

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: P219666

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219666
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-L27-80-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: 614.9 lumens
Efficiency: N/A
Efficacy: 90.4 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

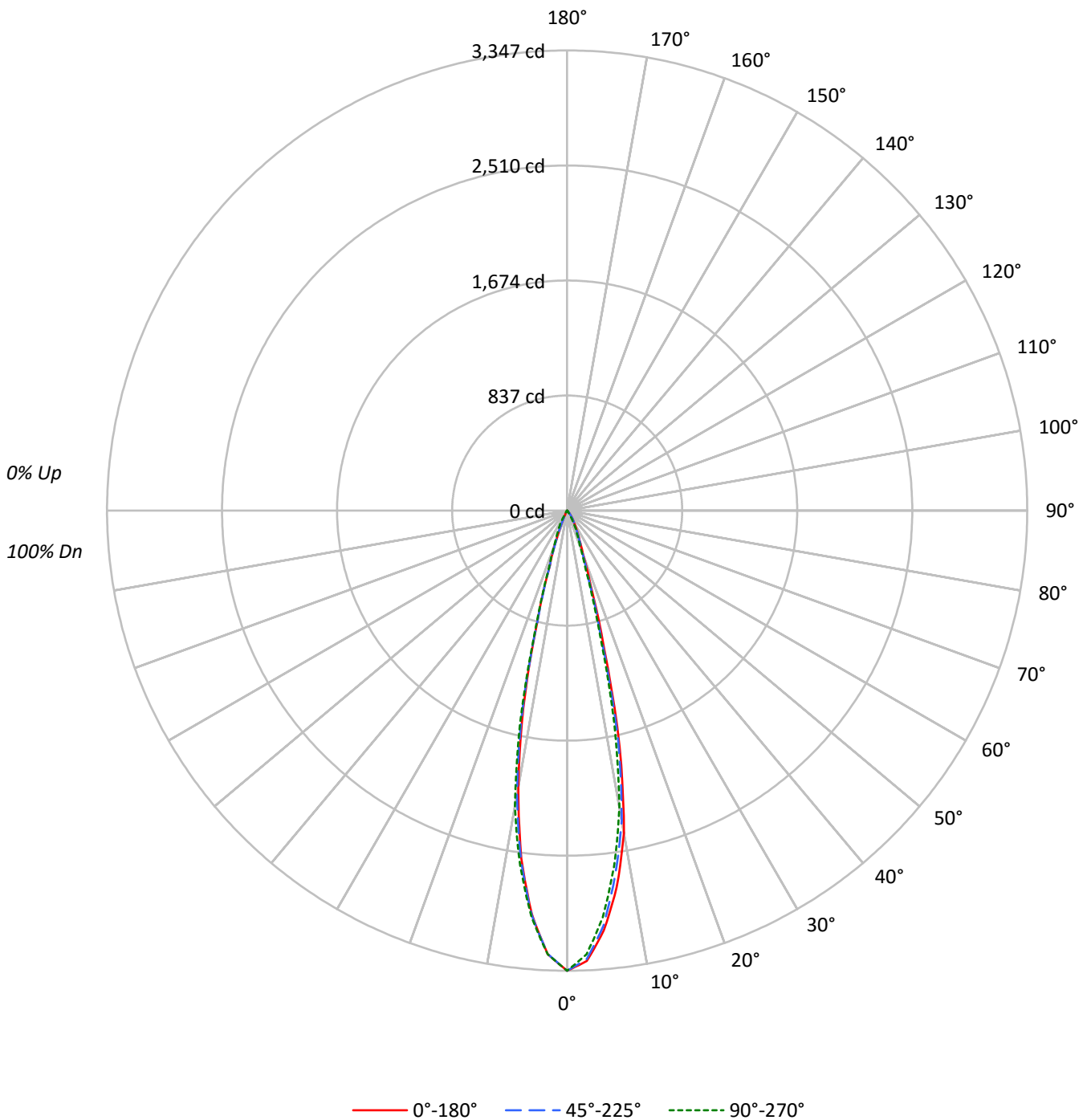
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1651341	1651341	1651341
5°	1517985	1470836	1458949
10°	1192158	1096368	1024225
15°	529019	450103	430182
20°	175995	143337	129161
25°	97554	82039	26947
30°	56401	29454	8546
35°	32043	8553	3132
40°	16874	4830	1932
45°	8373	3140	488
50°	4605	1689	0
55°	3183	1290	0
60°	2171	691	0
65°	1751	817	0
70°	1010	0	0
75°	1334	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.9	42.3
10°-20°	268.4	43.7
20°-30°	61.6	10.0
30°-40°	17.7	2.9
40°-50°	4.9	0.8
50°-60°	1.5	0.2
60°-70°	0.6	0.1
70°-80°	0.3	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°	589.9	95.9
0°-40°	607.6	98.8
0°-60°	614.1	99.9
0°-90°	614.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	614.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3347	3347	3347	3347	3347	
5°	3065	3030	2970	2955	2946	271
15°	1036	944	881	833	842	302
25°	179	172	151	56	50	86
35°	53	50	14	6	5	35
45°	12	11	4	2	1	10
55°	4	3	2	0	0	3
65°	2	2	1	0	0	1
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°	3347.0	3347.0	3347.0	3347.0	3347.0	3347.0	3347.0	3347.0	3347.0
2.5°	3279.5	3278.8	3264.5	3249.5	3230.0	3231.5	3228.5	3233.0	3230.8
5°	3065.0	3048.5	3030.5	2997.5	2969.8	2957.8	2954.8	2945.1	2945.8
7.5°	2762.8	2727.6	2676.6	2633.1	2609.8	2579.8	2567.1	2540.1	2551.3
10°	2379.6	2333.8	2288.1	2234.1	2188.4	2138.9	2100.6	2075.9	2044.4
12.5°	1766.9	1730.1	1711.4	1640.9	1586.1	1547.9	1526.9	1466.9	1467.7
15°	1035.7	989.9	944.2	908.2	881.2	866.9	833.2	824.9	842.2
17.5°	553.5	533.2	503.2	470.2	451.5	438.0	426.7	422.2	415.5
20°	335.2	329.2	312.0	290.2	273.0	261.0	249.7	246.7	246.0
22.5°	242.2	239.2	228.0	212.2	195.7	168.0	134.2	127.5	129.7
25°	179.2	177.0	172.5	160.5	150.7	83.2	55.5	53.2	49.5
27.5°	134.2	132.7	127.5	119.2	101.2	36.7	30.7	28.5	28.5
30°	99.0	98.2	95.2	87.0	51.7	21.0	17.2	15.7	15.0
32.5°	72.7	72.7	69.7	62.2	23.2	13.5	10.5	9.7	9.0
35°	53.2	53.2	49.5	42.7	14.2	9.0	6.0	6.0	5.2
37.5°	38.2	37.5	35.2	27.0	10.5	6.0	4.5	4.5	3.7
40°	26.2	26.2	24.0	16.5	7.5	4.5	3.7	3.0	3.0
42.5°	18.0	18.0	16.5	10.5	6.0	3.7	2.2	2.2	2.2
45°	12.0	12.0	11.2	7.5	4.5	2.2	1.5	1.5	0.7
47.5°	8.2	8.2	7.5	5.2	3.0	1.5	0.7	0.7	0.7
50°	6.0	6.0	5.2	3.7	2.2	1.5	0.7	0.7	0.0
52.5°	4.5	4.5	4.5	3.0	1.5	0.7	0.0	0.0	0.0
55°	3.7	3.7	3.0	2.2	1.5	0.7	0.0	0.0	0.0
57.5°	3.0	3.0	2.2	1.5	0.7	0.7	0.0	0.0	0.0
60°	2.2	2.2	2.2	1.5	0.7	0.0	0.0	0.0	0.0
62.5°	1.5	1.5	1.5	0.7	0.7	0.0	0.0	0.0	0.0
65°	1.5	1.5	1.5	0.7	0.7	0.0	0.0	0.0	0.0
67.5°	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0
70°	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
72.5°	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
75°	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
77.5°	0.7	0.7	0.7	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)