

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: RSA

Report Number: P14877

Luminaire Tested: **MRZ-1-REC-X-3-L27-97-FL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P14877
Test Lab: INNOVATION CENTER (G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: RSA
Catalog Number: MRZ-1-REC-X-3-L27-97-FL-UNV-X-STD-LSL
Description: MRZ INTEGRAL LED DOWNLIGHT
40 DEGREE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL 3
Light Source: (1) 2700K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 676.1 lumens
Efficiency: N/A
Efficacy: 56.8 lumens/watt
Spacing Criteria (0/90/45): 0.61 / 0.69 / 0.7
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

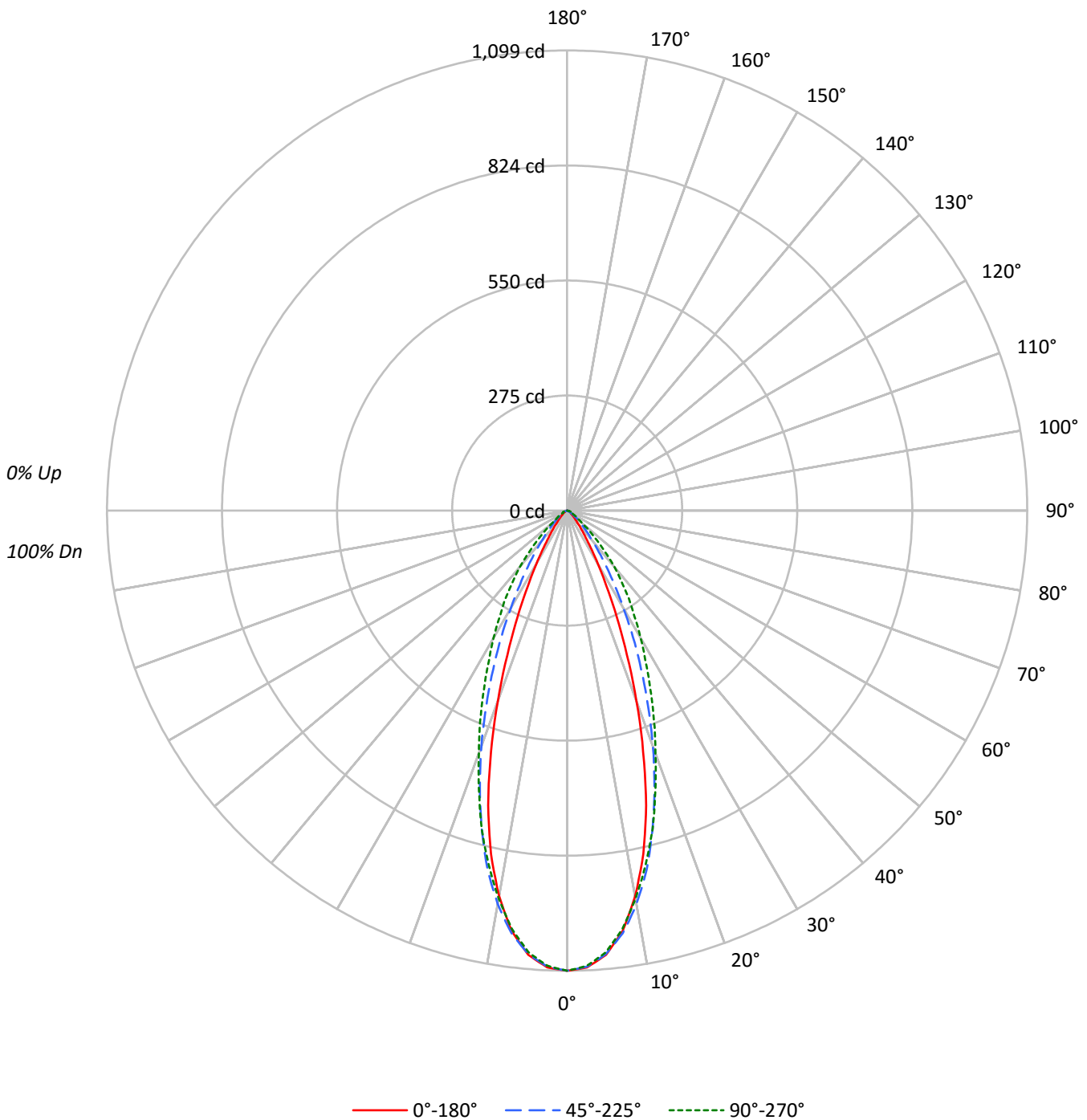
Input Watts (W): 11.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	90	89	87
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71
6	88	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67
7	84	75	70	65	83	75	69	65	73	68	65	72	68	65	71	67	64	63
8	81	71	66	62	79	71	65	61	70	65	61	69	64	61	68	64	61	59
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	65	61	57	56
10	74	64	59	55	73	64	59	55	63	58	55	62	58	55	62	58	55	53

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	542224	542224	542224
5°	527456	526466	524485
10°	468426	477945	471432
15°	372362	402498	402498
20°	254121	314501	323952
25°	151883	227553	255861
30°	83747	152681	199967
35°	43968	98176	154792
40°	25118	59898	113355
45°	16048	38376	70472
50°	11513	25330	36843
55°	9462	14623	23225
60°	7894	8881	14801
65°	7005	7005	11674
70°	5770	5770	15868
75°	5719	3813	9531
80°	2841	2841	5683
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	14.4
10°-20°	212.3	31.4
20°-30°	183.6	27.2
30°-40°	106.1	15.7
40°-50°	48.1	7.1
50°-60°	17.0	2.5
60°-70°	7.5	1.1
70°-80°	3.6	0.5
80°-90°	0.3	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	493.6	73.0
0°-40°	599.7	88.7
0°-60°	664.7	98.3
0°-90°	676.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	676.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1099	1099	1099	1099	1099	
5°	1065	1064	1063	1059	1059	98
15°	729	751	788	795	788	198
25°	279	321	418	479	470	131
35°	73	95	163	243	257	49
45°	23	28	55	96	101	19
55°	11	11	17	22	27	10
65°	6	7	6	9	10	6
75°	3	3	2	4	5	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099
2.5°	1092	1090	1090	1090	1091	1091	1090	1090	1090	1090	1090
5°	1065	1063	1063	1064	1063	1064	1063	1065	1064	1063	1063
7.5°	1013	1013	1013	1014	1015	1015	1015	1017	1017	1019	1018
10°	935	937	937	940	943	941	942	948	950	952	954
12.5°	840	843	845	847	850	853	854	864	867	871	878
15°	729	728	734	737	746	751	754	764	774	780	788
17.5°	604	607	610	618	629	636	640	652	668	681	693
20°	484	490	493	502	513	517	528	544	565	583	599
22.5°	373	376	384	394	406	415	426	442	464	482	504
25°	279	280	290	299	312	321	327	348	371	394	418
27.5°	203	205	211	220	234	240	250	268	290	315	340
30°	147	147	151	161	171	179	186	203	224	245	268
32.5°	103	104	108	115	125	131	136	152	169	190	210
35°	73	74	78	82	90	95	99	111	126	144	163
37.5°	53	54	56	59	65	68	72	82	94	108	125
40°	39	40	41	44	48	50	53	60	69	81	93
42.5°	30	30	31	33	35	37	39	44	51	60	71
45°	23	23	24	26	27	28	30	33	38	45	55
47.5°	19	19	19	20	21	22	23	26	29	36	42
50°	15	15	16	16	17	17	18	20	24	29	33
52.5°	13	13	13	13	13	14	14	16	20	22	24
55°	11	11	11	11	11	11	12	14	16	18	17
57.5°	9	9	9	9	9	10	10	12	13	12	12
60°	8	8	7	7	8	8	9	10	10	9	9
62.5°	7	6	6	6	7	8	8	8	7	7	7
65°	6	5	5	6	6	7	7	6	6	6	6
67.5°	5	5	5	5	6	6	6	5	5	5	5
70°	4	4	4	4	5	5	4	4	4	4	4
72.5°	3	3	3	4	4	4	3	3	3	4	3
75°	3	3	3	3	3	3	2	2	3	3	2
77.5°	2	2	2	2	2	2	2	2	2	2	2
80°	1	1	1	1	1	1	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	0	0	0	1
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099
2.5°	1089	1089	1088	1089	1089	1089	1089	1088	1089	1088
5°	1062	1062	1062	1060	1059	1060	1059	1058	1058	1059
7.5°	1016	1016	1015	1013	1013	1012	1010	1009	1008	1008
10°	956	955	952	951	951	948	944	944	940	941
12.5°	881	879	878	878	874	874	871	870	868	866
15°	791	794	796	795	795	792	791	789	786	788
17.5°	702	709	711	714	715	713	710	705	702	700
20°	614	624	631	633	633	632	631	623	622	617
22.5°	523	537	549	553	554	555	551	545	543	542
25°	438	457	469	477	479	482	480	477	471	470
27.5°	361	381	397	407	412	414	416	411	409	405
30°	292	315	332	346	349	353	354	355	351	351
32.5°	233	252	273	287	293	296	301	300	300	299
35°	183	202	221	236	243	247	253	256	257	257
37.5°	141	160	177	195	202	207	211	212	213	212
40°	108	126	143	155	160	164	169	173	175	176
42.5°	85	98	109	121	129	135	136	135	135	134
45°	64	74	91	94	96	97	100	101	101	101
47.5°	51	62	62	66	68	71	72	72	72	72
50°	38	40	43	46	47	47	48	48	48	48
52.5°	25	28	29	30	31	32	34	35	34	34
55°	18	19	20	22	22	23	27	27	27	27
57.5°	12	13	15	18	18	19	20	20	21	21
60°	10	11	12	13	14	16	18	15	15	15
62.5°	8	9	10	11	10	11	12	12	12	12
65°	7	8	7	8	9	9	8	9	9	10
67.5°	6	6	6	6	6	7	9	10	11	11
70°	4	4	4	6	6	7	8	10	10	11
72.5°	3	3	4	5	6	6	7	7	8	8
75°	3	3	4	4	4	4	5	5	5	5
77.5°	2	2	2	2	3	3	3	4	4	4
80°	1	1	1	1	2	2	2	2	2	2
82.5°	1	1	1	1	1	0	0	1	1	1
85°	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)