

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: P219674

Luminaire Tested: **MRZ-1-REC-X-2-L27-80-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219674
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-L27-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL2
Light Source: (1) 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 840.9 lumens
Efficiency: N/A
Efficacy: 95.6 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

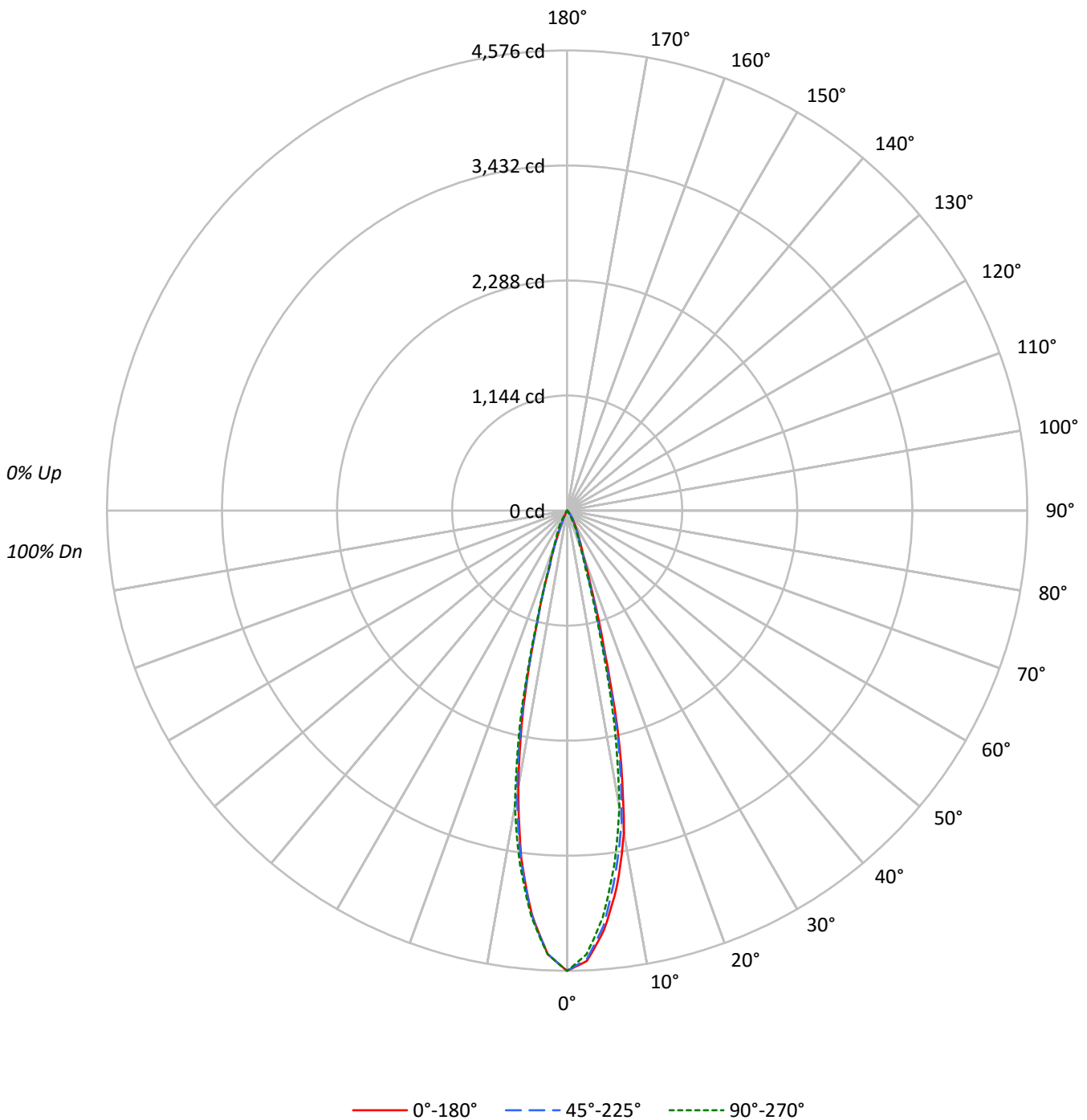
Input Watts (W): 8.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	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°	2257952	2257952	2257952
5°	2075603	2011119	1994875
10°	1630074	1499064	1400419
15°	723321	615444	588219
20°	240680	195999	176572
25°	133429	112198	36855
30°	77138	40335	11679
35°	43848	11745	4337
40°	23122	6634	2641
45°	11443	4326	698
50°	6294	2379	0
55°	4387	1806	0
60°	3059	987	0
65°	2452	1167	0
70°	1443	0	0
75°	1906	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.3	42.3
10°-20°	367.0	43.6
20°-30°	84.2	10.0
30°-40°	24.3	2.9
40°-50°	6.8	0.8
50°-60°	2.1	0.2
60°-70°	0.8	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°	806.6	95.9
0°-40°	830.8	98.8
0°-60°	839.7	99.9
0°-90°	840.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4576	4576	4576	4576	4576	
5°	4191	4144	4061	4040	4028	370
15°	1416	1291	1205	1139	1152	413
25°	245	236	206	76	68	118
35°	73	68	20	8	7	48
45°	16	15	6	2	1	14
55°	5	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°	4576.5	4576.5	4576.5	4576.5	4576.5	4576.5	4576.5	4576.5	4576.5
2.5°	4484.2	4483.2	4463.7	4443.2	4416.5	4418.6	4414.5	4420.6	4417.6
5°	4190.9	4168.4	4143.8	4098.6	4060.7	4044.3	4040.2	4026.9	4027.9
7.5°	3777.7	3729.5	3659.8	3600.3	3568.5	3527.5	3510.0	3473.1	3488.5
10°	3253.7	3191.1	3128.6	3054.8	2992.2	2924.5	2872.2	2838.4	2795.3
12.5°	2415.9	2365.7	2340.0	2243.6	2168.8	2116.5	2087.8	2005.7	2006.8
15°	1416.1	1353.6	1291.0	1241.8	1204.9	1185.4	1139.3	1128.0	1151.6
17.5°	756.8	729.1	688.1	642.9	617.3	598.9	583.5	577.3	568.1
20°	458.4	450.2	426.6	396.8	373.3	356.8	341.5	337.4	336.3
22.5°	331.2	327.1	311.7	290.2	267.6	229.7	183.6	174.3	177.4
25°	245.1	242.0	235.8	219.4	206.1	113.8	75.9	72.8	67.7
27.5°	183.6	181.5	174.3	163.0	138.4	50.2	42.0	39.0	39.0
30°	135.4	134.3	130.2	118.9	70.8	28.7	23.6	21.5	20.5
32.5°	99.5	99.5	95.4	85.1	31.8	18.5	14.4	13.3	12.3
35°	72.8	72.8	67.7	58.4	19.5	12.3	8.2	8.2	7.2
37.5°	52.3	51.3	48.2	36.9	14.4	8.2	6.2	6.2	5.1
40°	35.9	35.9	32.8	22.6	10.3	6.2	5.1	4.1	4.1
42.5°	24.6	24.6	22.6	14.4	8.2	5.1	3.1	3.1	3.1
45°	16.4	16.4	15.4	10.3	6.2	3.1	2.1	2.1	1.0
47.5°	11.3	11.3	10.3	7.2	4.1	2.1	1.0	1.0	1.0
50°	8.2	8.2	7.2	5.1	3.1	2.1	1.0	1.0	0.0
52.5°	6.2	6.2	6.2	4.1	2.1	1.0	0.0	0.0	0.0
55°	5.1	5.1	4.1	3.1	2.1	1.0	0.0	0.0	0.0
57.5°	4.1	4.1	3.1	2.1	1.0	1.0	0.0	0.0	0.0
60°	3.1	3.1	3.1	2.1	1.0	0.0	0.0	0.0	0.0
62.5°	2.1	2.1	2.1	1.0	1.0	0.0	0.0	0.0	0.0
65°	2.1	2.1	2.1	1.0	1.0	0.0	0.0	0.0	0.0
67.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
70°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
72.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
75°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.0	1.0	1.0	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)