

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: P219675

Luminaire Tested: **MRZ-1-REC-X-2-L30-80-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219675
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-L30-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL2
Light Source: (1) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 854.5 lumens
Efficiency: N/A
Efficacy: 97.1 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

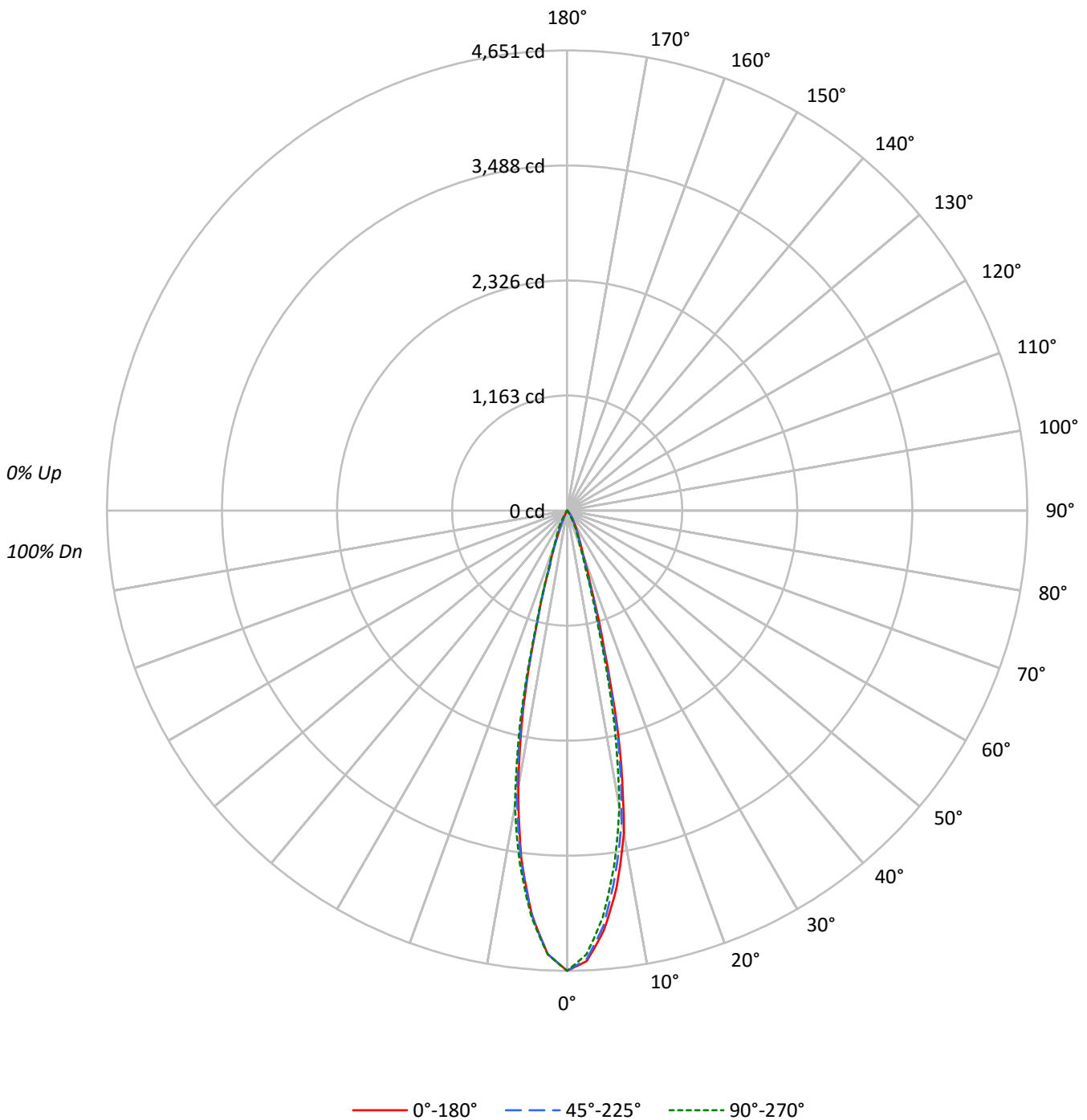
Input Watts (W): 8.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	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	83	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°	2294560	2294560	2294560
5°	2109231	2043708	2027215
10°	1656476	1523362	1423114
15°	735069	625404	597720
20°	244565	199149	179460
25°	135552	114048	37454
30°	78391	40962	11850
35°	44571	11926	4397
40°	23508	6698	2705
45°	11652	4396	698
50°	6371	2379	0
55°	4473	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°	361.1	42.3
10°-20°	372.9	43.6
20°-30°	85.6	10.0
30°-40°	24.7	2.9
40°-50°	6.9	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°	819.6	95.9
0°-40°	844.3	98.8
0°-60°	853.3	99.9
0°-90°	854.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	854.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4651	4651	4651	4651	4651	
5°	4259	4211	4126	4106	4093	376
15°	1439	1312	1224	1158	1170	420
25°	249	240	210	77	69	120
35°	74	69	20	8	7	48
45°	17	16	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	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4650.7	4650.7	4650.7	4650.7	4650.7	4650.7	4650.7	4650.7	4650.7
2.5°	4556.9	4555.8	4536.0	4515.2	4488.1	4490.2	4486.0	4492.3	4489.1
5°	4258.8	4235.9	4210.9	4165.1	4126.5	4109.8	4105.7	4092.1	4093.2
7.5°	3838.9	3789.9	3719.1	3658.6	3626.3	3584.6	3566.9	3529.4	3545.0
10°	3306.4	3242.9	3179.3	3104.3	3040.7	2971.9	2918.8	2884.4	2840.6
12.5°	2455.1	2404.0	2378.0	2280.0	2203.9	2150.8	2121.6	2038.2	2039.3
15°	1439.1	1375.5	1311.9	1261.9	1224.4	1204.6	1157.7	1146.3	1170.2
17.5°	769.0	740.9	699.2	653.4	627.3	608.6	592.9	586.7	577.3
20°	465.8	457.5	433.5	403.3	379.3	362.6	347.0	342.8	341.8
22.5°	336.6	332.4	316.8	294.9	272.0	233.4	186.5	177.1	180.3
25°	249.0	245.9	239.7	223.0	209.5	115.7	77.1	74.0	68.8
27.5°	186.5	184.4	177.1	165.7	140.7	51.1	42.7	39.6	39.6
30°	137.6	136.5	132.3	120.9	71.9	29.2	24.0	21.9	20.8
32.5°	101.1	101.1	96.9	86.5	32.3	18.8	14.6	13.5	12.5
35°	74.0	74.0	68.8	59.4	19.8	12.5	8.3	8.3	7.3
37.5°	53.1	52.1	49.0	37.5	14.6	8.3	6.3	6.3	5.2
40°	36.5	36.5	33.3	22.9	10.4	6.3	5.2	4.2	4.2
42.5°	25.0	25.0	22.9	14.6	8.3	5.2	3.1	3.1	3.1
45°	16.7	16.7	15.6	10.4	6.3	3.1	2.1	2.1	1.0
47.5°	11.5	11.5	10.4	7.3	4.2	2.1	1.0	1.0	1.0
50°	8.3	8.3	7.3	5.2	3.1	2.1	1.0	1.0	0.0
52.5°	6.3	6.3	6.3	4.2	2.1	1.0	0.0	0.0	0.0
55°	5.2	5.2	4.2	3.1	2.1	1.0	0.0	0.0	0.0
57.5°	4.2	4.2	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)