

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: H21235

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21235
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 30 DEGREES
Light Source: Q20MR16C/VNSP7 20 WATTS 200 LUMENS
Ballast/Driver: -

Summary

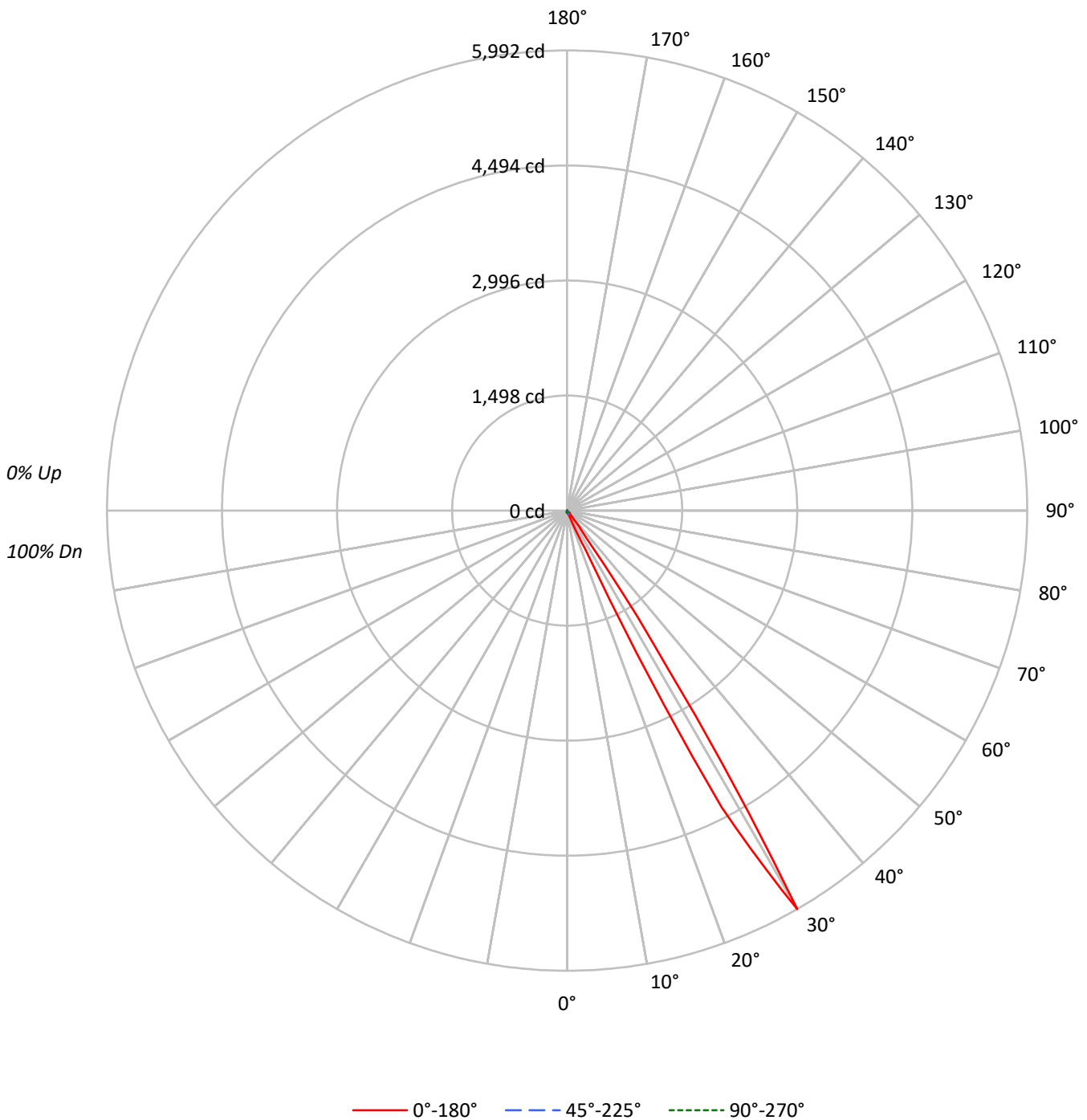
Lumens per Lamp: 200 (1 lamp)
Luminaire Lumens: 125.2 lumens
Efficiency: 62.6%
Efficacy: 6.3 lumens/watt
Spacing Criteria (0/90/45): 1.8 / 0.69 / 1.13
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): 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	75	75	75	75	73	73	73	73	70	70	70		67	67	67		64	64	64	63
1	70	69	67	65	69	67	66	64	65	63	62		62	61	60		60	59	59	57
2	66	63	60	58	65	62	59	57	60	58	56		58	56	54		56	55	53	52
3	62	58	54	51	61	57	53	51	55	52	50		53	51	49		52	50	48	47
4	58	53	49	46	57	52	48	46	51	47	45		49	47	44		48	46	44	43
5	55	49	44	41	54	48	44	41	47	43	41		46	43	40		45	42	40	39
6	51	45	40	37	50	44	40	37	43	39	37		42	39	36		41	38	36	35
7	48	41	37	33	47	41	36	33	40	36	33		39	35	33		38	35	33	32
8	45	38	33	30	44	37	33	30	37	33	30		36	32	30		35	32	30	29
9	42	35	30	27	41	34	30	27	34	30	27		33	30	27		33	29	27	26
10	39	32	28	25	39	32	28	25	31	27	25		31	27	25		30	27	25	24

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°	2.3	1.8	1.1	0°	22	22	22	22	
10°-20°	7.0	5.6	3.5	5°	27	25	23	21	3
20°-30°	57.2	45.7	28.6	15°	49	31	25	11	14
30°-40°	50.5	40.3	25.2	25°	539	41	13	10	1025
40°-50°	5.9	4.7	2.9	35°	431	29	5	2	887
50°-60°	1.4	1.1	0.7	45°	45	5	1	0	32
60°-70°	0.4	0.3	0.2	55°	4	2	1	0	5
70°-80°	0.2	0.2	0.1	65°	0	1	1	0	0
80°-90°	0.3	0.2	0.1	75°	0	1	0	0	0
90°-100°	0.0	0.0	0.0	85°	0	1	0	0	1
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0
0°-30°	66.4	53.1	33.2	165°	0	0	0	0	0
0°-40°	116.9	93.4	58.5	175°	0	0	0	0	0
0°-60°	124.2	99.2	62.1	180°	0	0	0	0	0
0°-90°	125.2	100.0	62.6						
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°	125.2	100.0	62.6						



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	22	22	22	22	22	22	22	22	22	22	22
2.5°	23	24	24	24	24	23	23	22	23	22	23
5°	27	28	27	28	28	28	25	23	23	23	25
7.5°	29	30	30	30	29	28	28	24	24	26	20
10°	34	34	34	34	34	32	28	25	28	21	16
12.5°	41	42	42	42	41	37	29	28	29	17	15
15°	49	50	50	50	49	43	31	33	25	14	11
17.5°	54	54	54	53	52	47	33	39	16	10	9
20°	67	69	67	66	63	51	43	32	11	10	9
22.5°	119	123	117	110	102	58	49	25	10	11	9
25°	539	552	473	370	293	74	41	24	13	13	10
27.5°	4356	4262	2849	1852	975	78	35	20	13	12	10
30°	5992	5801	4205	2708	1201	72	29	19	8	9	6
32.5°	2464	2415	1858	1282	594	65	29	12	8	4	4
35°	431	432	390	310	227	53	29	7	5	3	2
37.5°	146	142	131	114	97	45	24	5	3	2	2
40°	67	67	65	60	57	36	18	4	3	1	1
42.5°	49	49	47	46	43	32	9	4	2	1	1
45°	45	45	44	42	39	27	5	4	1	0	0
47.5°	37	37	36	34	32	16	4	3	1	1	0
50°	11	12	12	13	12	8	4	2	1	0	0
52.5°	9	10	10	9	8	5	3	1	1	0	0
55°	4	5	5	5	5	5	2	1	1	1	0
57.5°	3	4	4	4	4	4	1	1	1	1	0
60°	1	2	2	2	2	1	1	1	1	1	0
62.5°	0	1	1	1	1	1	1	1	1	0	0
65°	0	1	1	1	1	1	1	0	1	0	0
67.5°	0	1	1	1	0	0	1	0	1	0	0
70°	0	1	0	1	0	0	1	0	0	0	0
72.5°	0	1	0	1	0	0	1	1	0	0	0
75°	0	1	1	1	0	0	1	0	0	0	0
77.5°	0	1	0	1	0	0	1	1	0	0	0
80°	1	1	0	1	0	0	1	1	0	0	0
82.5°	1	1	0	1	0	1	1	0	0	0	0
85°	0	1	0	1	0	1	1	1	0	0	0
87.5°	1	1	0	0	0	0	1	1	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°	22	22
2.5°	23	22
5°	23	21
7.5°	17	16
10°	16	16
12.5°	15	14
15°	11	11
17.5°	9	8
20°	9	8
22.5°	10	9
25°	10	10
27.5°	8	7
30°	7	5
32.5°	5	5
35°	2	2
37.5°	2	2
40°	1	1
42.5°	1	1
45°	1	1
47.5°	0	0
50°	0	0
52.5°	0	0
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)