

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: P226124

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226124
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-1-L30-80-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 1
Light Source: (1) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 557.9 lumens
Efficiency: N/A
Efficacy: 103.3 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

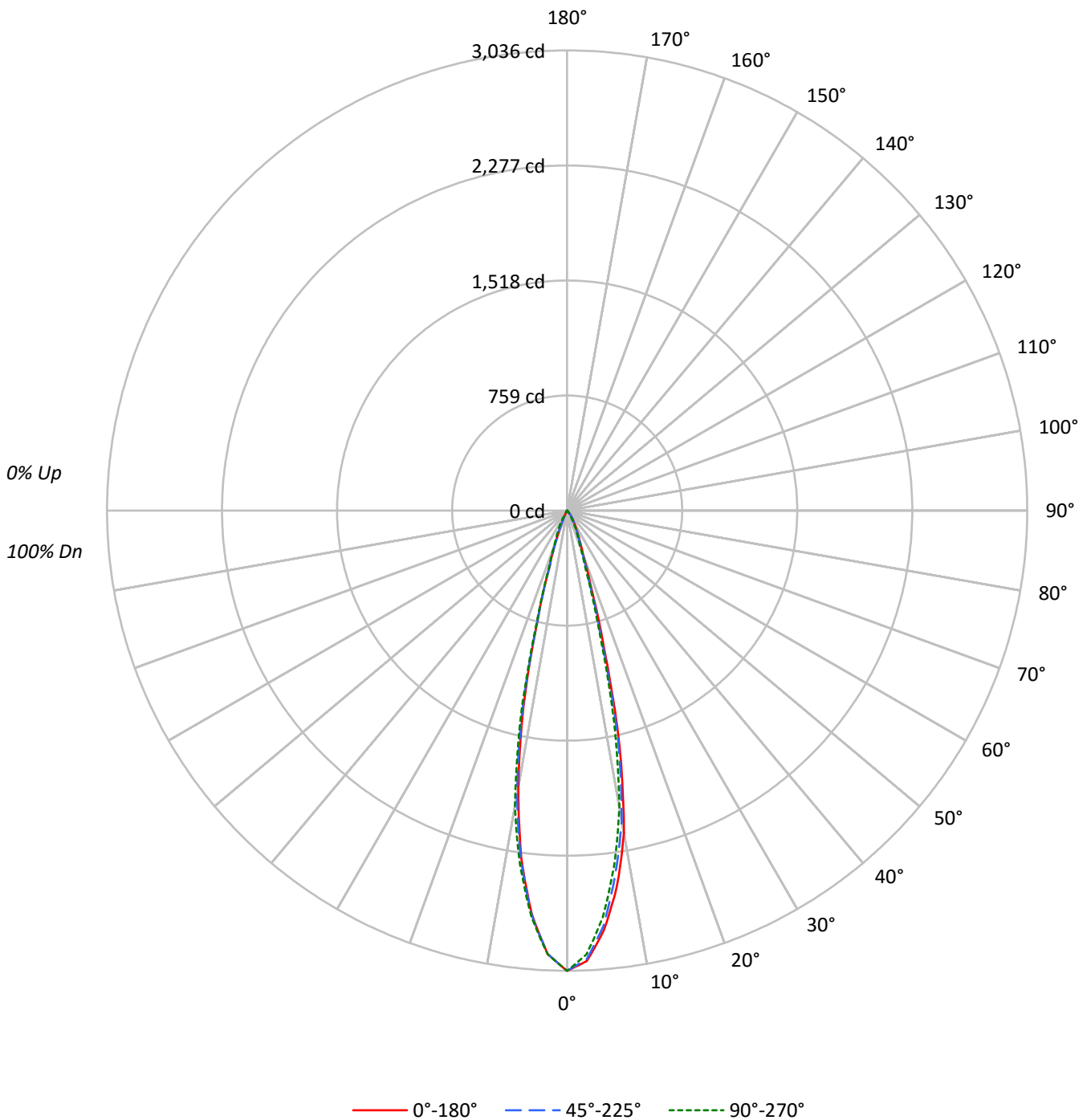
Input Watts (W): 5.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	96	91	87	85	90	87	84	89	86	84	88	85	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	82	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°	1498048	1498048	1498048
5°	1377033	1334242	1323494
10°	1081489	994567	929137
15°	479933	408321	390239
20°	159666	130001	117190
25°	88517	74472	24443
30°	51160	26776	7748
35°	29091	7770	2831
40°	15329	4380	1739
45°	7605	2861	488
50°	4145	1612	0
55°	2925	1118	0
60°	2072	691	0
65°	1518	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°	235.7	42.3
10°-20°	243.5	43.6
20°-30°	55.9	10.0
30°-40°	16.1	2.9
40°-50°	4.5	0.8
50°-60°	1.4	0.2
60°-70°	0.5	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°	535.1	95.9
0°-40°	551.2	98.8
0°-60°	557.1	99.9
0°-90°	557.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	557.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3036	3036	3036	3036	3036	
5°	2780	2749	2694	2680	2672	246
15°	940	856	799	756	764	274
25°	163	156	137	50	45	78
35°	48	45	13	5	5	32
45°	11	10	4	1	1	9
55°	3	3	1	0	0	3
65°	1	1	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°	3036.3	3036.3	3036.3	3036.3	3036.3	3036.3	3036.3	3036.3	3036.3
2.5°	2975.1	2974.3	2961.4	2947.8	2930.2	2931.5	2928.8	2932.8	2930.8
5°	2780.4	2765.5	2749.2	2719.2	2694.0	2683.1	2680.5	2671.6	2672.3
7.5°	2506.3	2474.3	2428.0	2388.6	2367.5	2340.3	2328.7	2304.2	2314.5
10°	2158.7	2117.2	2075.7	2026.7	1985.2	1940.3	1905.6	1883.1	1854.6
12.5°	1602.8	1569.5	1552.5	1488.6	1438.8	1404.2	1385.1	1330.7	1331.4
15°	939.6	898.0	856.5	823.9	799.4	786.5	755.8	748.3	764.0
17.5°	502.0	483.7	456.5	426.5	409.6	397.3	387.1	383.1	376.9
20°	304.1	298.7	283.0	263.3	247.6	236.7	226.6	223.8	223.2
22.5°	219.8	217.0	206.8	192.6	177.6	152.4	121.8	115.7	117.7
25°	162.6	160.6	156.5	145.6	136.8	75.5	50.3	48.3	44.9
27.5°	121.8	120.4	115.7	108.2	91.9	33.3	27.9	25.9	25.9
30°	89.8	89.1	86.4	78.9	47.0	19.0	15.6	14.3	13.6
32.5°	66.0	66.0	63.3	56.5	21.1	12.2	9.6	8.8	8.1
35°	48.3	48.3	44.9	38.7	12.9	8.1	5.4	5.4	4.7
37.5°	34.7	34.0	32.0	24.5	9.6	5.4	4.1	4.1	3.4
40°	23.8	23.8	21.8	15.0	6.8	4.1	3.4	2.7	2.7
42.5°	16.3	16.3	15.0	9.6	5.4	3.4	2.1	2.1	2.1
45°	10.9	10.9	10.2	6.8	4.1	2.1	1.3	1.3	0.7
47.5°	7.5	7.5	6.8	4.7	2.7	1.3	0.7	0.7	0.7
50°	5.4	5.4	4.7	3.4	2.1	1.3	0.7	0.7	0.0
52.5°	4.1	4.1	4.1	2.7	1.3	0.7	0.0	0.0	0.0
55°	3.4	3.4	2.7	2.1	1.3	0.7	0.0	0.0	0.0
57.5°	2.7	2.7	2.1	1.3	0.7	0.7	0.0	0.0	0.0
60°	2.1	2.1	2.1	1.3	0.7	0.0	0.0	0.0	0.0
62.5°	1.3	1.3	1.3	0.7	0.7	0.0	0.0	0.0	0.0
65°	1.3	1.3	1.3	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)