

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: P219695

Luminaire Tested: **MRZ-1-REC-X-4-L35-97-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219695
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-4-L35-97-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 4
Light Source: (1) 3500K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1198.5 lumens
Efficiency: N/A
Efficacy: 75.9 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

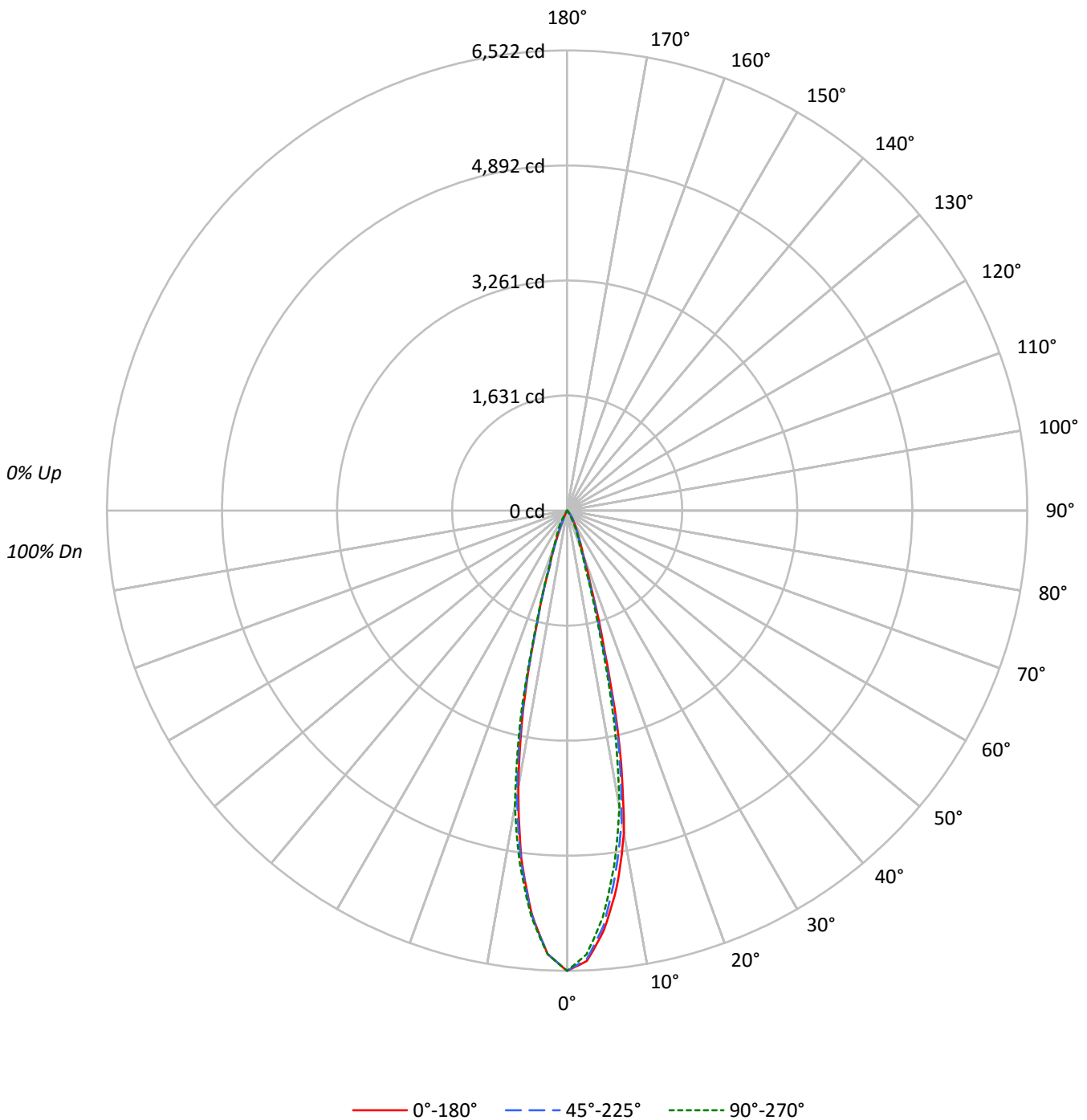
Input Watts (W): 15.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3217969	3217969	3217969
5°	2958114	2866193	2843014
10°	2323144	2136425	1995847
15°	1030864	877118	838299
20°	343011	279323	251653
25°	190153	159886	52533
30°	109896	57426	16635
35°	62519	16744	6144
40°	32912	9403	3736
45°	16327	6140	1047
50°	8980	3377	0
55°	6279	2495	0
60°	4342	1480	0
65°	3386	1751	0
70°	2164	0	0
75°	2859	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	506.4	42.3
10°-20°	523.0	43.6
20°-30°	120.0	10.0
30°-40°	34.6	2.9
40°-50°	9.7	0.8
50°-60°	3.0	0.2
60°-70°	1.2	0.1
70°-80°	0.6	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°	1149.5	95.9
0°-40°	1184.1	98.8
0°-60°	1196.7	99.9
0°-90°	1198.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1198.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6522	6522	6522	6522	6522	
5°	5973	5906	5787	5758	5740	528
15°	2018	1840	1717	1624	1641	589
25°	349	336	294	108	96	168
35°	104	96	28	12	10	68
45°	23	22	9	3	2	20
55°	7	6	3	0	0	7
65°	3	3	2	0	0	3
75°	2	2	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°	6522.3	6522.3	6522.3	6522.3	6522.3	6522.3	6522.3	6522.3	6522.3
2.5°	6390.8	6389.3	6361.6	6332.3	6294.3	6297.2	6291.4	6300.2	6295.8
5°	5972.8	5940.7	5905.6	5841.3	5787.2	5763.8	5758.0	5739.0	5740.4
7.5°	5383.9	5315.2	5215.8	5131.0	5085.7	5027.3	5002.4	4949.8	4971.7
10°	4637.1	4547.9	4458.8	4353.6	4264.4	4168.0	4093.4	4045.2	3983.8
12.5°	3443.1	3371.5	3335.0	3197.6	3090.9	3016.4	2975.4	2858.5	2860.0
15°	2018.2	1929.1	1839.9	1769.8	1717.2	1689.4	1623.6	1607.6	1641.2
17.5°	1078.5	1039.1	980.6	916.3	879.8	853.5	831.5	822.8	809.6
20°	653.3	641.6	607.9	565.6	532.0	508.6	486.7	480.8	479.3
22.5°	472.0	466.2	444.3	413.6	381.4	327.4	261.6	248.4	252.8
25°	349.3	344.9	336.1	312.7	293.7	162.2	108.1	103.8	96.5
27.5°	261.6	258.7	248.4	232.4	197.3	71.6	59.9	55.5	55.5
30°	192.9	191.4	185.6	169.5	100.8	40.9	33.6	30.7	29.2
32.5°	141.8	141.8	135.9	121.3	45.3	26.3	20.5	19.0	17.5
35°	103.8	103.8	96.5	83.3	27.8	17.5	11.7	11.7	10.2
37.5°	74.5	73.1	68.7	52.6	20.5	11.7	8.8	8.8	7.3
40°	51.1	51.1	46.8	32.2	14.6	8.8	7.3	5.8	5.8
42.5°	35.1	35.1	32.2	20.5	11.7	7.3	4.4	4.4	4.4
45°	23.4	23.4	21.9	14.6	8.8	4.4	2.9	2.9	1.5
47.5°	16.1	16.1	14.6	10.2	5.8	2.9	1.5	1.5	1.5
50°	11.7	11.7	10.2	7.3	4.4	2.9	1.5	1.5	0.0
52.5°	8.8	8.8	8.8	5.8	2.9	1.5	0.0	0.0	0.0
55°	7.3	7.3	5.8	4.4	2.9	1.5	0.0	0.0	0.0
57.5°	5.8	5.8	4.4	2.9	1.5	1.5	0.0	0.0	0.0
60°	4.4	4.4	4.4	2.9	1.5	0.0	0.0	0.0	0.0
62.5°	2.9	2.9	2.9	1.5	1.5	0.0	0.0	0.0	0.0
65°	2.9	2.9	2.9	1.5	1.5	0.0	0.0	0.0	0.0
67.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0
70°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
72.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
75°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
77.5°	1.5	1.5	1.5	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)