

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: H21198

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21198
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 MAIN BEAM AT 45 DEGREES AND CLEAR LENS
Light Source: Q50MR16C/FL40 50 WATTS 800 LUMENS
Ballast/Driver: -

Summary

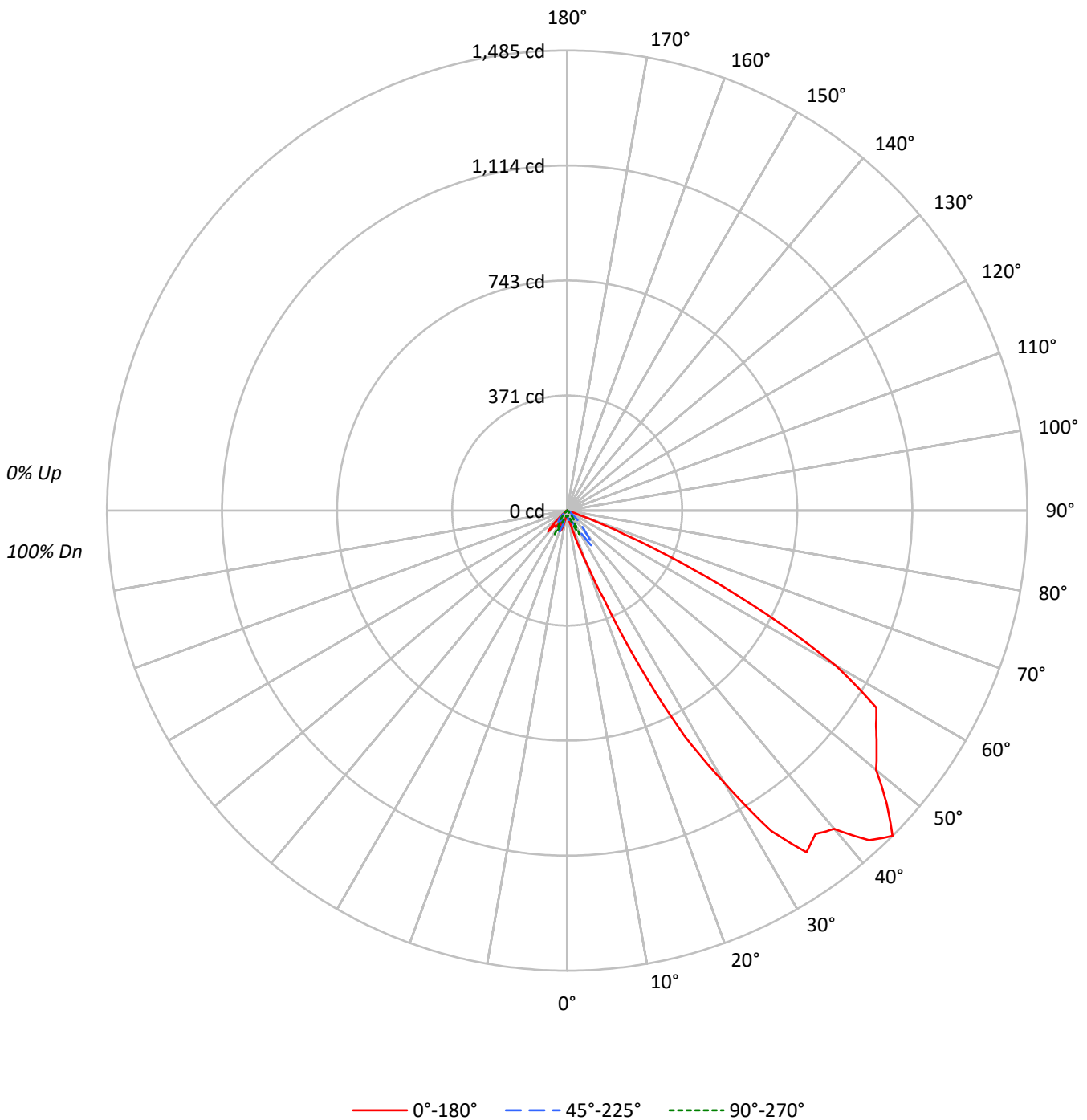
Lumens per Lamp: 800 (1 lamp)
Luminaire Lumens: 578.4 lumens
Efficiency: 72.3%
Efficacy: 10.7 lumens/watt
Spacing Criteria (0/90/45): 4.6 / 1.65 / 1.68
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

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	86	86	86	86	84	84	84	84	80	80	80		77	77	77		74	74	74	72
1	80	77	74	71	78	75	72	70	72	70	68		69	67	66		67	65	64	62
2	72	67	62	58	71	66	61	58	63	59	56		61	58	55		58	56	54	52
3	66	58	52	48	64	57	52	47	55	50	47		53	49	46		51	48	45	43
4	59	51	44	39	58	50	44	39	48	43	39		46	42	38		45	41	38	36
5	54	44	38	33	52	44	37	33	42	36	32		41	36	32		39	35	31	30
6	49	39	32	27	48	38	32	27	37	31	27		36	31	27		35	30	27	25
7	45	34	28	23	43	34	28	23	33	27	23		32	26	23		31	26	22	21
8	41	31	24	20	40	30	24	20	29	23	19		28	23	19		27	23	19	18
9	38	27	21	17	37	27	21	17	26	21	17		25	20	17		25	20	16	15
10	35	25	19	14	34	24	18	14	24	18	14		23	18	14		22	18	14	13

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	0.4	0.3	0°	19	19	19	19	19	
10°-20°	11.6	2.0	1.4	5°	26	22	17	18	19	3
20°-30°	54.3	9.4	6.8	15°	55	29	20	36	56	23
30°-40°	142.2	24.6	17.8	25°	556	44	68	48	42	276
40°-50°	180.0	31.1	22.5	35°	1346	141	37	45	65	799
50°-60°	139.6	24.1	17.5	45°	1485	63	8	28	63	1093
60°-70°	47.0	8.1	5.9	55°	1217	16	1	2	3	1077
70°-80°	1.2	0.2	0.2	65°	449	2	1	1	1	465
80°-90°	0.6	0.1	0.1	75°	2	1	1	0	1	7
90°-100°	0.0	0.0	0.0	85°	1	1	1	0	0	1
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°	67.9	11.7	8.5	165°	0	0	0	0	0	0
0°-40°	210.1	36.3	26.3	175°	0	0	0	0	0	0
0°-60°	529.6	91.6	66.2	180°	0	0	0	0	0	0
0°-90°	578.4	100.0	72.3							
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°	578.4	100.0	72.3							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	55°	60°
0°	19	19	19	19	19	19	19	19	19	19	19
2.5°	20	20	21	21	21	21	21	21	20	20	20
5°	26	26	26	26	26	25	25	24	22	20	19
7.5°	29	29	30	30	31	31	31	30	27	23	22
10°	31	31	31	30	30	29	29	30	31	27	26
12.5°	39	39	38	37	35	32	32	30	29	26	25
15°	55	54	51	47	43	40	37	33	29	25	24
17.5°	106	105	101	96	80	58	44	38	31	26	27
20°	172	168	155	141	121	101	74	49	35	30	32
22.5°	310	298	265	217	178	139	112	79	40	33	35
25°	556	530	488	397	296	207	149	108	44	34	37
27.5°	820	793	736	613	481	339	208	137	53	40	46
30°	1014	976	914	813	669	488	303	175	68	62	75
32.5°	1226	1182	1100	964	806	620	402	217	95	100	90
35°	1346	1328	1276	1120	912	720	486	288	141	88	69
37.5°	1316	1313	1316	1226	1012	796	565	334	129	60	55
40°	1341	1347	1359	1286	1069	811	568	302	96	42	38
42.5°	1443	1445	1410	1316	1098	809	550	281	74	29	26
45°	1485	1500	1471	1330	1119	811	517	245	63	23	20
47.5°	1398	1453	1436	1290	1086	800	478	208	47	20	15
50°	1302	1353	1343	1237	1027	737	421	180	28	16	13
52.5°	1259	1266	1248	1144	922	637	332	104	21	13	11
55°	1217	1211	1132	990	789	507	218	60	16	10	7
57.5°	1183	1146	1017	820	600	373	129	39	15	11	5
60°	1002	959	846	653	459	252	80	25	10	7	2
62.5°	728	703	616	492	330	132	36	15	9	2	1
65°	449	445	395	272	136	46	17	7	2	1	1
67.5°	201	185	140	88	46	15	5	3	1	1	1
70°	43	33	23	19	5	3	2	1	1	1	1
72.5°	2	2	2	2	2	2	1	1	1	1	1
75°	2	1	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1	1	1	1
82.5°	1	1	1	1	1	1	1	1	1	1	1
85°	1	0	0	0	0	0	1	1	1	1	1
87.5°	0	0	0	0	0	0	1	1	1	1	1
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°	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°	19	19	19	19	19	19
2.5°	20	19	19	18	18	19
5°	18	17	17	18	19	19
7.5°	20	18	18	19	20	21
10°	24	20	19	21	23	24
12.5°	26	20	20	25	31	35
15°	24	20	24	36	47	56
17.5°	24	22	34	54	65	69
20°	26	28	57	72	66	67
22.5°	29	44	78	65	60	57
25°	36	68	70	48	44	42
27.5°	58	86	44	36	37	38
30°	77	51	34	33	40	44
32.5°	80	38	31	38	48	51
35°	51	37	38	45	57	65
37.5°	42	34	32	46	57	63
40°	25	17	25	41	56	64
42.5°	17	11	18	39	67	91
45°	15	8	12	28	48	63
47.5°	11	4	5	12	23	33
50°	9	2	3	8	15	20
52.5°	7	2	2	3	4	5
55°	3	1	1	2	2	3
57.5°	2	1	1	1	1	1
60°	1	1	1	1	1	1
62.5°	1	1	1	1	1	1
65°	1	1	1	1	1	1
67.5°	1	1	1	1	1	1
70°	1	1	1	1	1	1
72.5°	1	1	1	0	0	1
75°	1	1	1	0	0	1
77.5°	1	1	1	0	0	0
80°	1	1	1	0	0	0
82.5°	1	1	1	0	0	0
85°	1	1	1	0	0	0
87.5°	1	1	1	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)