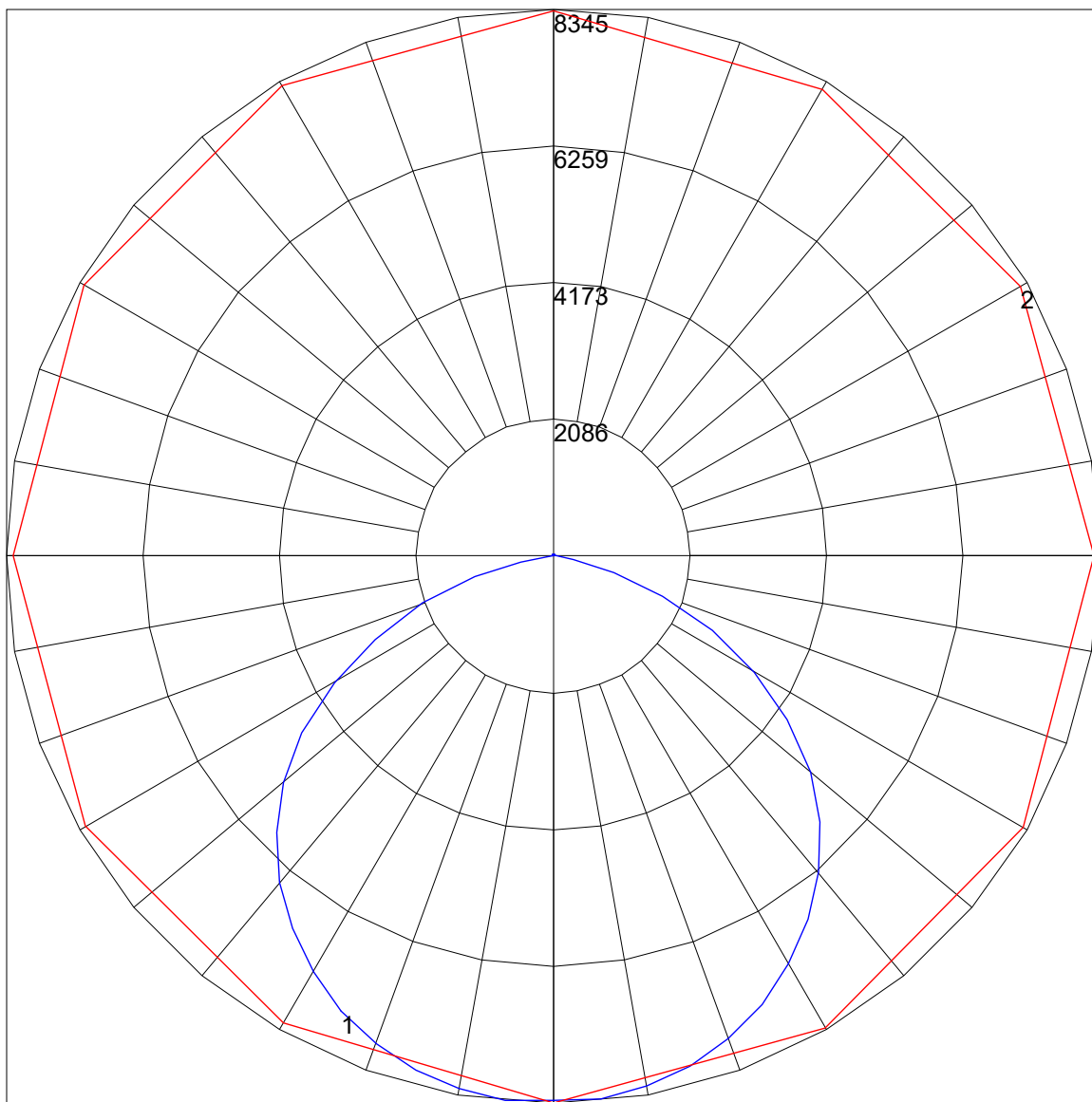
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UGR TABLE - CORRECTED

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	25.0	26.6	25.3	26.9	27.2	24.8	26.4	25.1	26.7	27.0
	3H	26.4	27.8	26.8	28.2	28.5	26.1	27.6	26.5	27.9	28.3
	4H	26.7	28.1	27.1	28.5	28.8	26.4	27.8	26.8	28.1	28.5
	6H	26.9	28.1	27.3	28.5	28.9	26.5	27.8	26.9	28.1	28.5
	8H	26.9	28.1	27.3	28.5	28.9	26.5	27.7	26.9	28.1	28.5
	12H	26.9	28.0	27.3	28.4	28.8	26.5	27.6	26.9	28.0	28.5
4H	2H	25.5	26.9	25.9	27.2	27.6	25.3	26.7	25.7	27.0	27.4
	3H	27.1	28.2	27.5	28.6	29.0	26.8	27.9	27.2	28.3	28.7
	4H	27.5	28.5	28.0	29.0	29.4	27.2	28.2	27.6	28.6	29.1
	6H	27.7	28.6	28.2	29.0	29.5	27.3	28.2	27.8	28.7	29.1
	8H	27.7	28.5	28.2	29.0	29.5	27.3	28.2	27.8	28.6	29.1
	12H	27.7	28.4	28.2	28.9	29.4	27.3	28.1	27.8	28.5	29.0
8H	4H	27.7	28.5	28.1	28.9	29.4	27.3	28.2	27.8	28.6	29.1
	6H	27.9	28.6	28.4	29.1	29.5	27.5	28.2	28.0	28.7	29.1
	8H	27.9	28.5	28.4	29.0	29.5	27.5	28.1	28.0	28.6	29.1
	12H	27.9	28.4	28.4	28.9	29.5	27.5	28.0	28.0	28.5	29.1
12H	4H	27.7	28.4	28.1	28.9	29.3	27.3	28.1	27.8	28.5	29.0
	6H	27.9	28.5	28.4	28.9	29.5	27.5	28.1	28.0	28.6	29.1
	8H	27.9	28.4	28.4	28.9	29.5	27.5	28.0	28.0	28.5	29.1

Maximum UGR = 29.5

POLAR GRAPH



Maximum Candela = 8345.15 Located At Horizontal Angle = 270, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)