

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: P219670

Luminaire Tested: **MRZ-1-REC-X-1H-L27-97-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219670
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-1H-L27-97-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, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 438.8 lumens
Efficiency: N/A
Efficacy: 64.5 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

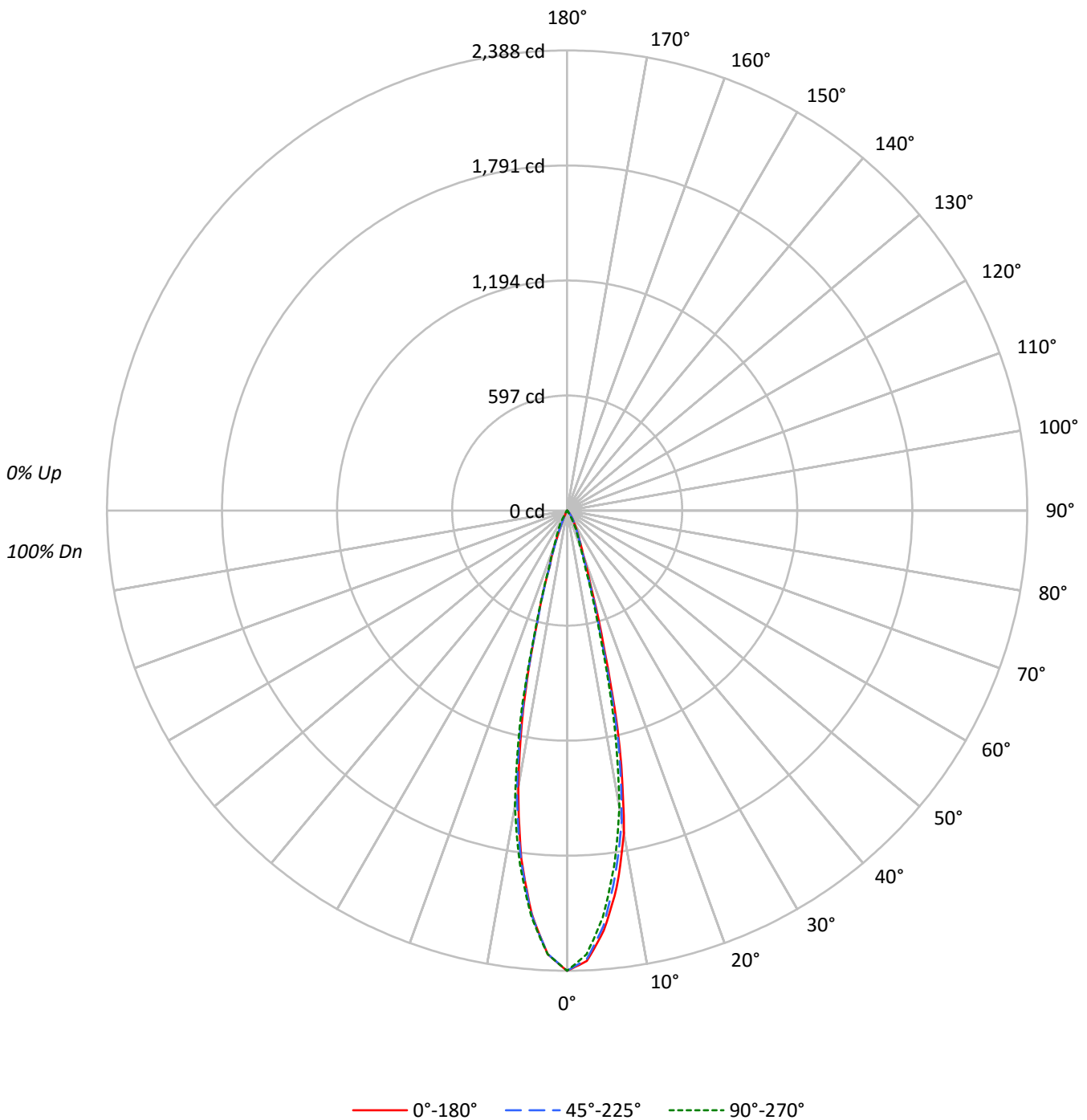
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	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	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	90	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°	1178240	1178240	1178240
5°	1083093	1049415	1040946
10°	850582	782247	730745
15°	377469	321130	306930
20°	125590	102278	92145
25°	69627	58576	19217
30°	40221	21022	6096
35°	22888	6144	2229
40°	12044	3478	1353
45°	6001	2233	349
50°	3301	1228	0
55°	2322	946	0
60°	1579	493	0
65°	1284	584	0
70°	721	0	0
75°	953	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.4	42.3
10°-20°	191.5	43.6
20°-30°	44.0	10.0
30°-40°	12.7	2.9
40°-50°	3.5	0.8
50°-60°	1.1	0.2
60°-70°	0.4	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°	420.9	95.9
0°-40°	433.5	98.8
0°-60°	438.2	99.9
0°-90°	438.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	438.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2388	2388	2388	2388	2388	
5°	2187	2162	2119	2108	2102	193
15°	739	674	629	594	601	216
25°	128	123	108	40	35	62
35°	38	35	10	4	4	25
45°	9	8	3	1	0	7
55°	3	2	1	0	0	2
65°	1	1	0	0	0	1
75°	0	0	0	0	0	0
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°	2388.1	2388.1	2388.1	2388.1	2388.1	2388.1	2388.1	2388.1	2388.1
2.5°	2339.9	2339.4	2329.2	2318.5	2304.6	2305.7	2303.5	2306.8	2305.1
5°	2186.9	2175.1	2162.3	2138.7	2118.9	2110.4	2108.2	2101.3	2101.8
7.5°	1971.3	1946.1	1909.7	1878.7	1862.1	1840.7	1831.6	1812.3	1820.4
10°	1697.8	1665.2	1632.5	1594.0	1561.4	1526.1	1498.8	1481.1	1458.6
12.5°	1260.7	1234.4	1221.1	1170.8	1131.7	1104.4	1089.4	1046.6	1047.2
15°	739.0	706.3	673.7	648.0	628.7	618.6	594.5	588.6	600.9
17.5°	394.9	380.4	359.0	335.5	322.1	312.5	304.5	301.3	296.4
20°	239.2	234.9	222.6	207.1	194.8	186.2	178.2	176.0	175.5
22.5°	172.8	170.7	162.7	151.4	139.7	119.9	95.8	91.0	92.6
25°	127.9	126.3	123.1	114.5	107.6	59.4	39.6	38.0	35.3
27.5°	95.8	94.7	91.0	85.1	72.2	26.2	21.9	20.3	20.3
30°	70.6	70.1	68.0	62.1	36.9	15.0	12.3	11.2	10.7
32.5°	51.9	51.9	49.8	44.4	16.6	9.6	7.5	7.0	6.4
35°	38.0	38.0	35.3	30.5	10.2	6.4	4.3	4.3	3.7
37.5°	27.3	26.8	25.1	19.3	7.5	4.3	3.2	3.2	2.7
40°	18.7	18.7	17.1	11.8	5.4	3.2	2.7	2.1	2.1
42.5°	12.8	12.8	11.8	7.5	4.3	2.7	1.6	1.6	1.6
45°	8.6	8.6	8.0	5.4	3.2	1.6	1.1	1.1	0.5
47.5°	5.9	5.9	5.4	3.7	2.1	1.1	0.5	0.5	0.5
50°	4.3	4.3	3.7	2.7	1.6	1.1	0.5	0.5	0.0
52.5°	3.2	3.2	3.2	2.1	1.1	0.5	0.0	0.0	0.0
55°	2.7	2.7	2.1	1.6	1.1	0.5	0.0	0.0	0.0
57.5°	2.1	2.1	1.6	1.1	0.5	0.5	0.0	0.0	0.0
60°	1.6	1.6	1.6	1.1	0.5	0.0	0.0	0.0	0.0
62.5°	1.1	1.1	1.1	0.5	0.5	0.0	0.0	0.0	0.0
65°	1.1	1.1	1.1	0.5	0.5	0.0	0.0	0.0	0.0
67.5°	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0
70°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
72.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
75°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
77.5°	0.5	0.5	0.5	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)