

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: P219900

Luminaire Tested: **MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P219900  
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-3-L30-80-WFL-UNV-X-STD-LSL  
Description: MRZ INTEGRAL LED DOWNLIGHT  
55 DEGREE WIDE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL 3  
Light Source: (1) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 867.9 lumens  
Efficiency: N/A  
Efficacy: 72.9 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

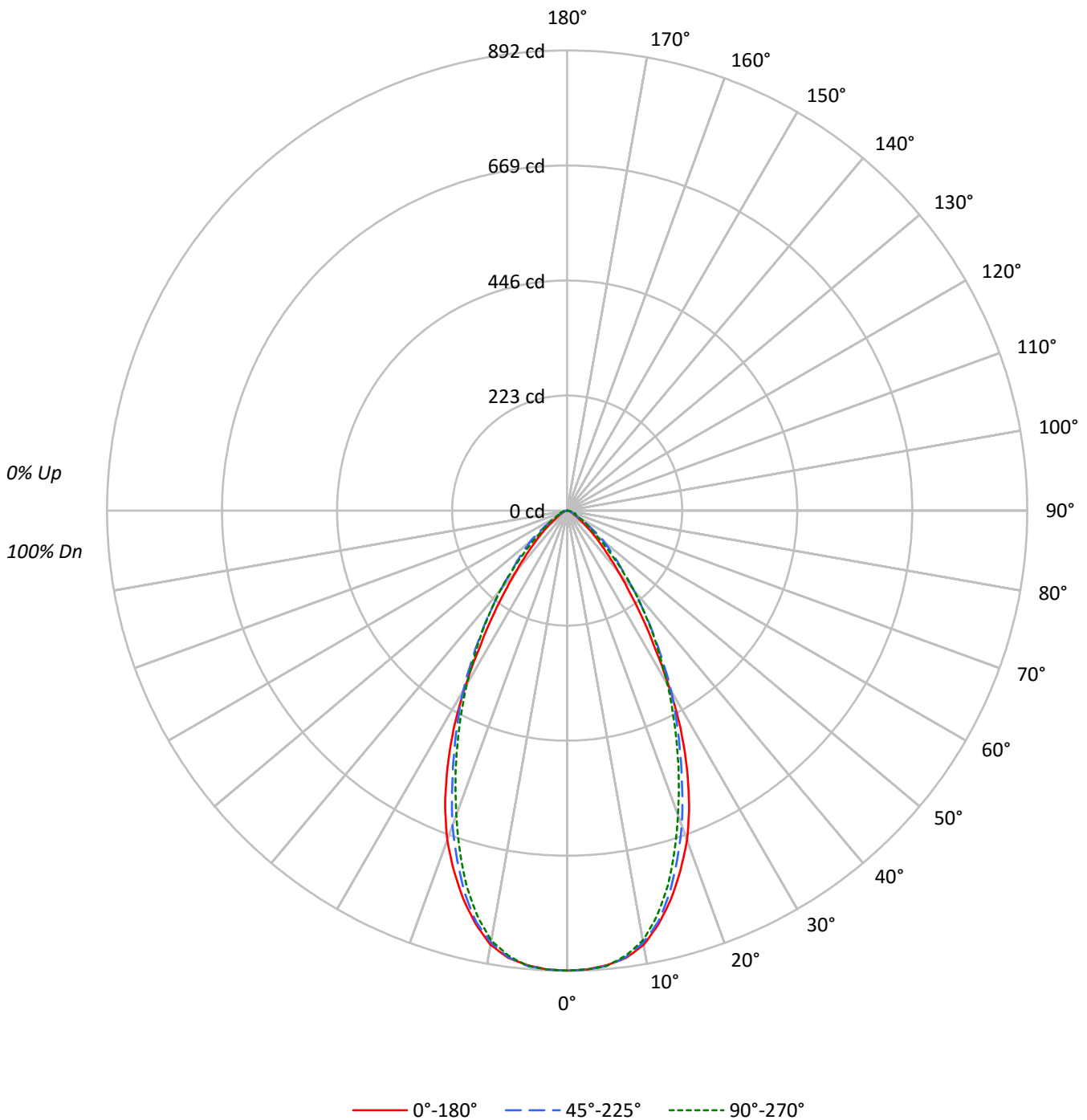
Input Watts (W): 11.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P219900

CATALOG NUMBER: MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL

### Luminous Intensity Polar Plot





TEST NUMBER: P219900

CATALOG NUMBER: MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL

**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	84	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°	439897	439897	439897
5°	438061	438755	438755
10°	428147	425992	423838
15°	397952	392129	384825
20°	356715	341016	329780
25°	298486	282209	274478
30°	225546	229648	221502
35°	153528	175030	173283
40°	99057	128426	129328
45°	63634	93428	86450
50°	40451	71076	53576
55°	24515	40429	39224
60°	15492	22498	25261
65°	11674	16578	18329
70°	10242	14425	24668
75°	8197	10866	16203
80°	3978	7956	12217
85°	0	0	0



TEST NUMBER: P219900

CATALOG NUMBER: MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.4	9.6
10°-20°	212.6	24.5
20°-30°	239.3	27.6
30°-40°	177.0	20.4
40°-50°	94.4	10.9
50°-60°	38.8	4.5
60°-70°	15.1	1.7
70°-80°	6.7	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°	535.3	61.7
0°-40°	712.3	82.1
0°-60°	845.4	97.4
0°-90°	867.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	867.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	884	884	886	886	886	84
15°	779	772	768	758	753	217
25°	548	541	518	508	504	248
35°	255	279	291	288	288	161
45°	91	102	134	132	124	73
55°	28	34	47	44	46	27
65°	10	14	14	17	16	11
75°	4	4	6	8	8	4
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P219900

CATALOG NUMBER: MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6
2.5°	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2
5°	884.5	884.5	884.5	884.5	884.5	884.5	884.5	885.9	884.5	885.9	885.9
7.5°	874.5	873.1	873.1	873.1	873.1	873.1	873.1	873.1	873.1	873.1	873.1
10°	854.6	853.1	853.1	850.3	851.7	850.3	850.3	850.3	850.3	850.3	850.3
12.5°	820.4	820.4	819.0	817.5	816.1	816.1	816.1	816.1	816.1	816.1	816.1
15°	779.1	779.1	777.7	774.8	773.4	772.0	770.5	770.5	769.1	769.1	767.7
17.5°	730.7	730.7	727.8	725.0	722.1	720.7	717.8	715.0	713.6	712.1	709.3
20°	679.4	679.4	675.1	673.7	668.0	666.6	662.3	658.0	652.3	650.9	649.5
22.5°	618.1	615.3	613.9	613.9	609.6	606.7	603.9	598.2	589.6	586.8	582.5
25°	548.3	546.9	546.9	545.5	544.1	541.2	542.6	538.4	531.3	525.6	518.4
27.5°	475.7	474.3	472.9	474.3	477.1	477.1	475.7	472.9	470.0	462.9	458.6
30°	395.9	395.9	398.8	403.1	407.3	408.8	410.2	408.8	407.3	403.1	403.1
32.5°	317.6	320.5	323.3	333.3	337.6	340.4	341.8	346.1	346.1	346.1	343.2
35°	254.9	254.9	260.6	267.8	273.5	279.2	280.6	286.3	290.6	290.6	290.6
37.5°	198.0	199.4	205.1	210.8	217.9	220.8	223.6	232.2	237.9	240.7	242.1
40°	153.8	156.7	159.5	165.2	172.3	173.8	176.6	183.7	190.9	196.5	199.4
42.5°	119.6	119.6	122.5	126.8	131.0	135.3	138.2	142.4	151.0	155.2	160.9
45°	91.2	92.6	94.0	96.9	101.1	102.5	105.4	111.1	116.8	122.5	133.9
47.5°	69.8	69.8	71.2	72.6	76.9	78.3	79.8	85.5	91.2	102.5	111.1
50°	52.7	52.7	52.7	54.1	57.0	59.8	61.2	65.5	76.9	85.5	92.6
52.5°	38.5	38.5	38.5	41.3	42.7	44.2	45.6	51.3	65.5	66.9	69.8
55°	28.5	28.5	28.5	29.9	32.8	34.2	35.6	45.6	48.4	52.7	47.0
57.5°	21.4	21.4	21.4	22.8	24.2	25.6	28.5	35.6	39.9	34.2	32.8
60°	15.7	15.7	15.7	17.1	19.9	21.4	24.2	27.1	27.1	24.2	22.8
62.5°	12.8	12.8	12.8	12.8	15.7	18.5	18.5	21.4	18.5	17.1	17.1
65°	10.0	10.0	10.0	11.4	12.8	14.2	15.7	14.2	12.8	12.8	14.2
67.5°	8.5	8.5	8.5	8.5	11.4	11.4	11.4	10.0	10.0	10.0	11.4
70°	7.1	7.1	7.1	7.1	8.5	8.5	8.5	7.1	7.1	8.5	10.0
72.5°	5.7	5.7	5.7	7.1	7.1	7.1	5.7	5.7	5.7	7.1	7.1
75°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.7	5.7	5.7
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.3	4.3	4.3
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



TEST NUMBER: P219900

CATALOG NUMBER: MRZ-1-REC-X-3-L30-80-WFL-UNV-X-STD-LSL

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6	891.6
2.5°	890.2	890.2	891.6	890.2	890.2	890.2	890.2	890.2	890.2	890.2
5°	885.9	885.9	885.9	885.9	885.9	885.9	885.9	885.9	885.9	885.9
7.5°	873.1	873.1	873.1	871.7	871.7	871.7	871.7	871.7	871.7	870.2
10°	850.3	850.3	848.9	847.4	848.9	846.0	846.0	844.6	844.6	846.0
12.5°	814.7	813.3	810.4	810.4	809.0	807.6	806.1	806.1	804.7	804.7
15°	767.7	764.8	762.0	760.6	757.7	759.1	757.7	754.9	754.9	753.4
17.5°	710.7	707.9	703.6	699.3	699.3	697.9	697.9	695.0	693.6	692.2
20°	645.2	643.8	642.3	638.1	636.7	633.8	631.0	631.0	626.7	628.1
22.5°	579.7	578.3	575.4	574.0	571.1	571.1	568.3	568.3	565.4	565.4
25°	517.0	515.6	512.7	511.3	508.5	508.5	505.6	507.0	504.2	504.2
27.5°	454.3	452.9	450.1	451.5	448.6	447.2	445.8	445.8	444.4	444.4
30°	397.4	393.1	393.1	391.7	390.3	390.3	390.3	387.4	387.4	388.8
32.5°	341.8	339.0	337.6	337.6	339.0	337.6	336.1	336.1	334.7	333.3
35°	290.6	289.1	287.7	287.7	287.7	287.7	287.7	287.7	287.7	287.7
37.5°	242.1	243.6	242.1	243.6	245.0	243.6	242.1	240.7	240.7	240.7
40°	200.8	203.7	205.1	202.2	200.8	200.8	199.4	200.8	199.4	200.8
42.5°	168.1	169.5	166.6	168.1	169.5	169.5	166.6	162.4	159.5	158.1
45°	136.7	139.6	146.7	136.7	132.5	131.0	126.8	125.3	123.9	123.9
47.5°	116.8	122.5	108.2	104.0	101.1	101.1	98.3	95.4	95.4	94.0
50°	95.4	84.0	81.2	78.3	75.5	74.1	72.6	71.2	71.2	69.8
52.5°	64.1	61.2	58.4	57.0	55.5	55.5	55.5	55.5	55.5	55.5
55°	45.6	44.2	42.7	44.2	44.2	45.6	47.0	47.0	47.0	45.6
57.5°	31.3	31.3	34.2	37.0	37.0	37.0	37.0	35.6	35.6	35.6
60°	24.2	25.6	28.5	28.5	28.5	29.9	28.5	27.1	25.6	25.6
62.5°	18.5	21.4	22.8	22.8	21.4	21.4	19.9	19.9	19.9	19.9
65°	15.7	17.1	17.1	17.1	17.1	15.7	14.2	14.2	15.7	15.7
67.5°	12.8	12.8	12.8	11.4	11.4	12.8	14.2	15.7	15.7	17.1
70°	10.0	10.0	10.0	11.4	12.8	12.8	15.7	15.7	17.1	17.1
72.5°	7.1	7.1	10.0	11.4	12.8	12.8	12.8	11.4	11.4	11.4
75°	5.7	7.1	10.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5
77.5°	4.3	5.7	5.7	4.3	5.7	5.7	5.7	7.1	7.1	8.5
80°	2.8	2.8	2.8	2.8	2.8	2.8	4.3	4.3	4.3	4.3
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)