

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: P219682

Luminaire Tested: **MRZ-1-REC-X-3-L27-80-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219682
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-3-L27-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 3
Light Source: (1) 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1149.3 lumens
Efficiency: N/A
Efficacy: 95.0 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

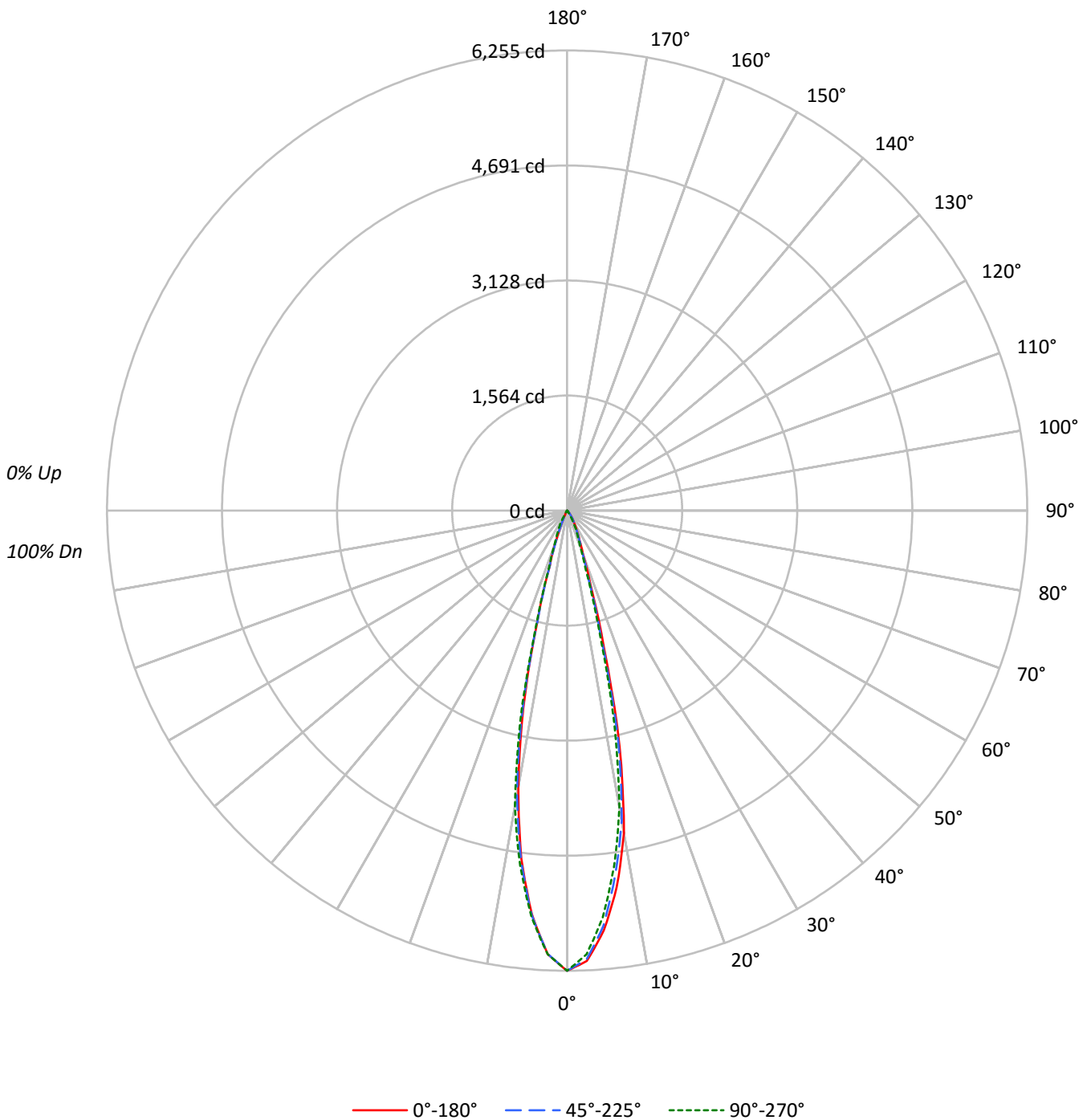
Input Watts (W): 12.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97					97			
2	112	108	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94					94			
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92					92			
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89					89			
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87					87			
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85					85			
7	98	92	88	85	97	91	87	85	90	87	84	89	86	84	88	86	84	83					83			
8	95	89	85	83	94	89	85	83	88	85	82	87	84	82	86	84	82	81					81			
9	93	87	83	81	92	86	83	80	86	82	80	85	82	80	84	82	80	79					79			
10	91	85	81	79	90	84	81	79	84	81	78	83	80	78	83	80	78	77					77			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3086138	3086138	3086138
5°	2836923	2748766	2726578
10°	2227956	2048902	1914085
15°	988623	841159	803923
20°	328940	267877	241363
25°	182369	153353	50356
30°	105396	55091	15952
35°	59929	16021	5903
40°	31623	9017	3607
45°	15629	5861	977
50°	8597	3224	0
55°	6021	2409	0
60°	4144	1381	0
65°	3269	1634	0
70°	2020	0	0
75°	2669	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.7	42.3
10°-20°	501.6	43.6
20°-30°	115.1	10.0
30°-40°	33.2	2.9
40°-50°	9.3	0.8
50°-60°	2.8	0.2
60°-70°	1.1	0.1
70°-80°	0.5	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°	1102.4	95.9
0°-40°	1135.6	98.8
0°-60°	1147.7	99.9
0°-90°	1149.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1149.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6255	6255	6255	6255	6255	
5°	5728	5664	5550	5522	5505	506
15°	1936	1764	1647	1557	1574	565
25°	335	322	282	104	92	161
35°	100	92	27	11	10	65
45°	22	21	8	3	1	19
55°	7	6	3	0	0	6
65°	3	3	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°	6255.1	6255.1	6255.1	6255.1	6255.1	6255.1	6255.1	6255.1	6255.1
2.5°	6129.0	6127.6	6100.9	6072.9	6036.5	6039.3	6033.7	6042.1	6037.9
5°	5728.1	5697.3	5663.6	5602.0	5550.1	5527.7	5522.1	5503.9	5505.3
7.5°	5163.3	5097.4	5002.1	4920.8	4877.4	4821.3	4797.5	4747.0	4768.1
10°	4447.1	4361.6	4276.1	4175.2	4089.7	3997.2	3925.7	3879.5	3820.6
12.5°	3302.0	3233.4	3198.3	3066.6	2964.3	2892.8	2853.5	2741.4	2742.8
15°	1935.5	1850.0	1764.5	1697.3	1646.8	1620.2	1557.1	1541.7	1573.9
17.5°	1034.3	996.5	940.4	878.8	843.7	818.5	797.5	789.1	776.5
20°	626.5	615.3	583.0	542.4	510.2	487.7	466.7	461.1	459.7
22.5°	452.7	447.1	426.1	396.6	365.8	313.9	250.9	238.3	242.5
25°	335.0	330.8	322.4	299.9	281.7	155.6	103.7	99.5	92.5
27.5°	250.9	248.1	238.3	222.8	189.2	68.7	57.5	53.3	53.3
30°	185.0	183.6	178.0	162.6	96.7	39.2	32.2	29.4	28.0
32.5°	135.9	135.9	130.3	116.3	43.4	25.2	19.6	18.2	16.8
35°	99.5	99.5	92.5	79.9	26.6	16.8	11.2	11.2	9.8
37.5°	71.5	70.1	65.9	50.5	19.6	11.2	8.4	8.4	7.0
40°	49.1	49.1	44.8	30.8	14.0	8.4	7.0	5.6	5.6
42.5°	33.6	33.6	30.8	19.6	11.2	7.0	4.2	4.2	4.2
45°	22.4	22.4	21.0	14.0	8.4	4.2	2.8	2.8	1.4
47.5°	15.4	15.4	14.0	9.8	5.6	2.8	1.4	1.4	1.4
50°	11.2	11.2	9.8	7.0	4.2	2.8	1.4	1.4	0.0
52.5°	8.4	8.4	8.4	5.6	2.8	1.4	0.0	0.0	0.0
55°	7.0	7.0	5.6	4.2	2.8	1.4	0.0	0.0	0.0
57.5°	5.6	5.6	4.2	2.8	1.4	1.4	0.0	0.0	0.0
60°	4.2	4.2	4.2	2.8	1.4	0.0	0.0	0.0	0.0
62.5°	2.8	2.8	2.8	1.4	1.4	0.0	0.0	0.0	0.0
65°	2.8	2.8	2.8	1.4	1.4	0.0	0.0	0.0	0.0
67.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0
70°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
72.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
75°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
77.5°	1.4	1.4	1.4	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)