

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: P14874

Luminaire Tested: **MRZ-1-REC-X-3-L27-97-NFL-UNV-X-STD-SNT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 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-L27-97-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, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 820.0 lumens
Efficiency: N/A
Efficacy: 68.9 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

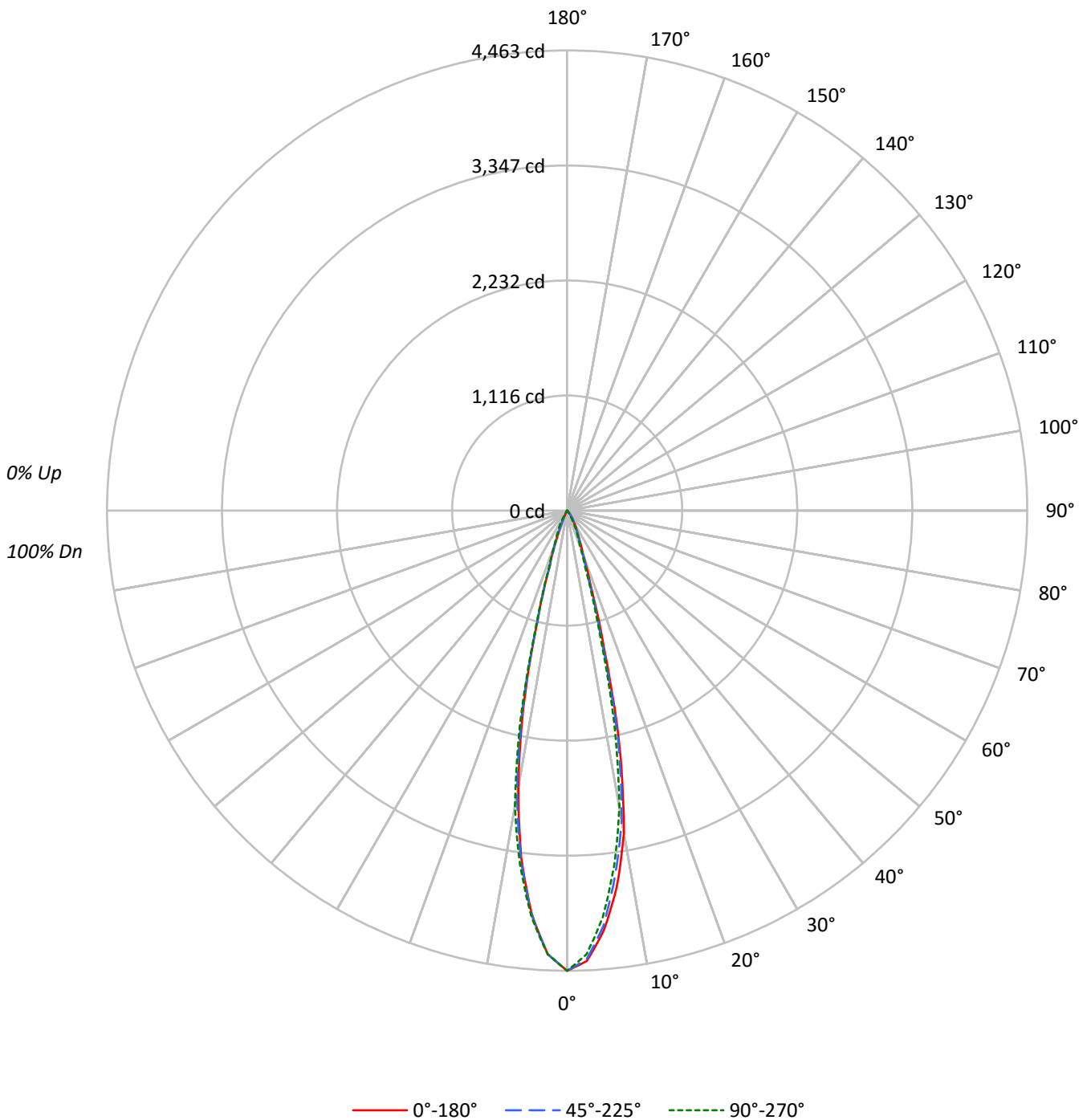
Input Watts (W): 11.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	97	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°	2201953	2201953	2201953
5°	2024145	1961246	1945398
10°	1589644	1461891	1365701
15°	705393	600171	573611
20°	234694	191116	172214
25°	130108	109421	35929
30°	75201	39310	11394
35°	42764	11444	4216
40°	22542	6441	2576
45°	11164	4186	698
50°	6140	2303	0
55°	4301	1720	0
60°	2960	987	0
65°	2335	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°	346.5	42.3
10°-20°	357.9	43.6
20°-30°	82.1	10.0
30°-40°	23.7	2.9
40°-50°	6.6	0.8
50°-60°	2.0	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°	786.6	95.9
0°-40°	810.2	98.8
0°-60°	818.9	99.9
0°-90°	820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	820.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4463	4463	4463	4463	4463	
5°	4087	4041	3960	3940	3928	361
15°	1381	1259	1175	1111	1123	403
25°	239	230	201	74	66	115
35°	71	66	19	8	7	46
45°	16	15	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4463	4463	4463	4463	4463	4463	4463	4463	4463
2.5°	4373	4372	4353	4333	4307	4309	4305	4311	4308
5°	4087	4065	4041	3997	3960	3944	3940	3927	3928
7.5°	3684	3637	3569	3511	3480	3440	3423	3387	3402
10°	3173	3112	3051	2979	2918	2852	2801	2768	2726
12.5°	2356	2307	2282	2188	2115	2064	2036	1956	1957
15°	1381	1320	1259	1211	1175	1156	1111	1100	1123
17.5°	738	711	671	627	602	584	569	563	554
20°	447	439	416	387	364	348	333	329	328
22.5°	323	319	304	283	261	224	179	170	173
25°	239	236	230	214	201	111	74	71	66
27.5°	179	177	170	159	135	49	41	38	38
30°	132	131	127	116	69	28	23	21	20
32.5°	97	97	93	83	31	18	14	13	12
35°	71	71	66	57	19	12	8	8	7
37.5°	51	50	47	36	14	8	6	6	5
40°	35	35	32	22	10	6	5	4	4
42.5°	24	24	22	14	8	5	3	3	3
45°	16	16	15	10	6	3	2	2	1
47.5°	11	11	10	7	4	2	1	1	1
50°	8	8	7	5	3	2	1	1	0
52.5°	6	6	6	4	2	1	0	0	0
55°	5	5	4	3	2	1	0	0	0
57.5°	4	4	3	2	1	1	0	0	0
60°	3	3	3	2	1	0	0	0	0
62.5°	2	2	2	1	1	0	0	0	0
65°	2	2	2	1	1	0	0	0	0
67.5°	1	1	1	1	1	0	0	0	0
70°	1	1	1	1	0	0	0	0	0
72.5°	1	1	1	1	0	0	0	0	0
75°	1	1	1	1	0	0	0	0	0
77.5°	1	1	1	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)