

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: P219911

Luminaire Tested: **MRZ-1-REC-X-4-L30-97-WFL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219911
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-4-L30-97-WFL-UNV-X-STD-LSL
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL 4
Light Source: (1) 3000K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 852.1 lumens
Efficiency: N/A
Efficacy: 53.9 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

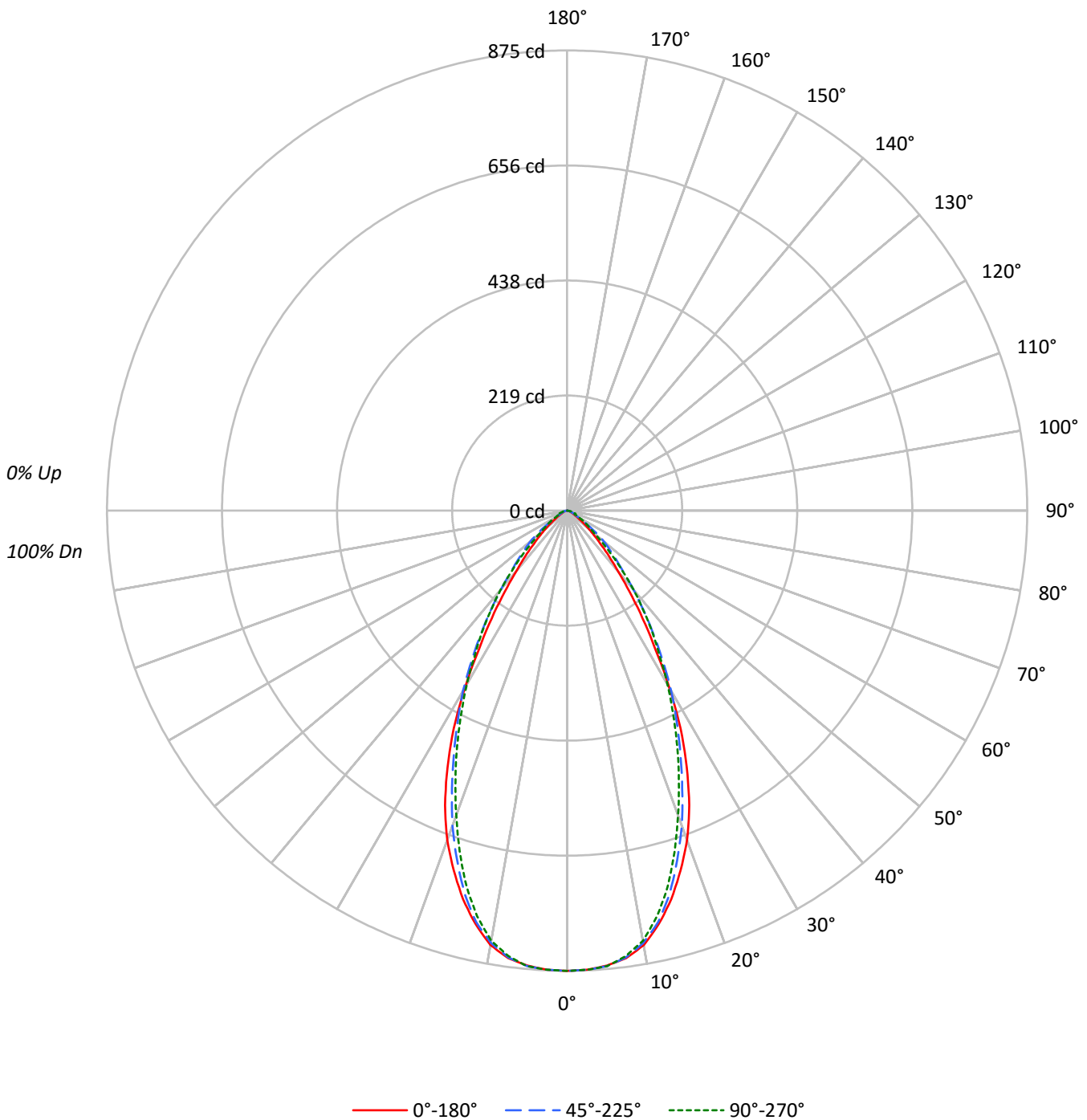
Input Watts (W): 15.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	431855	431855	431855
5°	430038	430731	430731
10°	420281	418177	416073
15°	390648	384927	377776
20°	350152	334768	323742
25°	293042	277037	269470
30°	221445	225433	217457
35°	150757	171777	170091
40°	97253	126043	126944
45°	62448	91684	84846
50°	39683	69771	52578
55°	24085	39654	38450
60°	15196	22103	24866
65°	11441	16344	17979
70°	10098	14137	24235
75°	8006	10675	16013
80°	3978	7956	11933
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.9	9.6
10°-20°	208.7	24.5
20°-30°	234.9	27.6
30°-40°	173.8	20.4
40°-50°	92.6	10.9
50°-60°	38.1	4.5
60°-70°	14.9	1.7
70°-80°	6.6	0.8
80°-90°	0.6	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°	525.5	61.7
0°-40°	699.2	82.1
0°-60°	830.0	97.4
0°-90°	852.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	852.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	868	868	870	870	870	82
15°	765	758	754	744	740	213
25°	538	531	509	499	495	244
35°	250	274	285	282	282	158
45°	90	101	131	130	122	72
55°	28	34	46	43	45	27
65°	10	14	14	17	15	10
75°	4	4	6	8	8	4
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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
5°	868.3	868.3	868.3	868.3	868.3	868.3	868.3	869.7	868.3	869.7	869.7
7.5°	858.5	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
10°	838.9	837.5	837.5	834.7	836.1	834.7	834.7	834.7	834.7	834.7	834.7
12.5°	805.4	805.4	804.0	802.6	801.2	801.2	801.2	801.2	801.2	801.2	801.2
15°	764.8	764.8	763.4	760.6	759.2	757.8	756.4	756.4	755.0	755.0	753.6
17.5°	717.3	717.3	714.5	711.7	708.9	707.5	704.7	701.9	700.5	699.1	696.3
20°	666.9	666.9	662.7	661.3	655.7	654.4	650.2	646.0	640.4	639.0	637.6
22.5°	606.8	604.0	602.6	602.6	598.4	595.6	592.8	587.2	578.8	576.1	571.9
25°	538.3	536.9	536.9	535.5	534.1	531.3	532.7	528.5	521.5	515.9	508.9
27.5°	467.0	465.6	464.2	465.6	468.4	468.4	467.0	464.2	461.4	454.4	450.2
30°	388.7	388.7	391.5	395.7	399.9	401.3	402.7	401.3	399.9	395.7	395.7
32.5°	311.8	314.6	317.4	327.2	331.4	334.2	335.6	339.8	339.8	339.8	337.0
35°	250.3	250.3	255.9	262.9	268.5	274.0	275.4	281.0	285.2	285.2	285.2
37.5°	194.3	195.7	201.3	206.9	213.9	216.7	219.5	227.9	233.5	236.3	237.7
40°	151.0	153.8	156.6	162.2	169.2	170.6	173.4	180.4	187.4	192.9	195.7
42.5°	117.4	117.4	120.2	124.4	128.6	132.8	135.6	139.8	148.2	152.4	158.0
45°	89.5	90.9	92.3	95.1	99.3	100.7	103.5	109.1	114.7	120.2	131.4
47.5°	68.5	68.5	69.9	71.3	75.5	76.9	78.3	83.9	89.5	100.7	109.1
50°	51.7	51.7	51.7	53.1	55.9	58.7	60.1	64.3	75.5	83.9	90.9
52.5°	37.8	37.8	37.8	40.5	41.9	43.3	44.7	50.3	64.3	65.7	68.5
55°	28.0	28.0	28.0	29.4	32.2	33.6	35.0	44.7	47.5	51.7	46.1
57.5°	21.0	21.0	21.0	22.4	23.8	25.2	28.0	35.0	39.1	33.6	32.2
60°	15.4	15.4	15.4	16.8	19.6	21.0	23.8	26.6	26.6	23.8	22.4
62.5°	12.6	12.6	12.6	12.6	15.4	18.2	18.2	21.0	18.2	16.8	16.8
65°	9.8	9.8	9.8	11.2	12.6	14.0	15.4	14.0	12.6	12.6	14.0
67.5°	8.4	8.4	8.4	8.4	11.2	11.2	11.2	9.8	9.8	9.8	11.2
70°	7.0	7.0	7.0	7.0	8.4	8.4	8.4	7.0	7.0	8.4	9.8
72.5°	5.6	5.6	5.6	7.0	7.0	7.0	5.6	5.6	5.6	7.0	7.0
75°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	5.6	5.6	5.6
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.2	4.2	4.2
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8
82.5°	0.0	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	873.9	873.9	875.3	873.9	873.9	873.9	873.9	873.9	873.9	873.9
5°	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7
7.5°	857.1	857.1	857.1	855.7	855.7	855.7	855.7	855.7	855.7	854.3
10°	834.7	834.7	833.3	831.9	833.3	830.5	830.5	829.1	829.1	830.5
12.5°	799.8	798.4	795.6	795.6	794.2	792.8	791.4	791.4	790.0	790.0
15°	753.6	750.8	748.0	746.6	743.8	745.2	743.8	741.0	741.0	739.6
17.5°	697.7	694.9	690.7	686.5	686.5	685.1	685.1	682.3	680.9	679.5
20°	633.4	632.0	630.6	626.4	625.0	622.2	619.4	619.4	615.2	616.6
22.5°	569.1	567.7	564.9	563.5	560.7	560.7	557.9	557.9	555.1	555.1
25°	507.5	506.1	503.3	501.9	499.2	499.2	496.4	497.8	495.0	495.0
27.5°	446.0	444.6	441.8	443.2	440.4	439.0	437.6	437.6	436.2	436.2
30°	390.1	385.9	385.9	384.5	383.1	383.1	383.1	380.3	380.3	381.7
32.5°	335.6	332.8	331.4	331.4	332.8	331.4	330.0	330.0	328.6	327.2
35°	285.2	283.8	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4
37.5°	237.7	239.1	237.7	239.1	240.5	239.1	237.7	236.3	236.3	236.3
40°	197.1	199.9	201.3	198.5	197.1	197.1	195.7	197.1	195.7	197.1
42.5°	165.0	166.4	163.6	165.0	166.4	166.4	163.6	159.4	156.6	155.2
45°	134.2	137.0	144.0	134.2	130.0	128.6	124.4	123.0	121.6	121.6
47.5°	114.7	120.2	106.3	102.1	99.3	99.3	96.5	93.7	93.7	92.3
50°	93.7	82.5	79.7	76.9	74.1	72.7	71.3	69.9	69.9	68.5
52.5°	62.9	60.1	57.3	55.9	54.5	54.5	54.5	54.5	54.5	54.5
55°	44.7	43.3	41.9	43.3	43.3	44.7	46.1	46.1	46.1	44.7
57.5°	30.8	30.8	33.6	36.4	36.4	36.4	36.4	35.0	35.0	35.0
60°	23.8	25.2	28.0	28.0	28.0	29.4	28.0	26.6	25.2	25.2
62.5°	18.2	21.0	22.4	22.4	21.0	21.0	19.6	19.6	19.6	19.6
65°	15.4	16.8	16.8	16.8	16.8	15.4	14.0	14.0	15.4	15.4
67.5°	12.6	12.6	12.6	11.2	11.2	12.6	14.0	15.4	15.4	16.8
70°	9.8	9.8	9.8	11.2	12.6	12.6	15.4	15.4	16.8	16.8
72.5°	7.0	7.0	9.8	11.2	12.6	12.6	12.6	11.2	11.2	11.2
75°	5.6	7.0	9.8	8.4	8.4	8.4	8.4	8.4	8.4	8.4
77.5°	4.2	5.6	5.6	4.2	5.6	5.6	5.6	7.0	7.0	8.4
80°	2.8	2.8	2.8	2.8	2.8	2.8	4.2	4.2	4.2	4.2
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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)