

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: H21194

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21194
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 AJUSTABLE DOWNLIGHT
MAIN BEAM AT 30 DEGREES WITH CLEAR LENS
Light Source: Q50MR16C/NFL25 50 WATTS 884 LUMENS
Ballast/Driver: -

Summary

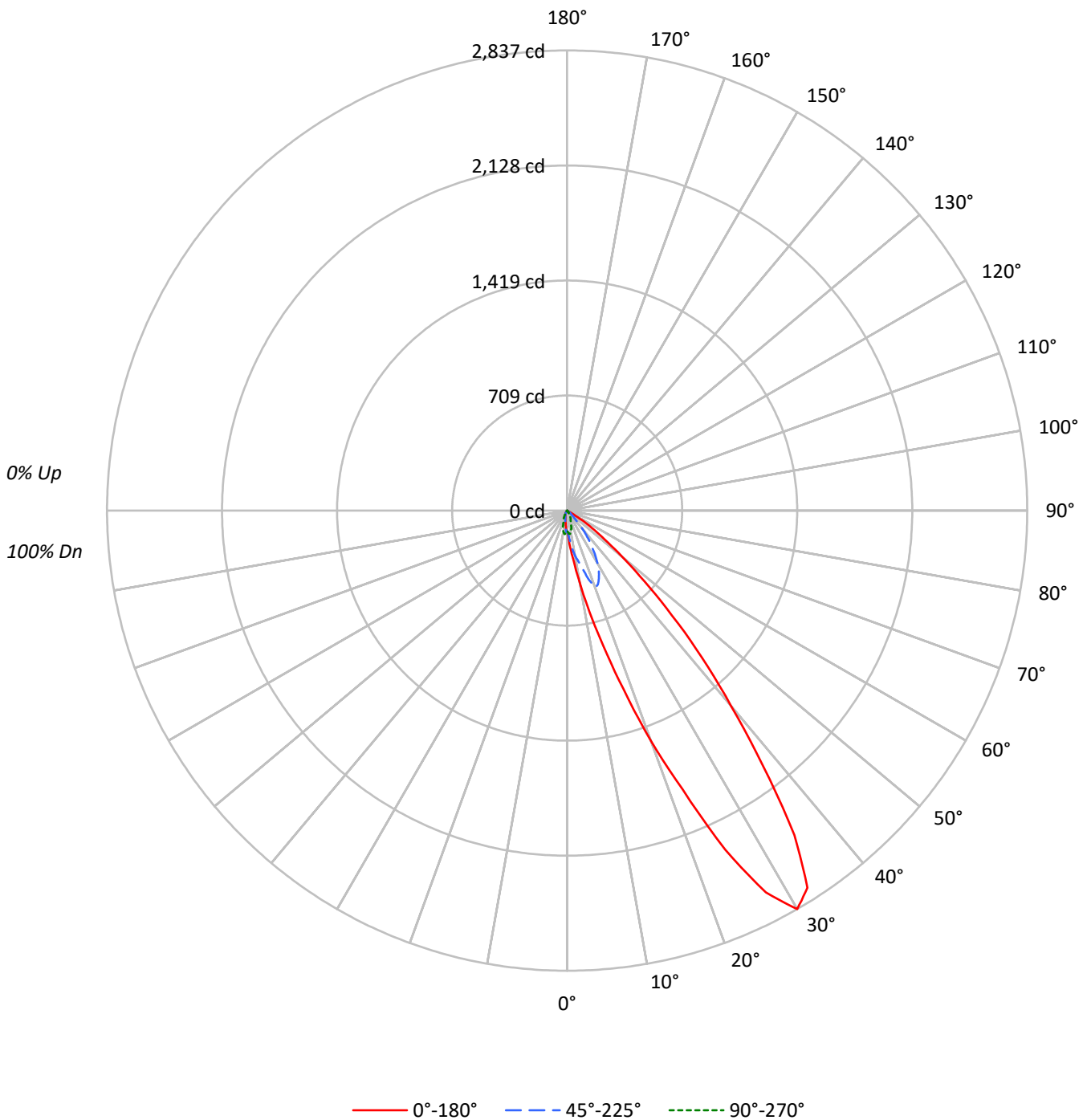
Lumens per Lamp: 884 (1 lamp)
Luminaire Lumens: 646.6 lumens
Efficiency: 73.1%
Efficacy: 12.0 lumens/watt
Spacing Criteria (0/90/45): 2.36 / 0.65 / 1.2
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 54
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	87	87	87	87	85	85	85	85	81	81	81		78	78	78		75	75	75	73
1	82	80	78	76	80	78	76	75	75	74	72		73	71	70		70	69	68	67
2	77	73	70	67	76	72	69	66	69	67	64		67	65	63		65	63	62	60
3	72	67	62	59	71	66	62	58	64	60	57		62	59	56		60	58	56	54
4	67	61	56	52	66	60	55	52	58	54	51		57	53	51		55	52	50	49
5	63	56	50	47	62	55	50	46	53	49	46		52	48	46		51	48	45	44
6	59	51	46	42	58	50	45	42	49	45	41		48	44	41		47	43	41	39
7	55	47	41	38	54	46	41	37	45	41	37		44	40	37		43	40	37	36
8	51	43	38	34	50	42	37	34	42	37	34		41	37	34		40	36	33	32
9	48	39	34	31	47	39	34	31	38	34	31		38	33	30		37	33	30	29
10	45	36	31	28	44	36	31	28	35	31	28		35	31	28		34	30	28	26

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°	15.2	2.3	1.7	0°	125	125	125	125	125	
10°-20°	74.2	11.5	8.4	5°	233	183	145	104	91	29
20°-30°	199.2	30.8	22.5	15°	862	373	98	46	37	273
30°-40°	235.5	36.4	26.6	25°	2307	463	48	25	24	1060
40°-50°	100.3	15.5	11.4	35°	2442	256	16	7	10	1457
50°-60°	21.2	3.3	2.4	45°	914	50	2	1	3	723
60°-70°	0.8	0.1	0.1	55°	187	5	1	0	0	176
70°-80°	0.2	0.0	0.0	65°	5	1	1	0	0	5
80°-90°	0.0	0.0	0.0	75°	0	0	1	0	0	0
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°	288.6	44.6	32.6	165°	0	0	0	0	0	0
0°-40°	524.1	81.1	59.3	175°	0	0	0	0	0	0
0°-60°	645.7	99.8	73.0	180°	0	0	0	0	0	0
0°-90°	646.6	100.0	73.1							
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°	646.6	100.0	73.1							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	55°	60°
0°	125	125	125	125	125	125	125	125	125	125	125
2.5°	159	161	160	159	159	156	154	150	143	134	131
5°	233	237	234	231	225	217	208	198	183	170	159
7.5°	319	317	310	304	300	290	283	269	236	200	184
10°	453	451	436	419	401	379	348	317	283	234	209
12.5°	642	631	612	583	544	497	444	398	321	266	244
15°	862	850	826	778	724	646	578	495	373	305	276
17.5°	1151	1136	1091	1012	926	818	709	606	447	326	280
20°	1512	1501	1414	1294	1177	1014	859	710	505	319	249
22.5°	1860	1839	1758	1609	1439	1236	1048	841	494	272	217
25°	2307	2264	2162	2010	1752	1468	1168	860	463	241	183
27.5°	2654	2609	2478	2260	1989	1598	1215	880	425	214	162
30°	2837	2786	2615	2369	2037	1606	1199	846	371	177	127
32.5°	2757	2705	2563	2328	1960	1523	1107	756	316	151	97
35°	2442	2424	2298	2108	1775	1350	964	630	256	114	63
37.5°	1984	1957	1901	1760	1488	1120	770	495	203	71	41
40°	1571	1560	1464	1334	1116	820	547	351	146	48	36
42.5°	1229	1202	1103	945	749	531	364	243	83	36	29
45°	914	873	788	665	511	363	236	155	50	28	23
47.5°	647	629	566	461	340	238	160	97	35	24	18
50°	439	419	387	311	245	161	101	64	29	12	11
52.5°	291	285	257	210	151	96	52	35	16	7	4
55°	187	177	157	116	74	45	22	14	5	4	5
57.5°	93	86	73	47	27	13	8	5	4	1	1
60°	17	16	11	7	5	4	2	3	1	1	1
62.5°	4	4	3	3	4	6	1	1	1	1	1
65°	5	4	2	1	1	1	1	1	1	1	1
67.5°	1	1	1	1	1	0	0	0	1	1	1
70°	0	0	0	0	0	0	0	0	1	1	1
72.5°	0	0	0	0	0	0	0	0	0	1	1
75°	0	0	0	0	0	0	0	0	0	0	1
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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CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	55°	60°
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):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	125	125	125	125	125	125
2.5°	128	134	145	133	125	126
5°	141	145	125	104	91	91
7.5°	160	144	104	85	76	74
10°	181	131	87	71	63	63
12.5°	210	117	77	58	52	48
15°	220	98	60	46	37	37
17.5°	198	75	50	42	35	34
20°	170	63	47	35	32	33
22.5°	147	57	40	33	30	31
25°	111	48	36	25	24	24
27.5°	84	35	29	18	17	16
30°	63	24	20	17	25	22
32.5°	48	18	12	10	13	15
35°	36	16	8	7	9	10
37.5°	28	9	5	5	7	8
40°	22	5	3	3	4	5
42.5°	16	4	1	2	3	3
45°	13	2	1	1	1	3
47.5°	7	1	1	1	1	1
50°	8	1	1	1	1	1
52.5°	6	1	1	1	1	1
55°	1	1	1	0	0	0
57.5°	1	1	1	0	0	0
60°	1	1	0	0	0	0
62.5°	1	1	0	0	0	0
65°	1	1	0	0	0	0
67.5°	1	1	0	0	0	0
70°	1	1	0	0	0	0
72.5°	1	1	0	0	0	0
75°	0	1	0	0	0	0
77.5°	0	0	0	0	0	0
80°	0	0	0	0	0	0
82.5°	0	0	0	0	0	0
85°	0	0	0	0	0	0
87.5°	0	0	0	0	0	0
90°	0	0	0	0	0	0
92.5°	0	0	0	0	0	0
95°	0	0	0	0	0	0
97.5°	0	0	0	0	0	0
100°	0	0	0	0	0	0
102.5°	0	0	0	0	0	0
105°	0	0	0	0	0	0
107.5°	0	0	0	0	0	0
110°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)