

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: P219694

Luminaire Tested: **MRZ-1-REC-X-4-L30-97-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219694
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-L30-97-NFL-UNV-X-STD-SNT
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH SNOOT, LIGHT LEVEL 4
Light Source: (1) 3000K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1146.6 lumens
Efficiency: N/A
Efficacy: 72.6 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

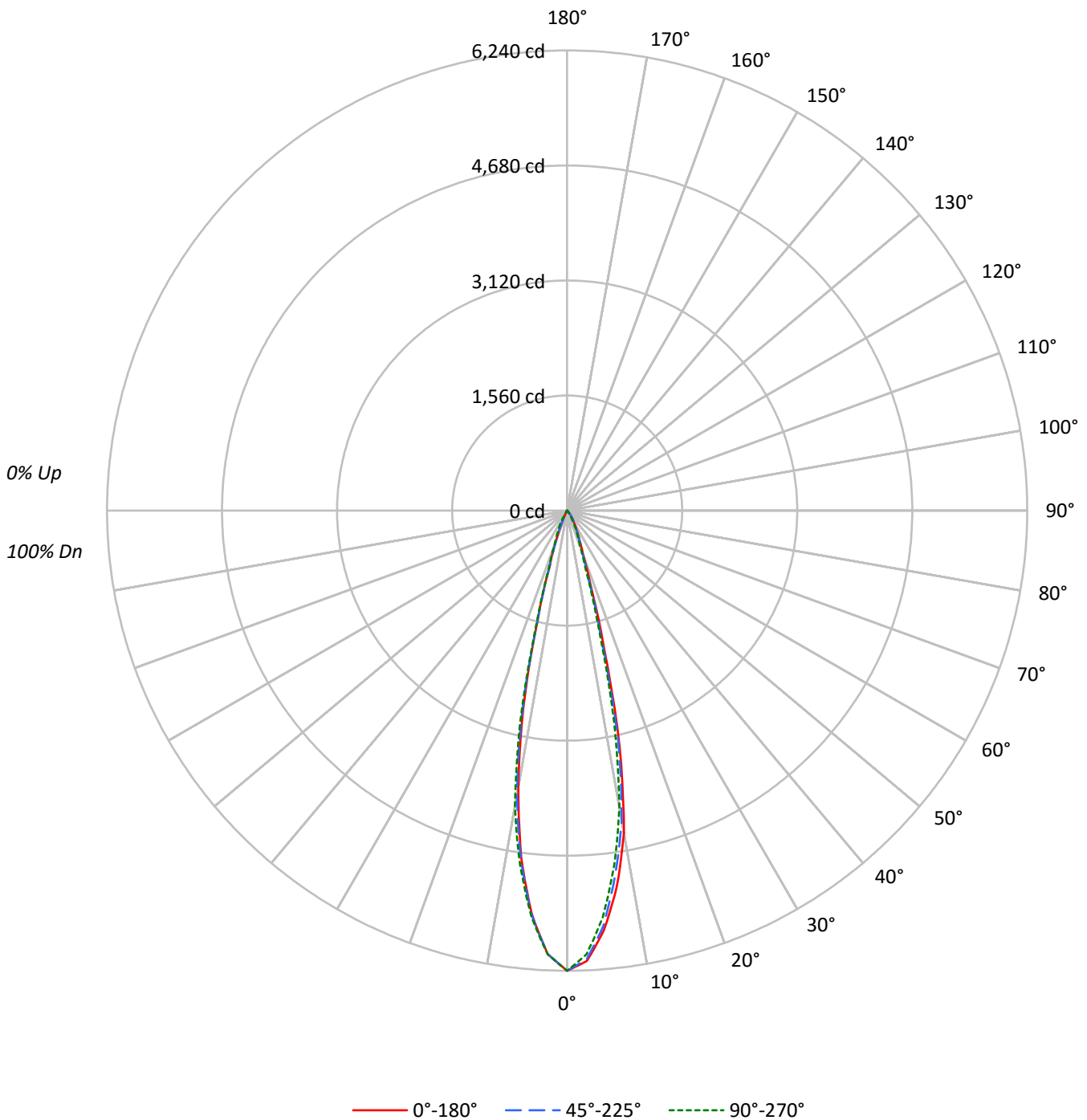
Input Watts (W): 15.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P219694

CATALOG NUMBER: MRZ-1-REC-X-4-L30-97-NFL-UNV-X-STD-SNT

Luminous Intensity Polar Plot





TEST NUMBER: P219694

CATALOG NUMBER: MRZ-1-REC-X-4-L30-97-NFL-UNV-X-STD-SNT

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°	3078688	3078688	3078688
5°	2830088	2742129	2719991
10°	2222595	2043992	1909476
15°	986273	839116	801982
20°	328152	267195	240785
25°	181933	152972	50247
30°	105168	54977	15952
35°	59809	16021	5903
40°	31495	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



TEST NUMBER: P219694

CATALOG NUMBER: MRZ-1-REC-X-4-L30-97-NFL-UNV-X-STD-SNT

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	484.5	42.3
10°-20°	500.4	43.6
20°-30°	114.8	10.0
30°-40°	33.1	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°	1099.7	95.9
0°-40°	1132.8	98.8
0°-60°	1145.0	99.9
0°-90°	1146.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1146.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6240	6240	6240	6240	6240	
5°	5714	5650	5537	5509	5492	505
15°	1931	1760	1643	1553	1570	564
25°	334	322	281	104	92	161
35°	99	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	



TEST NUMBER: P219694

CATALOG NUMBER: MRZ-1-REC-X-4-L30-97-NFL-UNV-X-STD-SNT

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	6240.0	6240.0	6240.0	6240.0	6240.0	6240.0	6240.0	6240.0	6240.0
2.5°	6114.2	6112.8	6086.2	6058.3	6021.9	6024.7	6019.1	6027.5	6023.3
5°	5714.3	5683.6	5650.0	5588.5	5536.7	5514.4	5508.8	5490.6	5492.0
7.5°	5150.9	5085.1	4990.1	4909.0	4865.6	4809.7	4785.9	4735.6	4756.6
10°	4436.4	4351.1	4265.8	4165.1	4079.9	3987.6	3916.3	3870.1	3811.4
12.5°	3294.1	3225.6	3190.6	3059.2	2957.1	2885.8	2846.7	2734.8	2736.2
15°	1930.9	1845.6	1760.3	1693.2	1642.8	1616.3	1553.4	1538.0	1570.1
17.5°	1031.8	994.1	938.2	876.7	841.7	816.5	795.6	787.2	774.6
20°	625.0	613.8	581.6	541.1	508.9	486.6	465.6	460.0	458.6
22.5°	451.6	446.0	425.0	395.7	364.9	313.2	250.3	237.7	241.9
25°	334.2	330.0	321.6	299.2	281.0	155.2	103.5	99.3	92.3
27.5°	250.3	247.5	237.7	222.3	188.8	68.5	57.3	53.1	53.1
30°	184.6	183.2	177.6	162.2	96.5	39.1	32.2	29.4	28.0
32.5°	135.6	135.6	130.0	116.0	43.3	25.2	19.6	18.2	16.8
35°	99.3	99.3	92.3	79.7	26.6	16.8	11.2	11.2	9.8
37.5°	71.3	69.9	65.7	50.3	19.6	11.2	8.4	8.4	7.0
40°	48.9	48.9	44.7	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)