

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: LUMIERE

Report Number: 19001

Luminaire Tested: **6002A-MH100PAR38-SP-15DEGREETILT**

Issue Date: 3/3/2020

**Test Information**

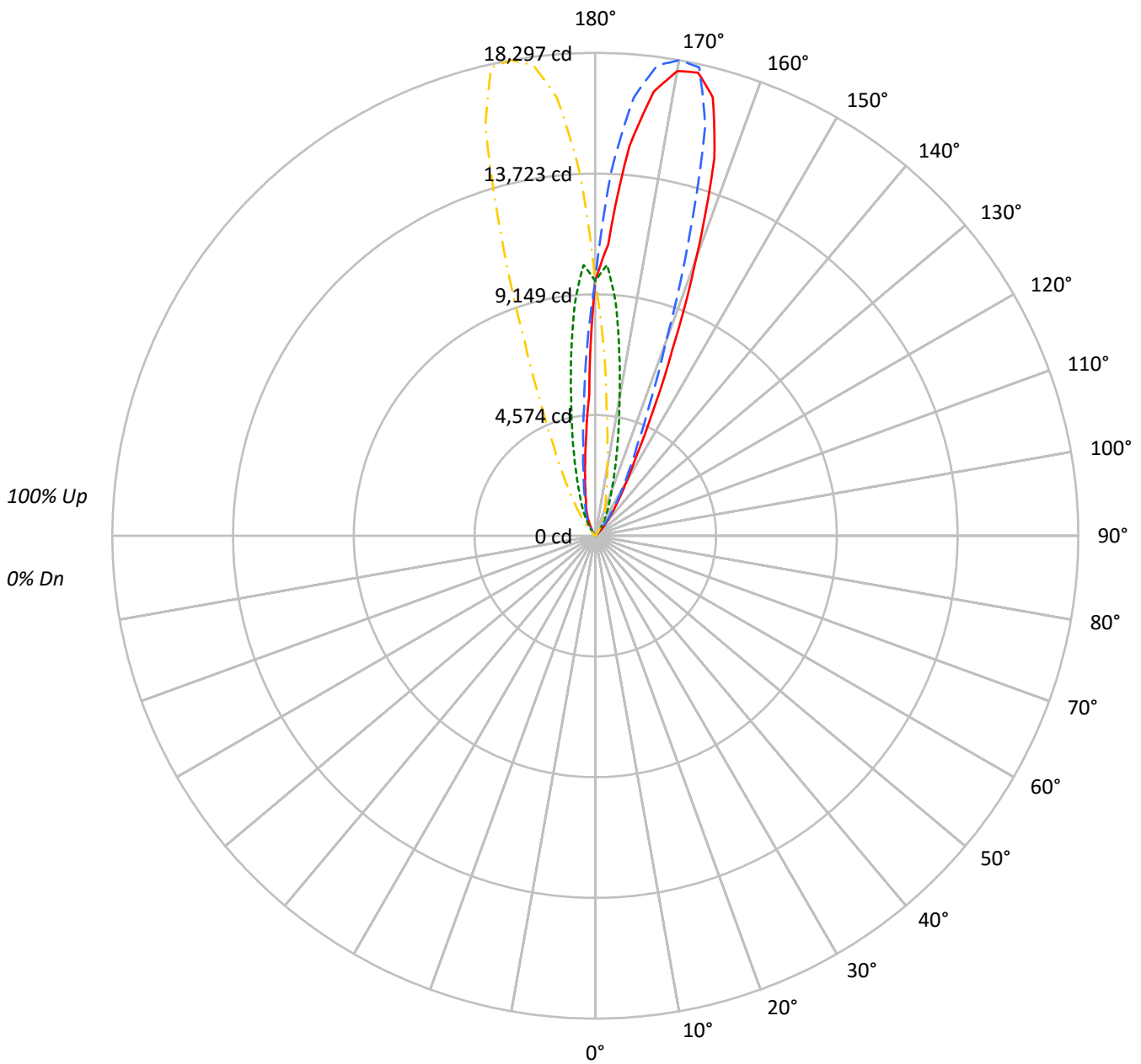
Test Method: LM-46-04  
Report Number: 19001  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 6002A-MH100PAR38-SP-15DEGREETILT  
Description: WITH PAR 38 SPOT LAMP AND TWO CLEAR GLASS LENS  
  
Light Source: ONE SYLVANIA 100 W MH LAMP  
  
MP100PAR38/U/SP20. LUMEN RATING = 5800 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 5800 (1 lamp)  
Luminaire Lumens: 4470.9 lumens  
Efficiency: 77.1%  
Efficacy: -  
N/A  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Indirect  
  
Input Watts (W): 0  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 25 FT

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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    ··· 90°-270°    - · 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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
RCR																		
0	73	73	73	73	63	63	63	63	43	43	43	25	25	25	8	8	8	0
1	67	64	61	58	57	54	52	50	37	36	35	21	21	20	7	7	7	0
2	61	56	51	48	52	48	44	41	33	30	29	19	18	17	6	6	5	0
3	55	49	44	39	47	42	38	34	29	26	24	17	15	14	5	5	5	0
4	50	43	37	33	43	37	32	29	25	22	20	15	13	12	5	4	4	0
5	46	38	32	28	39	33	28	24	22	19	17	13	11	10	4	4	3	0
6	42	34	28	24	36	29	24	21	20	17	15	12	10	9	4	3	3	0
7	39	30	25	21	33	26	21	18	18	15	13	10	9	8	3	3	3	0
8	36	27	22	18	31	23	19	16	16	13	11	9	8	7	3	3	2	0
9	33	25	19	16	28	21	17	14	15	12	10	9	7	6	3	2	2	0
10	31	22	17	14	26	19	15	12	13	11	9	8	6	5	3	2	2	0

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
95°	Luminaire represents a point source (luminous area is zero).			
100°	No luminance values can be calculated.			
105°				
110°				
115°				
120°				
125°				
130°				
135°				
140°				
145°				
150°				
155°				
160°				
165°				
170°				
175°				



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.0	0.0	0.0
20°-30°	0.0	0.0	0.0
30°-40°	0.0	0.0	0.0
40°-50°	0.0	0.0	0.0
50°-60°	0.0	0.0	0.0
60°-70°	0.0	0.0	0.0
70°-80°	0.0	0.0	0.0
80°-90°	0.0	0.0	0.0
90°-100°	0.8	0.0	0.0
100°-110°	3.0	0.1	0.1
110°-120°	7.8	0.2	0.1
120°-130°	15.6	0.3	0.3
130°-140°	79.5	1.8	1.4
140°-150°	363.5	8.1	6.3
150°-160°	1095.8	24.5	18.9
160°-170°	1975.5	44.2	34.1
170°-180°	929.4	20.8	16.0
0°-30°	0.0	0.0	0.0
0°-40°	0.0	0.0	0.0
0°-60°	0.0	0.0	0.0
0°-90°	0.0	0.0	0.0
90°-120°	11.6	0.3	0.2
90°-150°	470.3	10.5	8.1
90°-180°	4471.0	100.0	77.1
0°-180°	4470.9	100.0	77.1

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
90°	0	0	0	0	0	
95°	0	0	0	0	0	1
105°	5	0	5	0	5	5
115°	13	5	5	5	13	12
125°	25	12	13	12	25	27
135°	221	42	25	42	221	205
145°	1260	285	101	285	1260	817
155°	4981	1115	540	1115	4981	2501
165°	17200	3053	1378	3053	17200	4493
175°	14814	8863	3879	8863	14814	1495
180°	9658	9658	9658	9658	9658	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
92.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
95°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
97.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.4	0.5	0.5
100°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.4	5.4	5.4	0.5
102.5°	5.4	0.5	0.5	0.5	0.5	0.5	5.4	5.4	5.4	5.4	5.4
105°	5.4	0.5	0.5	0.5	0.5	5.4	5.4	5.4	5.4	5.4	5.4
107.5°	5.4	0.5	0.5	0.5	3.0	5.4	5.4	5.4	5.4	5.4	5.4
110°	5.4	5.4	5.4	0.5	3.0	5.4	5.4	5.4	5.4	5.4	5.4
112.5°	12.8	12.8	5.4	5.4	3.0	5.4	5.4	5.4	5.4	5.4	5.4
115°	12.8	12.8	5.4	5.4	5.4	12.8	5.4	5.4	5.4	5.4	5.4
117.5°	12.8	12.8	12.8	5.4	9.1	5.4	12.8	5.4	5.4	5.4	12.8
120°	17.7	17.7	12.8	5.4	9.1	12.8	12.8	12.8	12.8	12.8	12.8
122.5°	17.7	17.7	12.8	5.4	9.1	12.8	12.8	12.8	12.8	12.8	12.8
125°	25.0	25.0	17.7	12.8	11.5	12.8	12.8	12.8	12.8	12.8	12.8
127.5°	37.3	37.3	25.0	17.7	15.2	17.7	12.8	12.8	12.8	12.8	12.8
130°	66.8	59.4	42.2	25.0	23.8	25.0	17.7	17.7	17.7	17.7	17.7
132.5°	120.8	108.5	66.8	37.3	33.6	30.0	30.0	25.0	17.7	25.0	30.0
135°	221.4	209.1	108.5	54.5	42.2	42.2	37.3	30.0	25.0	30.0	37.3
137.5°	403.0	437.4	246.0	91.3	66.8	59.4	49.6	37.3	37.3	37.3	49.6
140°	616.6	682.9	486.5	187.0	106.0	84.0	59.4	54.5	49.6	54.5	59.4
142.5°	881.7	970.1	702.5	349.0	174.8	125.7	91.3	79.0	71.7	79.0	91.3
145°	1259.7	1389.8	1014.2	528.2	285.2	216.5	138.0	108.5	101.1	108.5	138.0
147.5°	1713.8	1917.5	1456.1	778.6	428.8	336.8	233.7	174.8	155.1	174.8	233.7
150°	2337.2	2673.5	2013.2	1122.2	632.5	503.7	378.5	300.0	263.1	300.0	378.5
152.5°	3277.3	3834.5	2715.2	1510.1	858.4	702.5	545.4	437.4	383.4	437.4	545.4
155°	4980.8	5999.4	3716.7	2032.9	1114.9	886.6	773.7	636.2	540.5	636.2	773.7
157.5°	7634.2	9391.6	5326.9	2720.2	1403.3	1036.3	940.6	832.6	749.1	832.6	940.6
160°	11171.2	13998.9	7820.7	3625.9	1788.6	1198.3	1097.7	1006.9	952.9	1006.9	1097.7
162.5°	15005.2	17761.7	11775.0	5005.3	2327.4	1485.5	1264.6	1186.1	1156.6	1186.1	1264.6
165°	17199.6	19128.9	16077.9	6993.5	3052.7	1888.1	1564.1	1414.3	1377.5	1414.3	1564.1
167.5°	17977.7	19433.3	18176.5	9642.0	4018.6	2462.4	2025.5	1797.2	1743.2	1797.2	2025.5
170°	17877.1	19241.8	18296.8	11907.6	5250.8	3201.2	2619.5	2320.1	2229.2	2320.1	2619.5
172.5°	16971.3	18517.7	17972.8	13736.2	6966.5	4350.0	3505.6	3081.0	2919.0	3081.0	3505.6
175°	14813.8	16659.6	16659.6	14376.9	8862.7	6024.0	4890.0	4183.1	3878.7	4183.1	4890.0
177.5°	11033.7	13021.9	13831.9	13166.8	10269.2	8319.0	7126.1	6087.8	5351.4	6087.8	7126.1
180°	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.5	0.5	0.5	0.5	0.5	0.5
92.5°	0.5	0.5	0.5	0.5	0.5	0.5
95°	0.5	0.5	0.5	0.5	0.5	0.5
97.5°	0.5	0.5	0.5	0.5	0.5	0.5
100°	0.5	0.5	0.5	0.5	0.5	0.5
102.5°	0.5	0.5	0.5	0.5	0.5	5.4
105°	5.4	0.5	0.5	0.5	0.5	5.4
107.5°	5.4	3.0	0.5	0.5	0.5	5.4
110°	5.4	3.0	0.5	5.4	5.4	5.4
112.5°	5.4	3.0	5.4	5.4	12.8	12.8
115°	12.8	5.4	5.4	5.4	12.8	12.8
117.5°	5.4	9.1	5.4	12.8	12.8	12.8
120°	12.8	9.1	5.4	12.8	17.7	17.7
122.5°	12.8	9.1	5.4	12.8	17.7	17.7
125°	12.8	11.5	12.8	17.7	25.0	25.0
127.5°	17.7	15.2	17.7	25.0	37.3	37.3
130°	25.0	23.8	25.0	42.2	59.4	66.8
132.5°	30.0	33.6	37.3	66.8	108.5	120.8
135°	42.2	42.2	54.5	108.5	209.1	221.4
137.5°	59.4	66.8	91.3	246.0	437.4	403.0
140°	84.0	106.0	187.0	486.5	682.9	616.6
142.5°	125.7	174.8	349.0	702.5	970.1	881.7
145°	216.5	285.2	528.2	1014.2	1389.8	1259.7
147.5°	336.8	428.8	778.6	1456.1	1917.5	1713.8
150°	503.7	632.5	1122.2	2013.2	2673.5	2337.2
152.5°	702.5	858.4	1510.1	2715.2	3834.5	3277.3
155°	886.6	1114.9	2032.9	3716.7	5999.4	4980.8
157.5°	1036.3	1403.3	2720.2	5326.9	9391.6	7634.2
160°	1198.3	1788.6	3625.9	7820.7	13998.9	11171.2
162.5°	1485.5	2327.4	5005.3	11775.0	17761.7	15005.2
165°	1888.1	3052.7	6993.5	16077.9	19128.9	17199.6
167.5°	2462.4	4018.6	9642.0	18176.5	19433.3	17977.7
170°	3201.2	5250.8	11907.6	18296.8	19241.8	17877.1
172.5°	4350.0	6966.5	13736.2	17972.8	18517.7	16971.3
175°	6024.0	8862.7	14376.9	16659.6	16659.6	14813.8
177.5°	8319.0	10269.2	13166.8	13831.9	13021.9	11033.7
180°	9658.2	9658.2	9658.2	9658.2	9658.2	9658.2

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