

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: P219676

Luminaire Tested: **MRZ-1-REC-X-2-L35-80-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219676
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-2-L35-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL2
Light Source: (1) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 900.7 lumens
Efficiency: N/A
Efficacy: 102.3 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

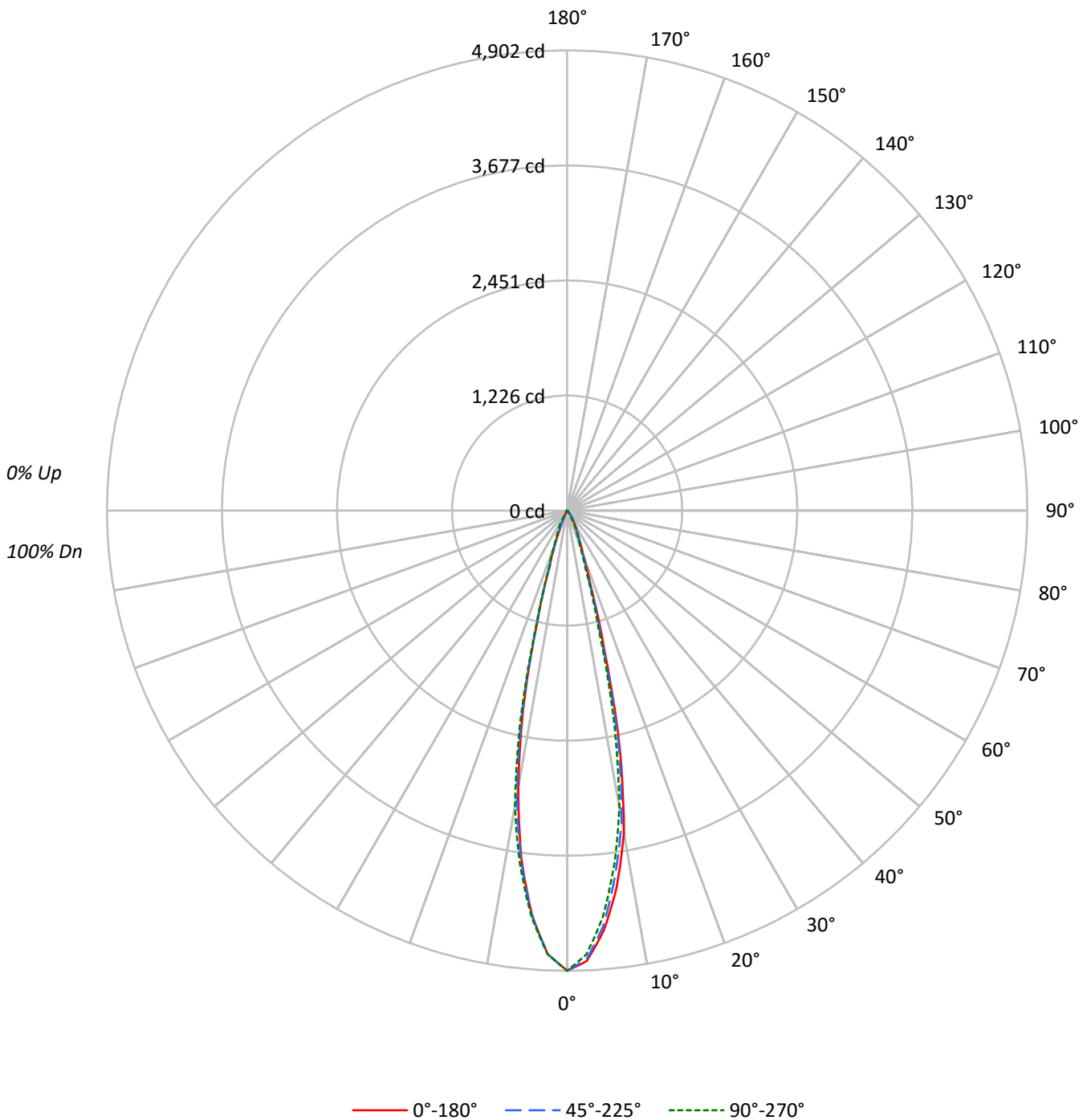
Input Watts (W): 8.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2418349	2418349	2418349
5°	2223092	2154003	2136570
10°	1745852	1605575	1499916
15°	774706	659167	630001
20°	257744	209912	189121
25°	142901	120200	39468
30°	82607	43184	12534
35°	46980	12588	4638
40°	24732	7085	2834
45°	12280	4605	768
50°	6755	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°	380.6	42.3
10°-20°	393.1	43.6
20°-30°	90.2	10.0
30°-40°	26.0	2.9
40°-50°	7.3	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°	863.8	95.9
0°-40°	889.9	98.8
0°-60°	899.4	99.9
0°-90°	900.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	900.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4902	4902	4902	4902	4902	
5°	4489	4438	4349	4327	4314	397
15°	1517	1383	1290	1220	1233	443
25°	262	253	221	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°	4901.6	4901.6	4901.6	4901.6	4901.6	4901.6	4901.6	4901.6	4901.6
2.5°	4802.8	4801.7	4780.8	4758.8	4730.3	4732.5	4728.1	4734.7	4731.4
5°	4488.7	4464.5	4438.1	4389.8	4349.2	4331.6	4327.2	4312.9	4314.0
7.5°	4046.1	3994.4	3919.7	3856.0	3822.0	3778.1	3759.4	3719.9	3736.3
10°	3484.8	3417.8	3350.8	3271.8	3204.8	3132.3	3076.3	3040.0	2993.9
12.5°	2587.5	2533.7	2506.3	2403.0	2322.9	2266.8	2236.1	2148.2	2149.3
15°	1516.7	1449.7	1382.7	1330.0	1290.5	1269.6	1220.2	1208.1	1233.4
17.5°	810.5	780.9	736.9	688.6	661.2	641.4	624.9	618.3	608.4
20°	490.9	482.1	456.9	425.0	399.8	382.2	365.7	361.3	360.2
22.5°	354.7	350.4	333.9	310.8	286.7	246.0	196.6	186.7	190.0
25°	262.5	259.2	252.6	235.0	220.8	121.9	81.3	78.0	72.5
27.5°	196.6	194.4	186.7	174.6	148.3	53.8	45.0	41.7	41.7
30°	145.0	143.9	139.5	127.4	75.8	30.8	25.3	23.1	22.0
32.5°	106.5	106.5	102.1	91.2	34.0	19.8	15.4	14.3	13.2
35°	78.0	78.0	72.5	62.6	20.9	13.2	8.8	8.8	7.7
37.5°	56.0	54.9	51.6	39.5	15.4	8.8	6.6	6.6	5.5
40°	38.4	38.4	35.1	24.2	11.0	6.6	5.5	4.4	4.4
42.5°	26.4	26.4	24.2	15.4	8.8	5.5	3.3	3.3	3.3
45°	17.6	17.6	16.5	11.0	6.6	3.3	2.2	2.2	1.1
47.5°	12.1	12.1	11.0	7.7	4.4	2.2	1.1	1.1	1.1
50°	8.8	8.8	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)