

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: P219896

Luminaire Tested: **MRZ-1-REC-X-2-L30-97-WFL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219896
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-L30-97-WFL-UNV-X-STD-LSL
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL2
Light Source: (1) 3000K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 487.5 lumens
Efficiency: N/A
Efficacy: 55.4 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

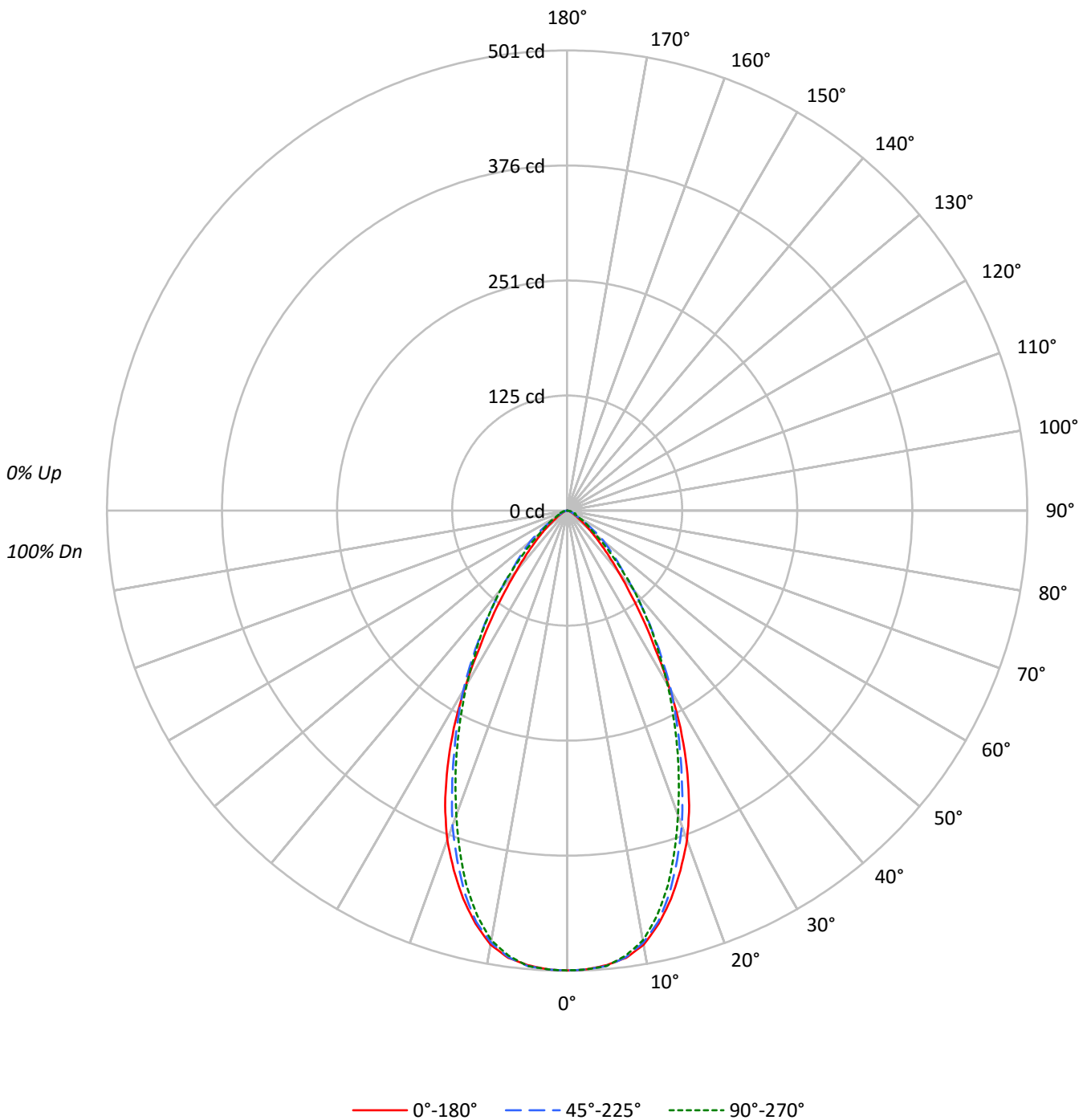
Input Watts (W): 8.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	247035	247035	247035
5°	245998	246394	246394
10°	240425	239223	238021
15°	223468	220199	216113
20°	200304	191536	185235
25°	167670	158525	154170
30°	126703	128981	124424
35°	86250	98296	97333
40°	55647	72135	72650
45°	35724	52470	48563
50°	22720	39913	30088
55°	13763	22709	22021
60°	8683	12631	14209
65°	6538	9339	10273
70°	5770	8078	13848
75°	4575	6100	9150
80°	2273	4546	6819
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	9.6
10°-20°	119.4	24.5
20°-30°	134.4	27.6
30°-40°	99.4	20.4
40°-50°	53.0	10.9
50°-60°	21.8	4.5
60°-70°	8.5	1.7
70°-80°	3.8	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°	300.6	61.7
0°-40°	400.0	82.1
0°-60°	474.8	97.4
0°-90°	487.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	487.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	497	497	498	498	498	47
15°	438	434	431	426	423	122
25°	308	304	291	286	283	140
35°	143	157	163	162	162	91
45°	51	58	75	74	70	41
55°	16	19	26	25	26	15
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°	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7
2.5°	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9
5°	496.7	496.7	496.7	496.7	496.7	496.7	496.7	497.5	496.7	497.5	497.5
7.5°	491.1	490.3	490.3	490.3	490.3	490.3	490.3	490.3	490.3	490.3	490.3
10°	479.9	479.1	479.1	477.5	478.3	477.5	477.5	477.5	477.5	477.5	477.5
12.5°	460.7	460.7	459.9	459.1	458.3	458.3	458.3	458.3	458.3	458.3	458.3
15°	437.5	437.5	436.7	435.1	434.3	433.5	432.7	432.7	431.9	431.9	431.1
17.5°	410.3	410.3	408.7	407.1	405.5	404.7	403.1	401.5	400.7	399.9	398.3
20°	381.5	381.5	379.1	378.4	375.2	374.4	372.0	369.6	366.4	365.6	364.8
22.5°	347.2	345.6	344.8	344.8	342.4	340.8	339.2	336.0	331.2	329.6	327.2
25°	308.0	307.2	307.2	306.4	305.6	304.0	304.8	302.4	298.4	295.2	291.2
27.5°	267.2	266.4	265.6	266.4	268.0	268.0	267.2	265.6	264.0	260.0	257.6
30°	222.4	222.4	224.0	226.4	228.8	229.6	230.4	229.6	228.8	226.4	226.4
32.5°	178.4	180.0	181.6	187.2	189.6	191.2	192.0	194.4	194.4	194.4	192.8
35°	143.2	143.2	146.4	150.4	153.6	156.8	157.6	160.8	163.2	163.2	163.2
37.5°	111.2	112.0	115.2	118.4	122.4	124.0	125.6	130.4	133.6	135.2	136.0
40°	86.4	88.0	89.6	92.8	96.8	97.6	99.2	103.2	107.2	110.4	112.0
42.5°	67.2	67.2	68.8	71.2	73.6	76.0	77.6	80.0	84.8	87.2	90.4
45°	51.2	52.0	52.8	54.4	56.8	57.6	59.2	62.4	65.6	68.8	75.2
47.5°	39.2	39.2	40.0	40.8	43.2	44.0	44.8	48.0	51.2	57.6	62.4
50°	29.6	29.6	29.6	30.4	32.0	33.6	34.4	36.8	43.2	48.0	52.0
52.5°	21.6	21.6	21.6	23.2	24.0	24.8	25.6	28.8	36.8	37.6	39.2
55°	16.0	16.0	16.0	16.8	18.4	19.2	20.0	25.6	27.2	29.6	26.4
57.5°	12.0	12.0	12.0	12.8	13.6	14.4	16.0	20.0	22.4	19.2	18.4
60°	8.8	8.8	8.8	9.6	11.2	12.0	13.6	15.2	15.2	13.6	12.8
62.5°	7.2	7.2	7.2	7.2	8.8	10.4	10.4	12.0	10.4	9.6	9.6
65°	5.6	5.6	5.6	6.4	7.2	8.0	8.8	8.0	7.2	7.2	8.0
67.5°	4.8	4.8	4.8	4.8	6.4	6.4	6.4	5.6	5.6	5.6	6.4
70°	4.0	4.0	4.0	4.0	4.8	4.8	4.8	4.0	4.0	4.8	5.6
72.5°	3.2	3.2	3.2	4.0	4.0	4.0	3.2	3.2	3.2	4.0	4.0
75°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.2
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
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°	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7	500.7
2.5°	499.9	499.9	500.7	499.9	499.9	499.9	499.9	499.9	499.9	499.9
5°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
7.5°	490.3	490.3	490.3	489.5	489.5	489.5	489.5	489.5	489.5	488.7
10°	477.5	477.5	476.7	475.9	476.7	475.1	475.1	474.3	474.3	475.1
12.5°	457.5	456.7	455.1	455.1	454.3	453.5	452.7	452.7	451.9	451.9
15°	431.1	429.5	427.9	427.1	425.5	426.3	425.5	423.9	423.9	423.1
17.5°	399.1	397.5	395.1	392.7	392.7	391.9	391.9	390.3	389.5	388.7
20°	362.4	361.6	360.8	358.4	357.6	356.0	354.4	354.4	352.0	352.8
22.5°	325.6	324.8	323.2	322.4	320.8	320.8	319.2	319.2	317.6	317.6
25°	290.4	289.6	288.0	287.2	285.6	285.6	284.0	284.8	283.2	283.2
27.5°	255.2	254.4	252.8	253.6	252.0	251.2	250.4	250.4	249.6	249.6
30°	223.2	220.8	220.8	220.0	219.2	219.2	219.2	217.6	217.6	218.4
32.5°	192.0	190.4	189.6	189.6	190.4	189.6	188.8	188.8	188.0	187.2
35°	163.2	162.4	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6
37.5°	136.0	136.8	136.0	136.8	137.6	136.8	136.8	135.2	135.2	135.2
40°	112.8	114.4	115.2	113.6	112.8	112.8	112.8	112.8	112.0	112.8
42.5°	94.4	95.2	93.6	94.4	95.2	95.2	93.6	91.2	89.6	88.8
45°	76.8	78.4	82.4	76.8	74.4	73.6	71.2	70.4	69.6	69.6
47.5°	65.6	68.8	60.8	58.4	56.8	56.8	55.2	53.6	53.6	52.8
50°	53.6	47.2	45.6	44.0	42.4	41.6	40.8	40.0	40.0	39.2
52.5°	36.0	34.4	32.8	32.0	31.2	31.2	31.2	31.2	31.2	31.2
55°	25.6	24.8	24.0	24.8	24.8	25.6	26.4	26.4	26.4	25.6
57.5°	17.6	17.6	19.2	20.8	20.8	20.8	20.8	20.0	20.0	20.0
60°	13.6	14.4	16.0	16.0	16.0	16.8	16.0	15.2	14.4	14.4
62.5°	10.4	12.0	12.8	12.8	12.0	12.0	11.2	11.2	11.2	11.2
65°	8.8	9.6	9.6	9.6	9.6	8.8	8.0	8.0	8.8	8.8
67.5°	7.2	7.2	7.2	6.4	6.4	7.2	8.0	8.8	8.8	9.6
70°	5.6	5.6	5.6	6.4	7.2	7.2	8.8	8.8	9.6	9.6
72.5°	4.0	4.0	5.6	6.4	7.2	7.2	7.2	6.4	6.4	6.4
75°	3.2	4.0	5.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8
77.5°	2.4	3.2	3.2	2.4	3.2	3.2	3.2	4.0	4.0	4.8
80°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4
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)