

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 11501988\_IES\_TRMUNV220AC850A.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] 11501988.01  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 11/7/2016  
 [MANUFAC] FULHAM CO INC  
 [LUMCAT] TRMUNV220AC850A  
 [LUMINAIRE] Gray semi-specular driver housing with gray heatsink and clear linear prismatic lens  
 [LAMP] 320 Nichia White LEDs  
 [BALLAST] One (1) Fulham WorkhorseLED T1M1UNV140P-200L  
 [OTHER] 25.4 C, 120.044 V, 1.72981 A, 206.885 W, 0.996298 PF, 59.99Hz  
 [OTHER] This test was performed using the calibrated photodetector method of absolute photometry.

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	22286
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	206.885
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.46
Spacing Criterion (90-270)	1.46
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	1.83 ft (Diameter)
Luminous Width (90-270)	1.83 ft (Diameter)
Luminous Height	1.29 ft



**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	12972	12972	12972
55	5347	5347	5347
65	2430	2430	2430
75	1582	1582	1582
85	1217	1217	1217

CANDELA TABULATION

	<u>0</u>
0.0	8549
0.5	8550
1.0	8552
1.5	8557
2.0	8562
2.5	8571
3.0	8577
3.5	8590
4.0	8610
4.5	8630
5.0	8647
5.5	8661
6.0	8678
6.5	8691
7.0	8708
7.5	8733
8.0	8749
8.5	8777
9.0	8797
9.5	8838
10.0	8875
10.5	8924
11.0	8976
11.5	9036
12.0	9101
12.5	9170
13.0	9234
13.5	9303
14.0	9370
14.5	9452
15.0	9529
15.5	9616
16.0	9695
16.5	9775
17.0	9848
17.5	9904
18.0	9963
18.5	10010
19.0	10060
19.5	10100
20.0	10140
20.5	10180
21.0	10220
21.5	10250
22.0	10270
22.5	10300
23.0	10320
23.5	10340
24.0	10350
24.5	10350
25.0	10350
25.5	10330
26.0	10310
26.5	10270

CANDELA TABULATION - (Cont.)

27.0	10220
27.5	10170
28.0	10100
28.5	10020
29.0	9942
29.5	9857
30.0	9762
30.5	9657
31.0	9547
31.5	9433
32.0	9296
32.5	9156
33.0	9007
33.5	8837
34.0	8663
34.5	8486
35.0	8297
35.5	8112
36.0	7921
36.5	7738
37.0	7543
37.5	7346
38.0	7147
38.5	6947
39.0	6754
39.5	6555
40.0	6346
40.5	6140
41.0	5936
41.5	5724
42.0	5505
42.5	5283
43.0	5067
43.5	4859
44.0	4654
44.5	4458
45.0	4271
45.5	4099
46.0	3930
46.5	3774
47.0	3627
47.5	3483
48.0	3347
48.5	3213
49.0	3076
49.5	2943
50.0	2811
50.5	2684
51.0	2560
51.5	2436
52.0	2323
52.5	2210
53.0	2101
53.5	1999
54.0	1898
54.5	1805

CANDELA TABULATION - (Cont.)

55.0	1717
55.5	1633
56.0	1553
56.5	1479
57.0	1407
57.5	1340
58.0	1277
58.5	1218
59.0	1163
59.5	1111
60.0	1064
60.5	1020
61.0	979
61.5	941
62.0	906
62.5	873
63.0	842
63.5	813
64.0	786
64.5	761
65.0	737
65.5	715
66.0	695
66.5	676
67.0	659
67.5	642
68.0	626
68.5	611
69.0	595
69.5	580
70.0	565
70.5	550
71.0	535
71.5	521
72.0	508
72.5	495
73.0	482
73.5	470
74.0	459
74.5	448
75.0	437
75.5	427
76.0	417
76.5	407
77.0	397
77.5	388
78.0	378
78.5	369
79.0	360
79.5	352
80.0	344
80.5	337
81.0	330
81.5	324
82.0	319
82.5	313

CANDELA TABULATION - (Cont.)

83.0	309
83.5	304
84.0	300
84.5	297
85.0	293
85.5	290
86.0	288
86.5	285
87.0	282
87.5	280
88.0	277
88.5	275
89.0	273
89.5	272
90.0	272
90.5	274
91.0	276
91.5	279
92.0	283
92.5	288
93.0	292
93.5	296
94.0	299
94.5	302
95.0	304
95.5	307
96.0	310
96.5	313
97.0	318
97.5	323
98.0	328
98.5	333
99.0	338
99.5	344
100.0	349
100.5	354
101.0	358
101.5	363
102.0	367
102.5	371
103.0	374
103.5	377
104.0	380
104.5	383
105.0	385
105.5	387
106.0	389
106.5	391
107.0	392
107.5	394
108.0	394
108.5	395
109.0	395
109.5	395
110.0	394
110.5	394

CANDELA TABULATION - (Cont.)

111.0	393
111.5	393
112.0	392
112.5	391
113.0	390
113.5	390
114.0	389
114.5	389
115.0	388
115.5	388
116.0	388
116.5	388
117.0	388
117.5	388
118.0	389
118.5	389
119.0	390
119.5	391
120.0	392
120.5	393
121.0	394
121.5	395
122.0	396
122.5	396
123.0	397
123.5	398
124.0	399
124.5	400
125.0	401
125.5	402
126.0	403
126.5	403
127.0	404
127.5	405
128.0	406
128.5	406
129.0	407
129.5	408
130.0	408
130.5	409
131.0	410
131.5	410
132.0	411
132.5	411
133.0	411
133.5	411
134.0	411
134.5	411
135.0	411
135.5	410
136.0	410
136.5	409
137.0	408
137.5	406
138.0	405
138.5	403

CANDELA TABULATION - (Cont.)

139.0	402
139.5	400
140.0	398
140.5	396
141.0	394
141.5	392
142.0	390
142.5	388
143.0	386
143.5	385
144.0	384
144.5	383
145.0	382
145.5	381
146.0	381
146.5	381
147.0	381
147.5	381
148.0	382
148.5	382
149.0	383
149.5	384
150.0	386
150.5	387
151.0	388
151.5	390
152.0	392
152.5	394
153.0	396
153.5	398
154.0	400
154.5	402
155.0	404
155.5	406
156.0	408
156.5	410
157.0	412
157.5	414
158.0	416
158.5	418
159.0	420
159.5	422
160.0	423
160.5	424
161.0	425
161.5	426
162.0	426
162.5	426
163.0	426
163.5	426
164.0	425
164.5	425
165.0	423
165.5	422
166.0	420
166.5	418

CANDELA TABULATION - (Cont.)

167.0	416
167.5	414
168.0	412
168.5	409
169.0	407
169.5	404
170.0	401
170.5	399
171.0	399
171.5	400
172.0	402
172.5	406
173.0	410
173.5	416
174.0	421
174.5	427
175.0	433
175.5	438
176.0	443
176.5	447
177.0	451
177.5	454
178.0	456
178.5	459
179.0	460
179.5	461
180.0	461



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	3553.76	N.A.	15.90
0-30	8272.63	N.A.	37.10
0-40	13393.72	N.A.	60.10
0-60	18352.04	N.A.	82.30
0-80	19574.2	N.A.	87.80
0-90	19899.01	N.A.	89.30
10-90	19067.38	N.A.	85.60
20-40	9839.96	N.A.	44.20
20-50	13206.02	N.A.	59.30
40-70	5713.01	N.A.	25.60
60-80	1222.16	N.A.	5.50
70-80	467.46	N.A.	2.10
80-90	324.82	N.A.	1.50
90-110	736.27	N.A.	3.30
90-120	1123.46	N.A.	5.00
90-130	1482.76	N.A.	6.70
90-150	2041.2	N.A.	9.20
90-180	2386.74	N.A.	10.70
110-180	1650.48	N.A.	7.40
0-180	22285.76	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

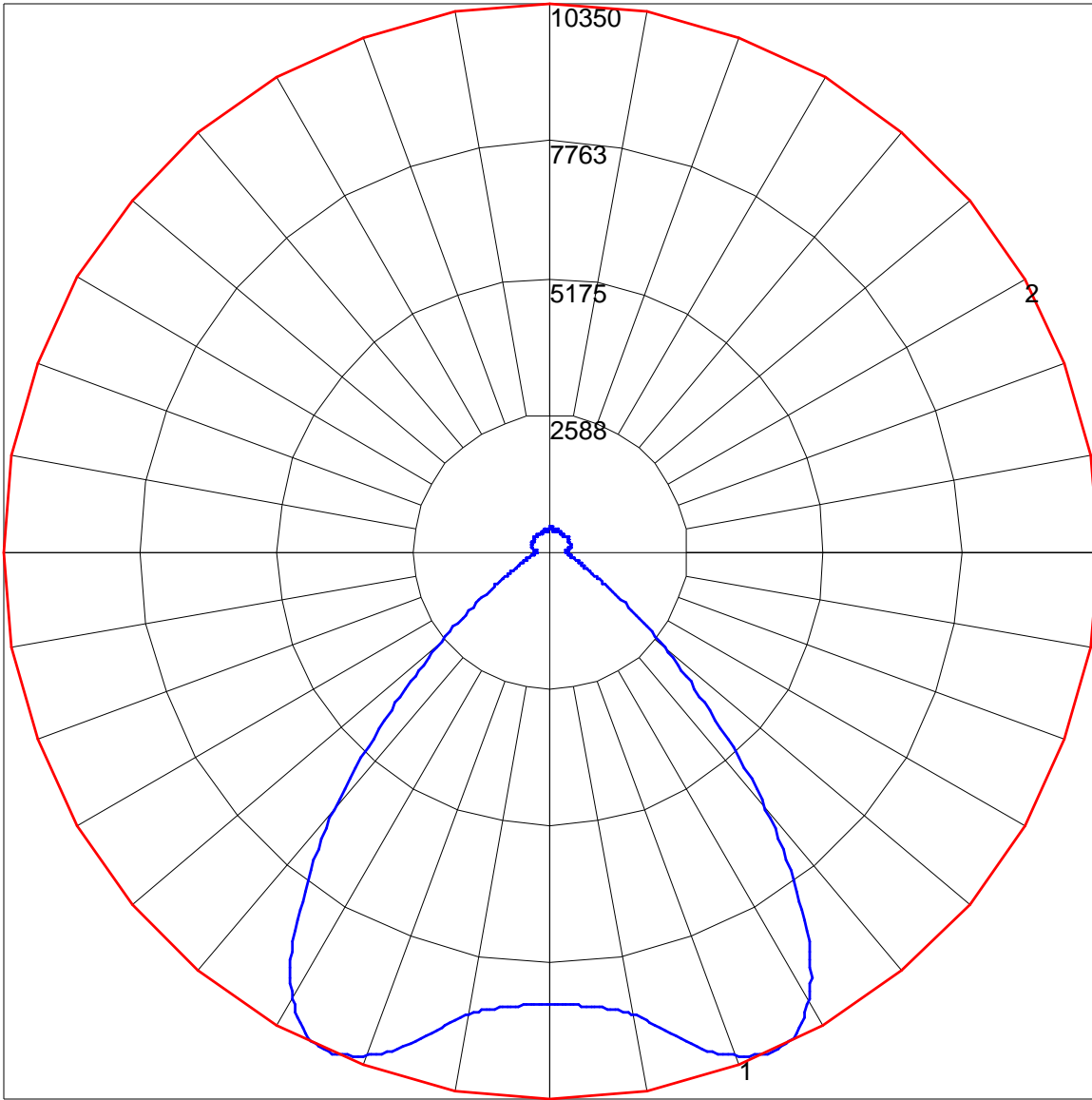
Zone	Lumens
0-10	831.63
10-20	2722.13
20-30	4718.87
30-40	5121.1
40-50	3366.06
50-60	1592.26
60-70	754.70
70-80	467.46
80-90	324.82
90-100	333.62
100-110	402.64
110-120	387.20
120-130	359.30
130-140	316.16
140-150	242.28
150-160	186.47
160-170	119.21
170-180	39.86

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	116	116	116	116	113	113	113	113	105	105	105	98	98	98	92	92	92	89
1	108	105	101	98	105	101	98	95	95	93	90	90	88	86	84	83	81	79
2	101	94	88	84	97	91	86	82	86	82	79	81	78	75	77	74	72	70
3	93	85	78	73	90	82	76	71	78	73	69	74	70	66	70	67	64	62
4	87	77	69	64	84	75	68	63	71	65	61	68	63	59	64	60	57	55
5	81	70	62	56	78	68	61	56	65	59	54	62	57	53	59	55	51	49
6	75	64	56	50	73	62	55	50	59	53	49	57	51	47	54	50	46	44
7	70	58	51	45	68	57	50	45	55	48	44	52	47	43	50	45	42	40
8	65	54	46	41	63	52	45	40	50	44	40	48	43	39	46	42	38	36
9	61	49	42	37	59	48	42	37	47	40	36	45	39	35	43	38	35	33
10	58	46	39	34	56	45	38	34	43	37	33	42	36	32	40	35	32	30

POLAR GRAPH



Maximum Candela = 10350 Located At Horizontal Angle = 0, Vertical Angle = 24  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (24) (Through Max. Cd.)