

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: H21230

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21230
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: 45MRC16/IRC/SP8 45 WATTS 1030 LUMENS
Ballast/Driver: -

Summary

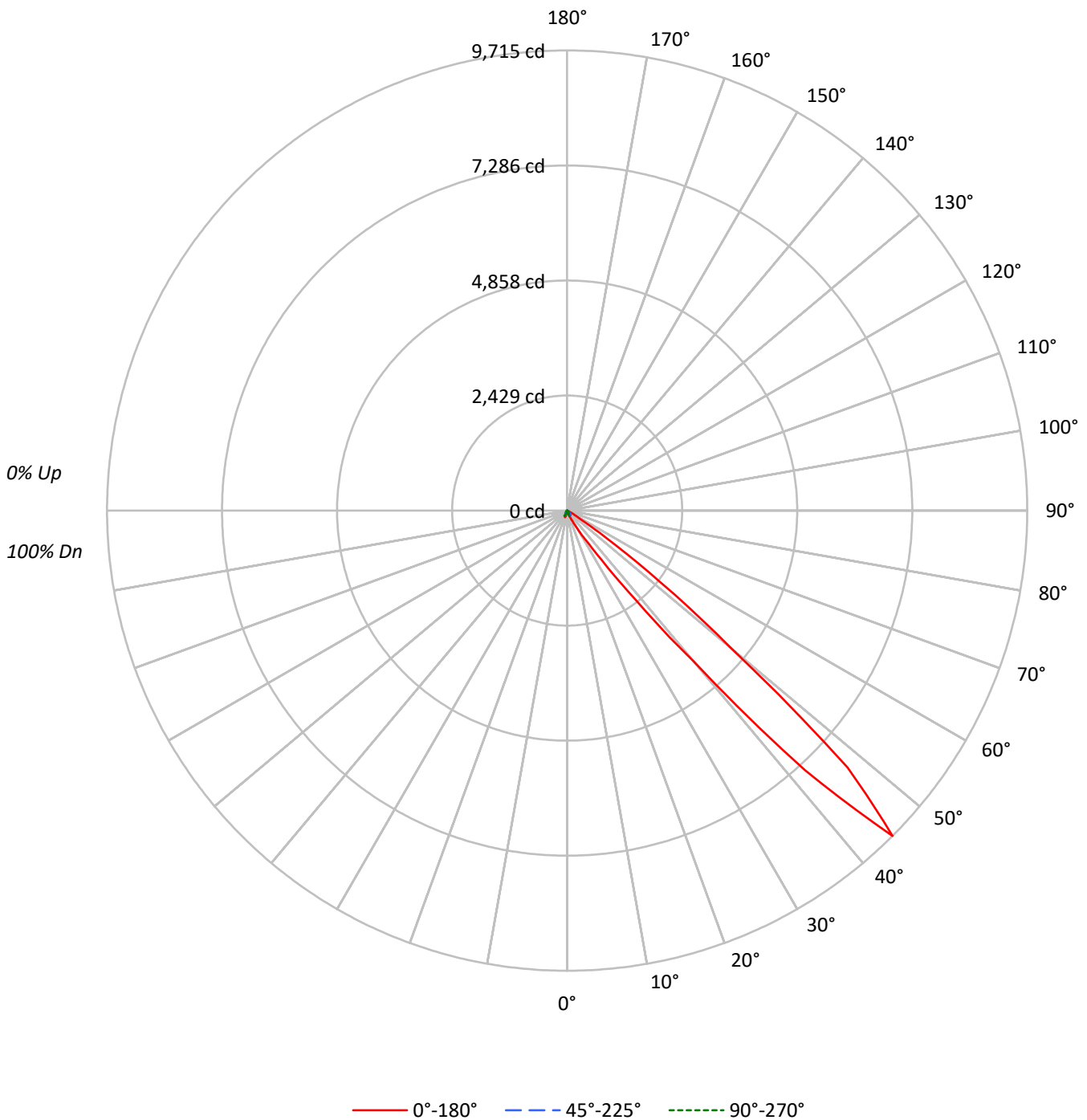
Lumens per Lamp: 1030 (1 lamp)
Luminaire Lumens: 666.0 lumens
Efficiency: 64.7%
Efficacy: 14.8 lumens/watt
Spacing Criteria (0/90/45): 3.59 / 1.74 / 1.7
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 45
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	77	77	77	77	75	75	75	75	72	72	72		69	69	69		66	66	66	65
1	72	69	67	65	70	68	65	64	65	63	62		62	61	60		60	59	58	57
2	66	61	57	54	64	60	56	53	57	54	52		55	53	51		53	51	50	48
3	60	53	48	45	58	52	48	44	50	47	43		49	45	43		47	44	42	41
4	54	47	41	37	53	46	41	37	44	40	36		43	39	36		41	38	35	34
5	49	41	35	31	48	40	35	31	39	34	30		38	33	30		36	33	30	28
6	45	36	30	26	44	35	30	26	34	29	26		33	29	25		32	28	25	24
7	41	32	26	22	40	31	26	22	30	25	22		29	25	21		28	24	21	20
8	37	28	22	18	36	28	22	18	27	22	18		26	21	18		25	21	18	17
9	34	25	19	16	33	25	19	16	24	19	16		23	19	15		22	18	15	14
10	32	22	17	13	31	22	17	13	21	17	13		21	16	13		20	16	13	12

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°	2.1	0.3	0.2	0°	17	17	17	17	
10°-20°	17.4	2.6	1.7	5°	20	20	17	19	2
20°-30°	45.5	6.8	4.4	15°	44	25	33	85	16
30°-40°	124.5	18.7	12.1	25°	175	51	131	79	110
40°-50°	365.5	54.9	35.5	35°	1265	127	47	58	1095
50°-60°	102.0	15.3	9.9	45°	9715	50	10	10	5720
60°-70°	8.2	1.2	0.8	55°	968	24	1	1	1326
70°-80°	0.6	0.1	0.1	65°	51	4	0	0	67
80°-90°	0.1	0.0	0.0	75°	4	0	0	0	5
90°-100°	0.0	0.0	0.0	85°	1	0	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°	65.0	9.8	6.3	165°	0	0	0	0	0
0°-40°	189.6	28.5	18.4	175°	0	0	0	0	0
0°-60°	657.0	98.7	63.8	180°	0	0	0	0	0
0°-90°	666.0	100.0	64.7						
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°	666.0	100.0	64.7						



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	17	17	17	17	17	17	17	17	17	17	17
2.5°	19	19	19	19	19	19	19	18	17	17	17
5°	20	21	20	20	20	20	20	19	17	17	19
7.5°	23	23	22	22	22	22	21	19	18	20	22
10°	27	27	26	26	26	25	22	20	20	24	40
12.5°	32	33	32	33	32	29	23	21	24	39	57
15°	44	44	43	43	42	36	25	24	33	56	85
17.5°	70	68	67	66	63	50	29	28	57	81	112
20°	112	111	108	105	99	67	34	39	66	104	156
22.5°	142	143	138	137	133	100	40	51	87	148	112
25°	175	174	169	165	159	131	51	69	131	105	79
27.5°	292	282	269	253	230	150	65	92	118	70	60
30°	496	480	453	421	381	180	77	102	72	53	56
32.5°	755	739	700	650	582	240	105	109	54	49	59
35°	1265	1201	1101	997	877	323	127	70	47	50	58
37.5°	2356	2284	2011	1692	1355	403	123	50	34	32	32
40°	4159	3965	3475	2790	2065	470	100	33	23	22	22
42.5°	7436	7123	6165	4571	3054	465	71	25	15	15	17
45°	9715	9320	7689	5508	3508	440	50	17	10	10	10
47.5°	8029	7706	6366	4592	2988	388	38	12	6	5	6
50°	4483	4516	3867	2952	2086	324	29	8	3	2	5
52.5°	2468	2356	2119	1678	1218	239	23	6	1	2	3
55°	968	939	858	694	529	148	24	3	1	1	1
57.5°	314	311	294	260	228	89	20	1	0	0	0
60°	172	170	162	150	135	55	10	1	0	0	0
62.5°	105	106	100	92	82	33	9	0	0	0	0
65°	51	51	48	44	40	20	4	1	0	0	0
67.5°	27	27	25	23	21	11	1	1	0	0	0
70°	14	14	12	12	11	6	0	1	0	0	0
72.5°	8	9	7	7	6	2	0	1	0	0	0
75°	4	4	3	2	0	0	0	1	0	0	0
77.5°	0	0	0	0	0	0	0	1	0	0	0
80°	1	0	0	0	0	0	0	1	0	0	0
82.5°	1	0	0	0	0	0	0	1	0	0	0
85°	1	0	0	0	0	0	0	1	0	0	0
87.5°	1	0	0	0	0	0	0	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°	17	17
2.5°	17	17
5°	19	19
7.5°	26	27
10°	48	48
12.5°	75	76
15°	98	100
17.5°	152	150
20°	138	126
22.5°	99	92
25°	73	70
27.5°	61	61
30°	62	64
32.5°	70	74
35°	60	58
37.5°	33	32
40°	21	20
42.5°	25	27
45°	10	15
47.5°	7	10
50°	8	9
52.5°	4	5
55°	1	4
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	1
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)