

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: P219897

Luminaire Tested: **MRZ-1-REC-X-2-L35-97-WFL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P219897  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14882)  
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-2-L35-97-WFL-UNV-X-STD-LSL  
Description: MRZ INTEGRAL LED DOWNLIGHT  
55 DEGREE WIDE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL2  
Light Source: (1) 3500K CCT, 97 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 509.5 lumens  
Efficiency: N/A  
Efficacy: 57.9 lumens/watt  
Spacing Criteria (0/90/45): 0.88 / 0.83 / 0.87  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

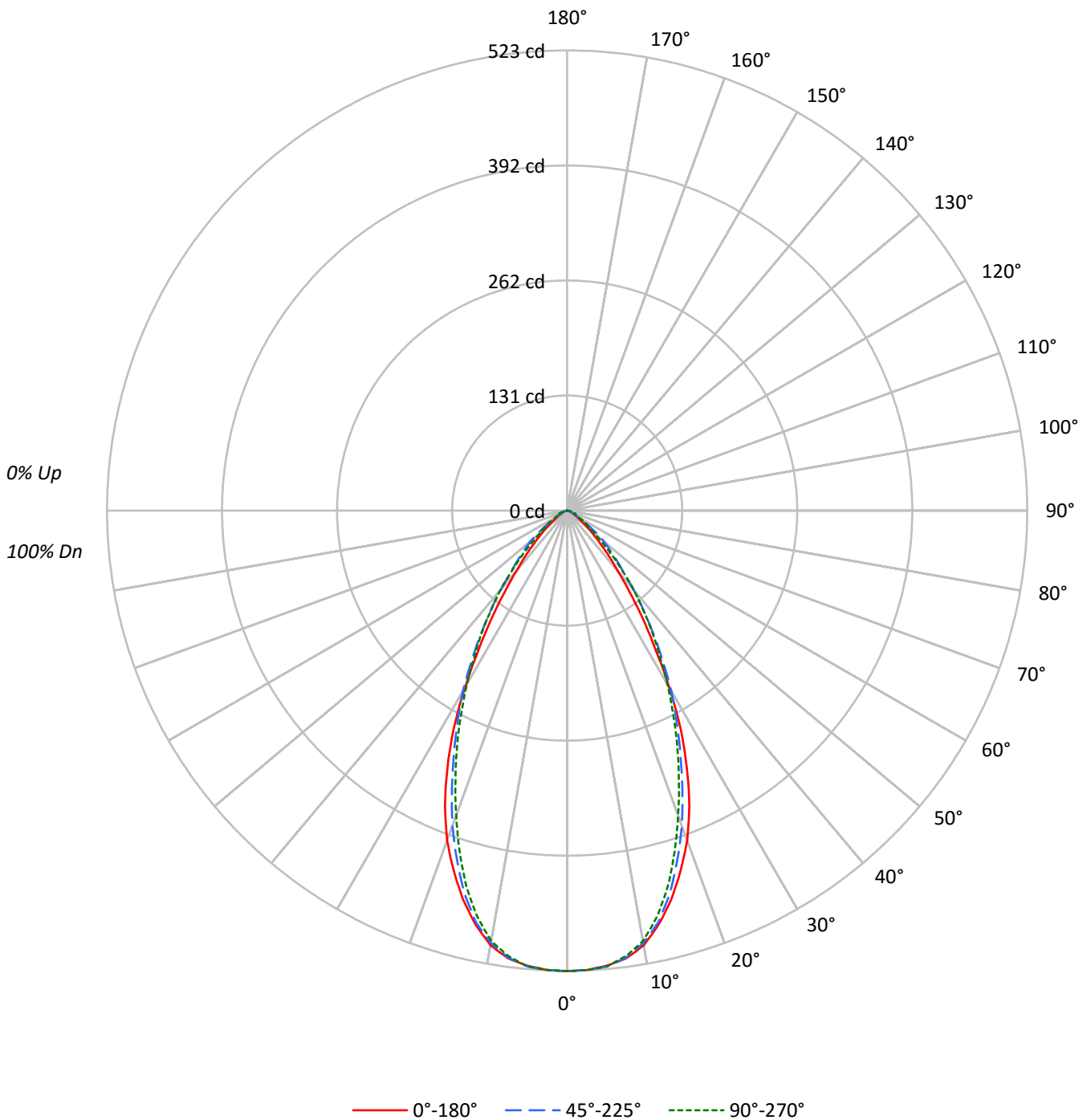
Input Watts (W): 8.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61					61			
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56					56			
8	76	66	59	55	75	65	59	55	64	58	54	63	58	54	62	57	54	52					52			
9	72	62	55	51	71	61	55	51	60	55	51	59	54	51	58	54	50	49					49			
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46					46			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	258235	258235	258235
5°	257141	257537	257537
10°	251297	250044	248792
15°	233582	230159	225920
20°	209387	200199	193584
25°	175237	165656	161138
30°	132400	134792	130007
35°	90165	102753	101729
40°	58159	75420	75935
45°	37329	54843	50726
50°	23718	41679	31470
55°	14365	23741	23053
60°	9078	13223	14801
65°	6888	9806	10740
70°	6059	8511	14425
75°	4766	6291	9531
80°	2273	4830	7103
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.9	9.6
10°-20°	124.8	24.5
20°-30°	140.5	27.6
30°-40°	103.9	20.4
40°-50°	55.4	10.9
50°-60°	22.8	4.5
60°-70°	8.9	1.7
70°-80°	4.0	0.8
80°-90°	0.4	0.1
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°	314.2	61.7
0°-40°	418.1	82.1
0°-60°	496.3	97.4
0°-90°	509.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	509.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	523	523	523	523	523	
5°	519	519	520	520	520	49
15°	457	453	451	445	442	127
25°	322	318	304	298	296	146
35°	150	164	171	169	169	95
45°	54	60	79	78	73	43
55°	17	20	28	26	27	16
65°	6	8	8	10	9	6
75°	2	2	3	5	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°	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4
2.5°	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5
5°	519.2	519.2	519.2	519.2	519.2	519.2	519.2	520.0	519.2	520.0	520.0
7.5°	513.4	512.5	512.5	512.5	512.5	512.5	512.5	512.5	512.5	512.5	512.5
10°	501.6	500.8	500.8	499.1	500.0	499.1	499.1	499.1	499.1	499.1	499.1
12.5°	481.6	481.6	480.7	479.9	479.1	479.1	479.1	479.1	479.1	479.1	479.1
15°	457.3	457.3	456.5	454.8	454.0	453.2	452.3	452.3	451.5	451.5	450.6
17.5°	428.9	428.9	427.2	425.6	423.9	423.1	421.4	419.7	418.9	418.0	416.4
20°	398.8	398.8	396.3	395.5	392.1	391.3	388.8	386.3	382.9	382.1	381.3
22.5°	362.9	361.2	360.4	360.4	357.8	356.2	354.5	351.2	346.1	344.5	342.0
25°	321.9	321.1	321.1	320.2	319.4	317.7	318.5	316.0	311.9	308.5	304.3
27.5°	279.3	278.4	277.6	278.4	280.1	280.1	279.3	277.6	275.9	271.7	269.2
30°	232.4	232.4	234.1	236.6	239.1	240.0	240.8	240.0	239.1	236.6	236.6
32.5°	186.4	188.1	189.8	195.6	198.2	199.8	200.7	203.2	203.2	203.2	201.5
35°	149.7	149.7	153.0	157.2	160.5	163.9	164.7	168.1	170.6	170.6	170.6
37.5°	116.2	117.1	120.4	123.7	127.9	129.6	131.3	136.3	139.6	141.3	142.1
40°	90.3	92.0	93.6	97.0	101.2	102.0	103.7	107.9	112.0	115.4	117.1
42.5°	70.2	70.2	71.9	74.4	76.9	79.4	81.1	83.6	88.6	91.1	94.5
45°	53.5	54.3	55.2	56.9	59.4	60.2	61.9	65.2	68.6	71.9	78.6
47.5°	41.0	41.0	41.8	42.6	45.1	46.0	46.8	50.2	53.5	60.2	65.2
50°	30.9	30.9	30.9	31.8	33.4	35.1	36.0	38.5	45.1	50.2	54.3
52.5°	22.6	22.6	22.6	24.2	25.1	25.9	26.8	30.1	38.5	39.3	41.0
55°	16.7	16.7	16.7	17.6	19.2	20.1	20.9	26.8	28.4	30.9	27.6
57.5°	12.5	12.5	12.5	13.4	14.2	15.0	16.7	20.9	23.4	20.1	19.2
60°	9.2	9.2	9.2	10.0	11.7	12.5	14.2	15.9	15.9	14.2	13.4
62.5°	7.5	7.5	7.5	7.5	9.2	10.9	10.9	12.5	10.9	10.0	10.0
65°	5.9	5.9	5.9	6.7	7.5	8.4	9.2	8.4	7.5	7.5	8.4
67.5°	5.0	5.0	5.0	5.0	6.7	6.7	6.7	5.9	5.9	5.9	6.7
70°	4.2	4.2	4.2	4.2	5.0	5.0	5.0	4.2	4.2	5.0	5.9
72.5°	3.3	3.3	3.3	4.2	4.2	4.2	3.3	3.3	3.3	4.2	4.2
75°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.3	3.3	3.3
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5	2.5
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	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°	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4	523.4
2.5°	522.5	522.5	523.4	522.5	522.5	522.5	522.5	522.5	522.5	522.5
5°	520.0	520.0	520.0	520.0	520.0	520.0	520.0	520.0	520.0	520.0
7.5°	512.5	512.5	512.5	511.7	511.7	511.7	511.7	511.7	511.7	510.8
10°	499.1	499.1	498.3	497.5	498.3	496.6	496.6	495.8	495.8	496.6
12.5°	478.2	477.4	475.7	475.7	474.9	474.1	473.2	473.2	472.4	472.4
15°	450.6	449.0	447.3	446.5	444.8	445.6	444.8	443.1	443.1	442.3
17.5°	417.2	415.5	413.0	410.5	410.5	409.7	409.7	408.0	407.2	406.3
20°	378.7	377.9	377.1	374.6	373.7	372.1	370.4	370.4	367.9	368.7
22.5°	340.3	339.4	337.8	336.9	335.3	335.3	333.6	333.6	331.9	331.9
25°	303.5	302.7	301.0	300.2	298.5	298.5	296.8	297.6	296.0	296.0
27.5°	266.7	265.9	264.2	265.0	263.4	262.5	261.7	261.7	260.9	260.9
30°	233.3	230.8	230.8	229.9	229.1	229.1	229.1	227.4	227.4	228.2
32.5°	200.7	199.0	198.2	198.2	199.0	198.2	197.3	197.3	196.5	195.6
35°	170.6	169.7	168.9	168.9	168.9	168.9	168.9	168.9	168.9	168.9
37.5°	142.1	143.0	142.1	143.0	143.8	143.0	142.1	141.3	141.3	141.3
40°	117.9	119.6	120.4	118.7	117.9	117.9	117.1	117.9	117.1	117.9
42.5°	98.7	99.5	97.8	98.7	99.5	99.5	97.8	95.3	93.6	92.8
45°	80.3	81.9	86.1	80.3	77.8	76.9	74.4	73.6	72.7	72.7
47.5°	68.6	71.9	63.5	61.0	59.4	59.4	57.7	56.0	56.0	55.2
50°	56.0	49.3	47.7	46.0	44.3	43.5	42.6	41.8	41.8	41.0
52.5°	37.6	36.0	34.3	33.4	32.6	32.6	32.6	32.6	32.6	32.6
55°	26.8	25.9	25.1	25.9	25.9	26.8	27.6	27.6	27.6	26.8
57.5°	18.4	18.4	20.1	21.7	21.7	21.7	21.7	20.9	20.9	20.9
60°	14.2	15.0	16.7	16.7	16.7	17.6	16.7	15.9	15.0	15.0
62.5°	10.9	12.5	13.4	13.4	12.5	12.5	11.7	11.7	11.7	11.7
65°	9.2	10.0	10.0	10.0	10.0	9.2	8.4	8.4	9.2	9.2
67.5°	7.5	7.5	7.5	6.7	6.7	7.5	8.4	9.2	9.2	10.0
70°	5.9	5.9	5.9	6.7	7.5	7.5	9.2	9.2	10.0	10.0
72.5°	4.2	4.2	5.9	6.7	7.5	7.5	7.5	6.7	6.7	6.7
75°	3.3	4.2	5.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0
77.5°	2.5	3.3	3.3	2.5	3.3	3.3	3.3	4.2	4.2	5.0
80°	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5	2.5	2.5
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)