

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: 19049

Luminaire Tested: **6002A-MH39PAR20-FL-15DEGREETILT**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: 19049  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 6002A-MH39PAR20-FL-15DEGREETILT  
Description: WITH PAR LAMP AND TWO CLEAR GLASS LENS  
  
Light Source: ONE PHILIPS 39 WATT CMH LAMP  
  
CDM35/830/PAR20/FL. LUMEN RATING = 2000 LMS.  
  
Ballast/Driver: -

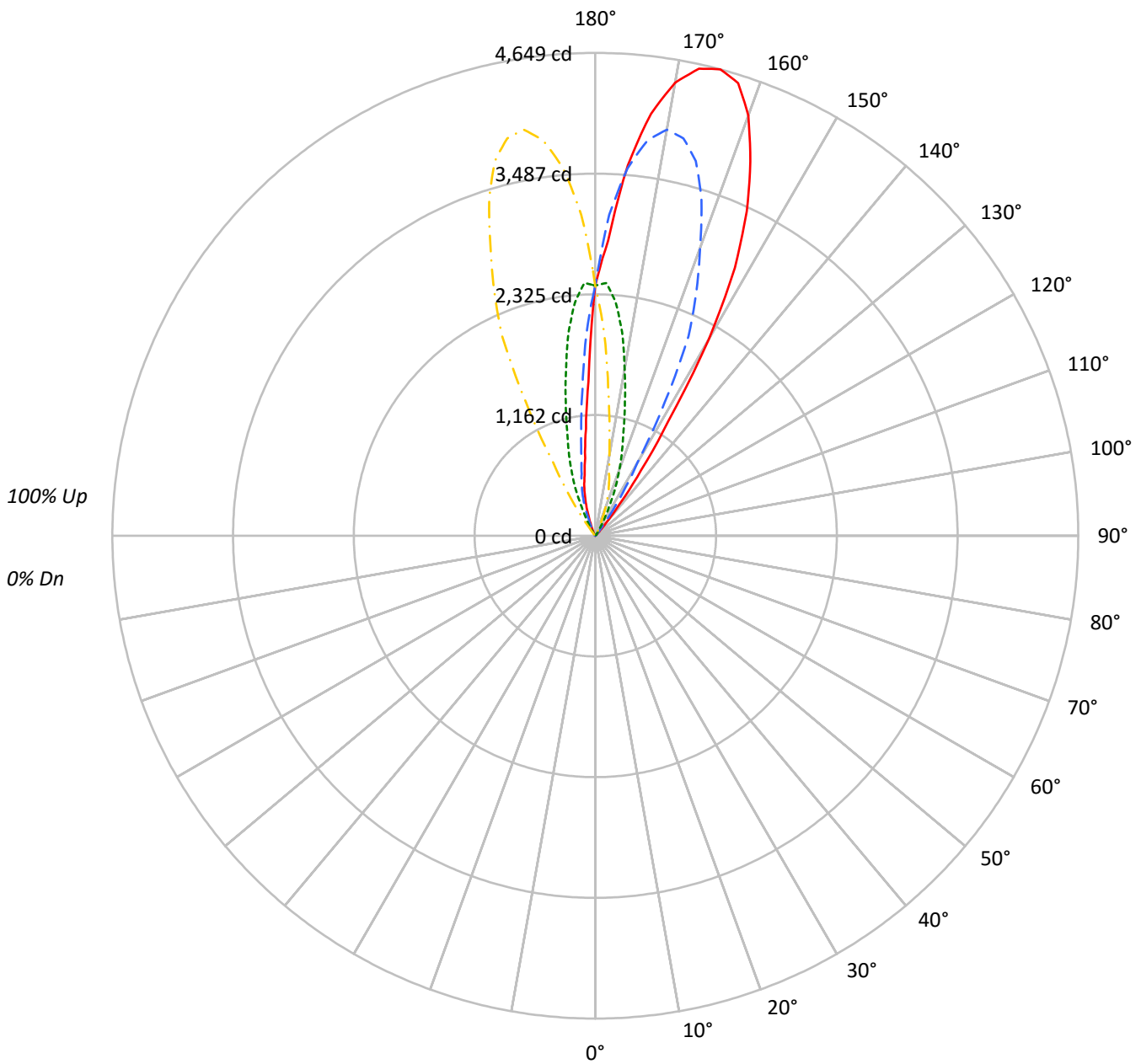
**Summary**

Lumens per Lamp: 2000 (1 lamp)  
Luminaire Lumens: 1387.1 lumens  
Efficiency: 69.4%  
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				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
RCR																					
0	66	66	66	66	56	56	56	56	39	39	39	22	22	22	7	7	7	0	0	0	0
1	60	57	55	53	51	49	47	45	34	32	31	19	19	18	6	6	6	0	0	0	0
2	55	50	46	43	47	43	40	37	29	27	26	17	16	15	5	5	5	0	0	0	0
3	50	44	39	36	42	38	34	31	26	23	22	15	14	13	5	4	4	0	0	0	0
4	45	39	34	30	39	33	29	26	23	20	18	13	12	11	4	4	4	0	0	0	0
5	41	34	29	25	35	29	25	22	20	18	15	12	10	9	4	3	3	0	0	0	0
6	38	30	25	22	32	26	22	19	18	15	13	10	9	8	3	3	3	0	0	0	0
7	35	27	22	19	30	23	19	16	16	13	12	9	8	7	3	3	2	0	0	0	0
8	32	24	20	16	27	21	17	14	15	12	10	8	7	6	3	2	2	0	0	0	0
9	30	22	17	14	25	19	15	12	13	11	9	8	6	5	2	2	2	0	0	0	0
10	28	20	16	12	24	17	13	11	12	9	8	7	6	5	2	2	2	0	0	0	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°	0.6	0.0	0.0
100°-110°	0.9	0.1	0.0
110°-120°	1.6	0.1	0.1
120°-130°	2.7	0.2	0.1
130°-140°	10.4	0.7	0.5
140°-150°	130.0	9.4	6.5
150°-160°	480.7	34.7	24.0
160°-170°	535.9	38.6	26.8
170°-180°	224.4	16.2	11.2
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°	3.0	0.2	0.2
90°-150°	146.1	10.5	7.3
90°-180°	1387.0	100.0	69.4
0°-180°	1387.1	100.0	69.4

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
90°	0	0	0	0	0	
95°	0	0	0	0	0	1
105°	0	0	2	0	0	1
115°	2	1	2	1	2	2
125°	6	2	2	2	6	5
135°	31	8	6	8	31	37
145°	769	35	13	35	769	547
155°	3446	333	62	333	3446	1534
165°	4649	1047	378	1047	4649	1288
175°	3581	2254	1034	2254	3581	366
180°	2410	2410	2410	2410	2410	



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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	0.5	0.5	0.5
100°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.0	0.5	0.5
102.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.0	2.0	2.0	0.5
105°	0.5	0.5	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	2.0
107.5°	0.5	0.5	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	2.0
110°	0.5	0.5	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	2.0
112.5°	2.0	0.5	0.5	0.5	1.2	2.0	2.0	2.0	2.0	2.0	2.0
115°	2.0	2.0	0.5	0.5	1.2	2.0	2.0	2.0	2.0	2.0	2.0
117.5°	2.0	2.0	2.0	0.5	1.2	2.0	2.0	2.0	4.2	2.0	2.0
120°	4.2	2.0	2.0	2.0	1.2	2.0	2.0	2.0	4.2	2.0	2.0
122.5°	4.2	4.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
125°	5.7	4.2	4.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
127.5°	5.7	5.7	4.2	2.0	3.1	2.0	2.0	4.2	4.2	4.2	2.0
130°	7.9	7.9	5.7	4.2	3.1	4.2	4.2	4.2	4.2	4.2	4.2
132.5°	15.2	11.5	7.9	5.7	4.9	5.7	5.7	4.2	4.2	4.2	5.7
135°	30.7	20.4	11.5	9.3	7.5	5.7	5.7	5.7	5.7	5.7	5.7
137.5°	68.9	41.7	16.7	11.5	9.7	7.9	5.7	5.7	5.7	5.7	5.7
140°	155.0	110.1	40.2	16.7	14.1	11.5	9.3	7.9	7.9	7.9	9.3
142.5°	391.9	293.3	86.6	27.7	23.7	15.2	11.5	9.3	9.3	9.3	11.5
145°	769.4	656.1	246.3	60.1	34.7	25.5	15.2	13.0	13.0	13.0	15.2
147.5°	1308.0	1087.3	489.1	131.5	61.6	38.0	25.5	18.2	16.7	18.2	25.5
150°	2182.9	1883.4	809.1	266.1	109.0	57.9	43.9	34.3	29.2	34.3	43.9
152.5°	2909.1	2813.5	1450.0	440.5	199.9	93.9	57.9	46.9	43.9	46.9	57.9
155°	3446.3	3334.4	2120.3	780.4	333.1	167.5	97.6	66.7	61.6	66.7	97.6
157.5°	3898.8	3760.4	2540.5	1200.6	508.9	304.4	162.4	111.6	93.9	111.6	162.4
160°	4304.9	4173.2	2946.6	1458.9	673.4	447.9	282.3	188.9	152.8	188.9	282.3
162.5°	4570.6	4459.4	3399.2	1735.5	852.9	545.0	399.3	305.9	262.4	305.9	399.3
165°	4649.3	4566.9	3735.4	2100.5	1046.8	634.8	506.7	411.8	378.0	411.8	506.7
167.5°	4606.6	4620.6	3920.1	2490.4	1317.2	805.5	609.7	522.9	492.8	522.9	609.7
170°	4430.0	4543.3	3970.1	2801.0	1628.1	1054.9	764.3	628.9	589.9	628.9	764.3
172.5°	4098.2	4252.7	3839.2	2970.2	1972.8	1400.0	1038.7	851.8	754.7	851.8	1038.7
175°	3580.9	3769.3	3552.2	2964.3	2254.3	1803.9	1417.7	1191.8	1033.6	1191.8	1417.7
177.5°	2845.8	3106.3	3093.8	2824.5	2434.9	2240.3	1953.3	1701.7	1486.1	1701.7	1953.3
180°	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5



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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	0.5
105°	0.5	0.5	0.5	0.5	0.5	0.5
107.5°	0.5	0.5	0.5	0.5	0.5	0.5
110°	0.5	0.5	0.5	0.5	0.5	0.5
112.5°	2.0	1.2	0.5	0.5	0.5	2.0
115°	2.0	1.2	0.5	0.5	2.0	2.0
117.5°	2.0	1.2	0.5	2.0	2.0	2.0
120°	2.0	1.2	2.0	2.0	2.0	4.2
122.5°	2.0	2.0	2.0	2.0	4.2	4.2
125°	2.0	2.0	2.0	4.2	4.2	5.7
127.5°	2.0	3.1	2.0	4.2	5.7	5.7
130°	4.2	3.1	4.2	5.7	7.9	7.9
132.5°	5.7	4.9	5.7	7.9	11.5	15.2
135°	5.7	7.5	9.3	11.5	20.4	30.7
137.5°	7.9	9.7	11.5	16.7	41.7	68.9
140°	11.5	14.1	16.7	40.2	110.1	155.0
142.5°	15.2	23.7	27.7	86.6	293.3	391.9
145°	25.5	34.7	60.1	246.3	656.1	769.4
147.5°	38.0	61.6	131.5	489.1	1087.3	1308.0
150°	57.9	109.0	266.1	809.1	1883.4	2182.9
152.5°	93.9	199.9	440.5	1450.0	2813.5	2909.1
155°	167.5	333.1	780.4	2120.3	3334.4	3446.3
157.5°	304.4	508.9	1200.6	2540.5	3760.4	3898.8
160°	447.9	673.4	1458.9	2946.6	4173.2	4304.9
162.5°	545.0	852.9	1735.5	3399.2	4459.4	4570.6
165°	634.8	1046.8	2100.5	3735.4	4566.9	4649.3
167.5°	805.5	1317.2	2490.4	3920.1	4620.6	4606.6
170°	1054.9	1628.1	2801.0	3970.1	4543.3	4430.0
172.5°	1400.0	1972.8	2970.2	3839.2	4252.7	4098.2
175°	1803.9	2254.3	2964.3	3552.2	3769.3	3580.9
177.5°	2240.3	2434.9	2824.5	3093.8	3106.3	2845.8
180°	2409.5	2409.5	2409.5	2409.5	2409.5	2409.5

(END OF REPORT)