

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: IRiS

Report Number: H21238

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21238
Test Lab:
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: IRiS
Catalog Number: PN3MR-E3AAC2
Description: IRIS 3.5 IN RECESSED ADJUSTABLE DOWNLIGHT
WITH CLEAR LENS AND BEAM AT 45 DEGREES
Light Source: Q20MR16C/VNSP7 20 WATTS 200 LUMENS
Ballast/Driver: -

Summary

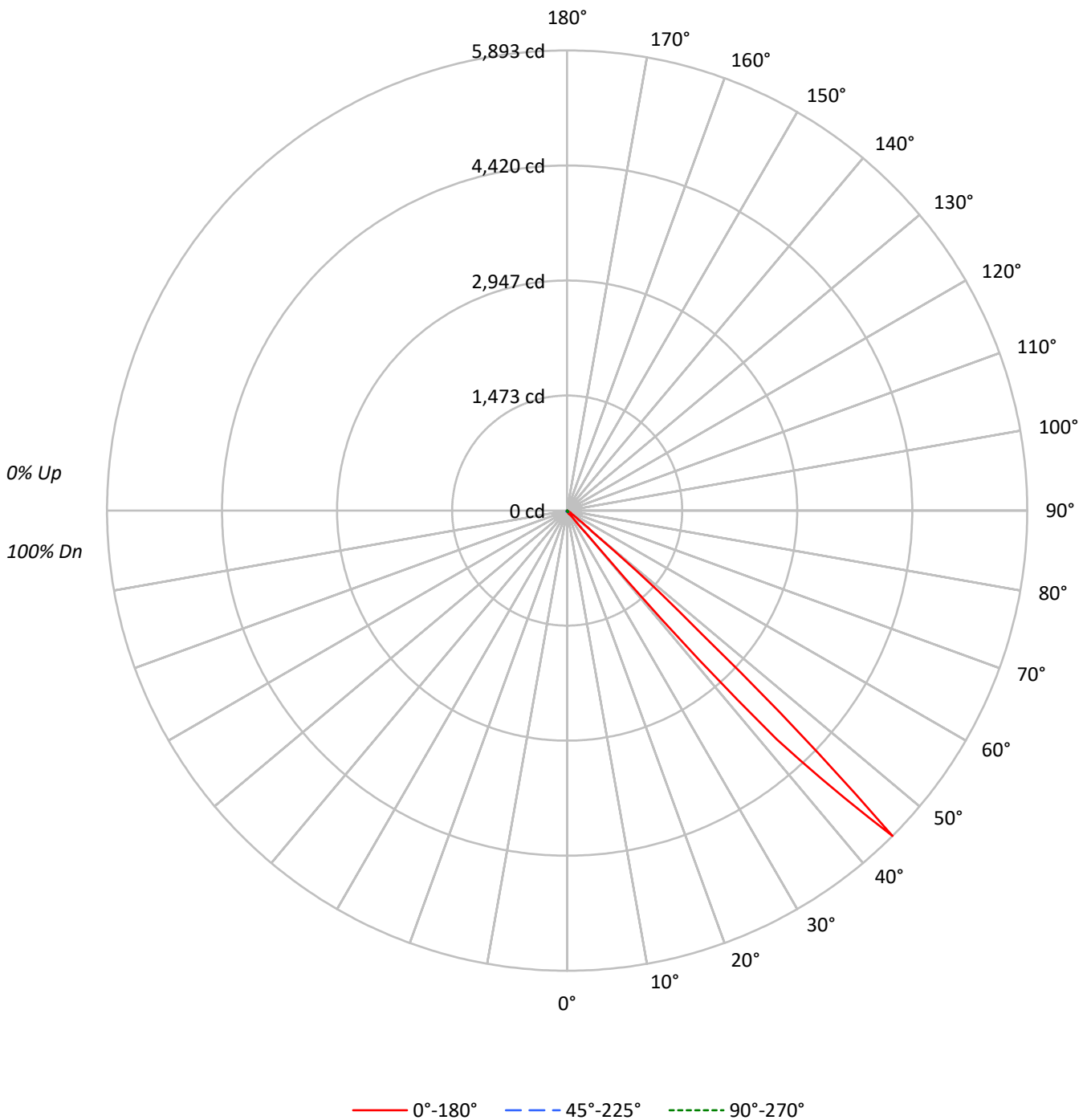
Lumens per Lamp: 200 (1 lamp)
Luminaire Lumens: 114.0 lumens
Efficiency: 57.0%
Efficacy: 5.7 lumens/watt
Spacing Criteria (0/90/45): 3.43 / 1.87 / 1.67
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 20
Input Voltage (V): NR
Input Current (A_{in}): 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





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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	68	68	68	68	66	66	66	66	63	63	63		61	61	61		58	58	58	57
1	63	61	59	57	62	59	58	56	57	56	54		55	54	53		53	52	51	50
2	58	53	50	47	56	52	49	47	50	48	45		49	46	44		47	45	43	42
3	52	47	42	39	51	46	42	39	44	41	38		43	40	37		41	39	37	35
4	48	41	36	32	46	40	36	32	39	35	32		37	34	31		36	33	31	30
5	43	36	31	27	42	35	30	27	34	30	26		33	29	26		32	28	26	25
6	39	31	26	22	38	31	26	22	30	25	22		29	25	22		28	24	22	20
7	36	27	22	19	35	27	22	19	26	22	18		25	21	18		24	21	18	17
8	32	24	19	16	31	24	19	15	23	19	15		22	18	15		22	18	15	14
9	30	21	16	13	29	21	16	13	20	16	13		20	16	13		19	15	13	12
10	27	19	14	11	26	19	14	11	18	14	11		18	14	11		17	13	11	10

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	0.4	0.4	0.2	0°	5	5	5	5	5	
10°-20°	1.7	1.5	0.8	5°	4	5	6	4	3	0
20°-30°	6.0	5.2	3.0	15°	7	4	5	6	7	3
30°-40°	11.9	10.4	6.0	25°	29	7	8	14	11	15
40°-50°	82.6	72.4	41.3	35°	60	15	8	6	7	74
50°-60°	9.7	8.5	4.8	45°	5893	15	4	3	4	2429
60°-70°	1.6	1.4	0.8	55°	68	3	0	1	0	106
70°-80°	0.2	0.1	0.1	65°	9	1	0	0	0	12
80°-90°	0.0	0.0	0.0	75°	1	0	0	0	0	1
90°-100°	0.0	0.0	0.0	85°	0	0	0	0	0	0
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	8.1	7.1	4.0	165°	0	0	0	0	0	0
0°-40°	20.0	17.5	10.0	175°	0	0	0	0	0	0
0°-60°	112.3	98.5	56.1	180°	0	0	0	0	0	0
0°-90°	114.0	100.0	57.0							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	114.0	100.0	57.0							



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	5	5	5	5	5	5	5	5	5	5	5
2.5°	6	6	6	6	6	6	6	6	6	6	5
5°	4	4	4	4	4	4	5	5	6	5	4
7.5°	4	4	4	4	4	4	4	5	6	4	4
10°	5	5	5	5	5	5	4	5	6	4	4
12.5°	7	7	7	6	6	5	3	4	5	4	4
15°	7	7	7	7	7	6	4	4	5	4	6
17.5°	11	11	11	11	10	6	5	4	5	6	8
20°	21	21	21	21	20	11	6	5	7	6	7
22.5°	24	24	23	23	23	19	6	6	8	8	15
25°	29	28	28	27	26	21	7	9	8	17	14
27.5°	37	36	35	34	32	23	7	10	14	17	9
30°	46	45	45	44	42	26	10	11	23	8	6
32.5°	52	52	50	48	45	31	12	15	12	6	5
35°	60	59	58	55	50	34	15	23	8	6	6
37.5°	100	95	91	80	67	36	24	12	8	8	8
40°	435	390	300	189	106	43	24	10	8	8	9
42.5°	3970	3342	1799	728	204	45	19	8	7	5	6
45°	5893	4686	2901	1014	288	41	15	6	4	4	3
47.5°	2325	2081	1338	651	211	36	11	6	3	2	2
50°	413	381	320	204	128	34	7	7	2	1	2
52.5°	142	130	117	91	69	32	6	3	1	1	1
55°	68	66	63	53	47	28	3	2	0	1	1
57.5°	49	48	46	42	37	24	3	1	0	0	0
60°	38	36	32	26	19	9	3	1	0	0	0
62.5°	11	10	10	10	9	7	2	1	0	0	0
65°	9	9	9	9	8	5	1	0	0	0	0
67.5°	7	7	7	6	5	5	0	0	0	0	0
70°	4	5	4	4	4	2	0	0	0	0	0
72.5°	2	2	2	1	1	1	0	0	0	0	0
75°	1	1	1	1	1	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	157.5°	180°
0°	5	5
2.5°	4	4
5°	4	3
7.5°	4	4
10°	4	4
12.5°	5	5
15°	10	7
17.5°	5	5
20°	11	11
22.5°	14	13
25°	12	11
27.5°	7	7
30°	5	5
32.5°	5	6
35°	7	7
37.5°	8	8
40°	8	8
42.5°	9	7
45°	3	4
47.5°	2	3
50°	3	3
52.5°	1	1
55°	0	0
57.5°	0	0
60°	0	0
62.5°	0	0
65°	0	0
67.5°	0	0
70°	0	0
72.5°	0	0
75°	0	0
77.5°	0	0
80°	0	0
82.5°	0	0
85°	0	0
87.5°	0	0
90°	0	0
92.5°	0	0
95°	0	0
97.5°	0	0
100°	0	0
102.5°	0	0
105°	0	0
107.5°	0	0
110°	0	0



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CANDELA DISTRIBUTION (continued):

	157.5°	180°
112.5°	0	0
115°	0	0
117.5°	0	0
120°	0	0
122.5°	0	0
125°	0	0
127.5°	0	0
130°	0	0
132.5°	0	0
135°	0	0
137.5°	0	0
140°	0	0
142.5°	0	0
145°	0	0
147.5°	0	0
150°	0	0
152.5°	0	0
155°	0	0
157.5°	0	0
160°	0	0
162.5°	0	0
165°	0	0
167.5°	0	0
170°	0	0
172.5°	0	0
175°	0	0
177.5°	0	0
180°	0	0

(END OF REPORT)