

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: P226098

Luminaire Tested: **MRZ-1-REC-X-1-L27-80-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226098
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-1-L27-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 1
Light Source: (1) 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 548.9 lumens
Efficiency: N/A
Efficacy: 101.6 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

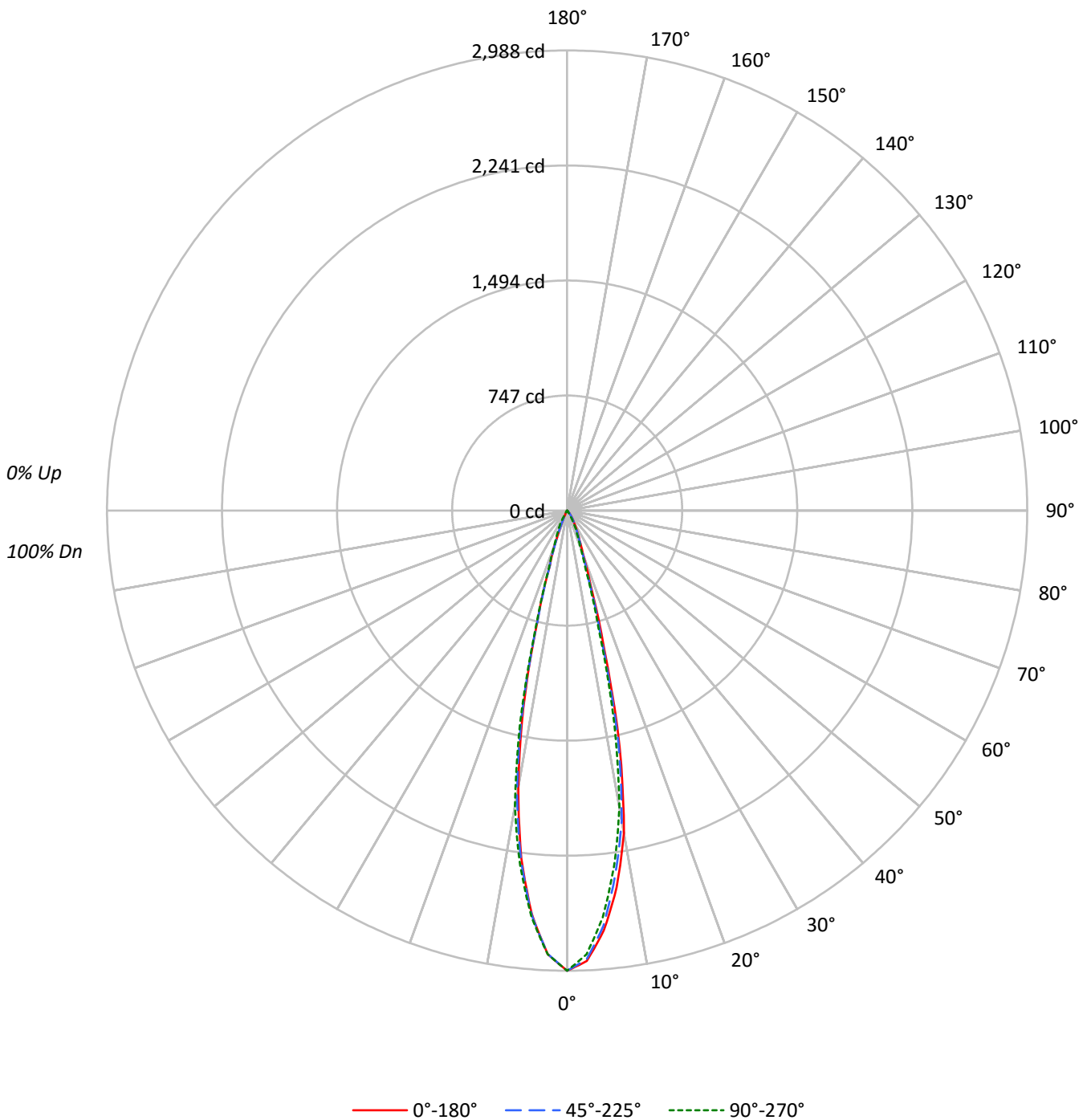
Input Watts (W): 5.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	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	97	97	97		
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	94	94	94	94		
3	109	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	92	92	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	89	89	89		
5	103	97	93	91	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	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	85	85	85		
7	98	92	88	85	97	91	87	85	90	87	84	89	86	84	88	86	84	83	83	83	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	81	81	81		
9	93	87	83	81	92	86	83	80	86	83	80	85	82	80	84	82	80	79	79	79	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	77	77	77		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1474119	1474119	1474119
5°	1355092	1312995	1302396
10°	1064204	978735	914308
15°	472271	401783	384007
20°	157093	127953	115300
25°	87101	73220	24062
30°	50362	26320	7634
35°	28609	7649	2771
40°	15071	4315	1739
45°	7466	2791	419
50°	4145	1535	0
55°	2839	1118	0
60°	1974	592	0
65°	1518	700	0
70°	866	0	0
75°	1144	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	42.3
10°-20°	239.6	43.7
20°-30°	55.0	10.0
30°-40°	15.8	2.9
40°-50°	4.4	0.8
50°-60°	1.3	0.2
60°-70°	0.5	0.1
70°-80°	0.2	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°	526.6	95.9
0°-40°	542.4	98.8
0°-60°	548.2	99.9
0°-90°	548.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	548.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2988	2988	2988	2988	2988	
5°	2736	2705	2651	2638	2630	242
15°	925	843	787	744	752	270
25°	160	154	134	50	44	77
35°	48	44	13	5	5	31
45°	11	10	4	1	1	9
55°	3	3	1	0	0	3
65°	1	1	1	0	0	1
75°	1	1	0	0	0	1
85°	0	0	0	0	0	0
90°	0	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°	2987.8	2987.8	2987.8	2987.8	2987.8	2987.8	2987.8	2987.8	2987.8
2.5°	2927.6	2926.9	2914.2	2900.8	2883.4	2884.7	2882.0	2886.1	2884.1
5°	2736.1	2721.4	2705.3	2675.8	2651.1	2640.4	2637.7	2629.0	2629.7
7.5°	2466.3	2434.9	2389.4	2350.5	2329.7	2303.0	2291.6	2267.5	2277.5
10°	2124.2	2083.4	2042.6	1994.3	1953.6	1909.4	1875.2	1853.1	1825.0
12.5°	1577.3	1544.4	1527.7	1464.8	1415.9	1381.8	1363.0	1309.5	1310.2
15°	924.6	883.7	842.9	810.7	786.6	773.9	743.8	736.4	751.8
17.5°	494.1	476.0	449.2	419.7	403.0	391.0	380.9	376.9	370.9
20°	299.2	293.9	278.5	259.1	243.7	233.0	222.9	220.2	219.6
22.5°	216.2	213.5	203.5	189.4	174.7	150.0	119.8	113.8	115.8
25°	160.0	158.0	154.0	143.3	134.5	74.3	49.5	47.5	44.2
27.5°	119.8	118.5	113.8	106.4	90.3	32.8	27.4	25.4	25.4
30°	88.4	87.7	85.0	77.7	46.2	18.7	15.4	14.0	13.4
32.5°	64.9	64.9	62.2	55.5	20.7	12.1	9.4	8.7	8.0
35°	47.5	47.5	44.2	38.1	12.7	8.0	5.4	5.4	4.6
37.5°	34.1	33.5	31.4	24.1	9.4	5.4	4.0	4.0	3.3
40°	23.4	23.4	21.4	14.7	6.7	4.0	3.3	2.7	2.7
42.5°	16.1	16.1	14.7	9.4	5.4	3.3	2.0	2.0	2.0
45°	10.7	10.7	10.0	6.7	4.0	2.0	1.3	1.3	0.6
47.5°	7.3	7.3	6.7	4.6	2.7	1.3	0.6	0.6	0.6
50°	5.4	5.4	4.6	3.3	2.0	1.3	0.6	0.6	0.0
52.5°	4.0	4.0	4.0	2.7	1.3	0.6	0.0	0.0	0.0
55°	3.3	3.3	2.7	2.0	1.3	0.6	0.0	0.0	0.0
57.5°	2.7	2.7	2.0	1.3	0.6	0.6	0.0	0.0	0.0
60°	2.0	2.0	2.0	1.3	0.6	0.0	0.0	0.0	0.0
62.5°	1.3	1.3	1.3	0.6	0.6	0.0	0.0	0.0	0.0
65°	1.3	1.3	1.3	0.6	0.6	0.0	0.0	0.0	0.0
67.5°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0
70°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
72.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
75°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
77.5°	0.6	0.6	0.6	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)