

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: P219686

Luminaire Tested: **MRZ-1-REC-X-3-L30-97-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P219686  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14874)  
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-L30-97-NFL-UNV-X-STD-SNT  
Description: MRZ INTEGRAL LED DOWNLIGHT  
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 3  
Light Source: (1) 3000K CCT, 97 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 896.6 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 0.42 / 0.41 / 0.38  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

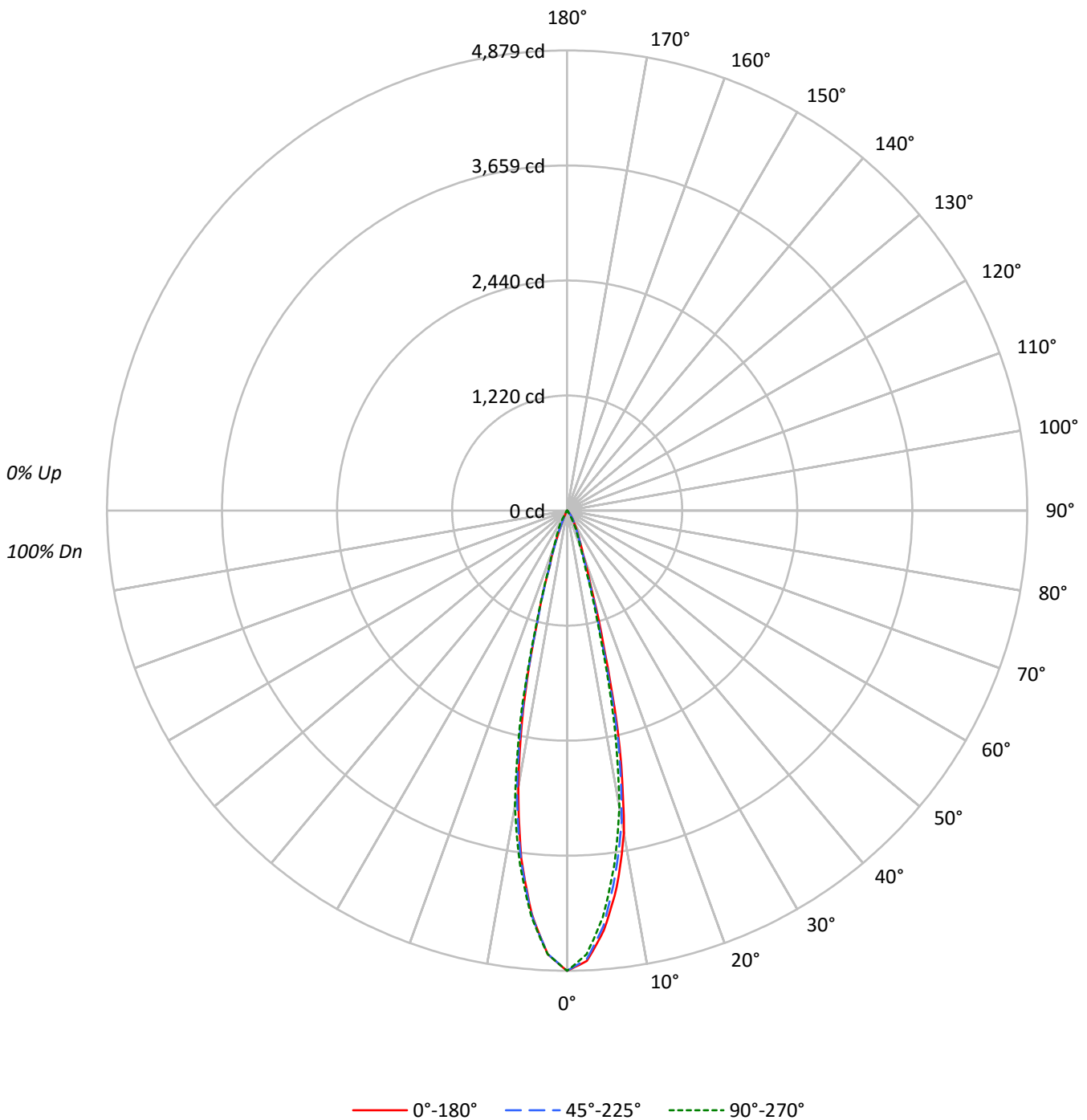
Input Watts (W): 12.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97	
2	112	108	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	94	
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	92	92	92	
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89	89	89	89	
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	87	
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85	85	85	85	
7	98	92	88	85	96	91	87	85	90	87	84	89	86	84	88	85	84	83	83	83	83	
8	95	89	85	83	94	89	85	83	88	85	82	87	84	82	86	84	82	81	81	81	81	
9	93	87	83	81	92	86	83	80	86	82	80	85	82	80	84	82	80	79	79	79	79	
10	91	85	81	79	90	84	81	79	84	81	78	83	80	78	83	80	78	77	77	77	77	

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

	0°	90°	180°
0°	2407347	2407347	2407347
5°	2212939	2144197	2126862
10°	1737937	1598261	1493103
15°	771182	656153	627090
20°	256589	208967	188281
25°	142248	119601	39305
30°	82209	42956	12477
35°	46739	12528	4638
40°	24668	7020	2834
45°	12211	4605	768
50°	6678	2533	0
55°	4731	1892	0
60°	3256	1085	0
65°	2568	1284	0
70°	1587	0	0
75°	2097	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	378.8	42.3
10°-20°	391.3	43.6
20°-30°	89.8	10.0
30°-40°	25.9	2.9
40°-50°	7.2	0.8
50°-60°	2.2	0.2
60°-70°	0.9	0.1
70°-80°	0.4	0.0
80°-90°	0.0	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°	859.9	95.9
0°-40°	885.8	98.8
0°-60°	895.3	99.9
0°-90°	896.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	896.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	4879	4879	4879	4879	4879	
5°	4468	4418	4329	4308	4294	395
15°	1510	1376	1285	1215	1228	441
25°	261	252	220	81	72	126
35°	78	72	21	9	8	51
45°	18	16	7	2	1	15
55°	6	4	2	0	0	5
65°	2	2	1	0	0	2
75°	1	1	0	0	0	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4879.3	4879.3	4879.3	4879.3	4879.3	4879.3	4879.3	4879.3	4879.3
2.5°	4780.9	4779.8	4759.0	4737.2	4708.7	4710.9	4706.5	4713.1	4709.8
5°	4468.2	4444.2	4417.9	4369.8	4329.4	4311.9	4307.5	4293.3	4294.4
7.5°	4027.6	3976.2	3901.9	3838.5	3804.6	3760.9	3742.3	3702.9	3719.3
10°	3469.0	3402.3	3335.6	3256.9	3190.2	3118.0	3062.3	3026.2	2980.3
12.5°	2575.8	2522.2	2494.8	2392.1	2312.3	2256.5	2225.9	2138.4	2139.5
15°	1509.8	1443.1	1376.4	1324.0	1284.6	1263.8	1214.6	1202.6	1227.7
17.5°	806.8	777.3	733.6	685.5	658.2	638.5	622.1	615.5	605.7
20°	488.7	479.9	454.8	423.1	398.0	380.5	364.1	359.7	358.6
22.5°	353.1	348.8	332.4	309.4	285.3	244.9	195.7	185.9	189.1
25°	261.3	258.0	251.5	234.0	219.7	121.4	80.9	77.6	72.2
27.5°	195.7	193.5	185.9	173.8	147.6	53.6	44.8	41.5	41.5
30°	144.3	143.2	138.8	126.8	75.4	30.6	25.1	23.0	21.9
32.5°	106.0	106.0	101.7	90.7	33.9	19.7	15.3	14.2	13.1
35°	77.6	77.6	72.2	62.3	20.8	13.1	8.7	8.7	7.7
37.5°	55.8	54.7	51.4	39.4	15.3	8.7	6.6	6.6	5.5
40°	38.3	38.3	35.0	24.1	10.9	6.6	5.5	4.4	4.4
42.5°	26.2	26.2	24.1	15.3	8.7	5.5	3.3	3.3	3.3
45°	17.5	17.5	16.4	10.9	6.6	3.3	2.2	2.2	1.1
47.5°	12.0	12.0	10.9	7.7	4.4	2.2	1.1	1.1	1.1
50°	8.7	8.7	7.7	5.5	3.3	2.2	1.1	1.1	0.0
52.5°	6.6	6.6	6.6	4.4	2.2	1.1	0.0	0.0	0.0
55°	5.5	5.5	4.4	3.3	2.2	1.1	0.0	0.0	0.0
57.5°	4.4	4.4	3.3	2.2	1.1	1.1	0.0	0.0	0.0
60°	3.3	3.3	3.3	2.2	1.1	0.0	0.0	0.0	0.0
62.5°	2.2	2.2	2.2	1.1	1.1	0.0	0.0	0.0	0.0
65°	2.2	2.2	2.2	1.1	1.1	0.0	0.0	0.0	0.0
67.5°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0
70°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
72.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
75°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
77.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	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
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)