

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: P219885

Luminaire Tested: **MRZ-1-REC-X-1H-L35-80-WFL-UNV-X-STD-LSL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14882)
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-1H-L35-80-WFL-UNV-X-STD-LSL
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC WITH LINEAR SPREAD LENS, LIGHT LEVEL 1
Light Source: (1) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 489.5 lumens
Efficiency: N/A
Efficacy: 72.0 lumens/watt
Spacing Criteria (0/90/45): 0.88 / 0.83 / 0.87
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

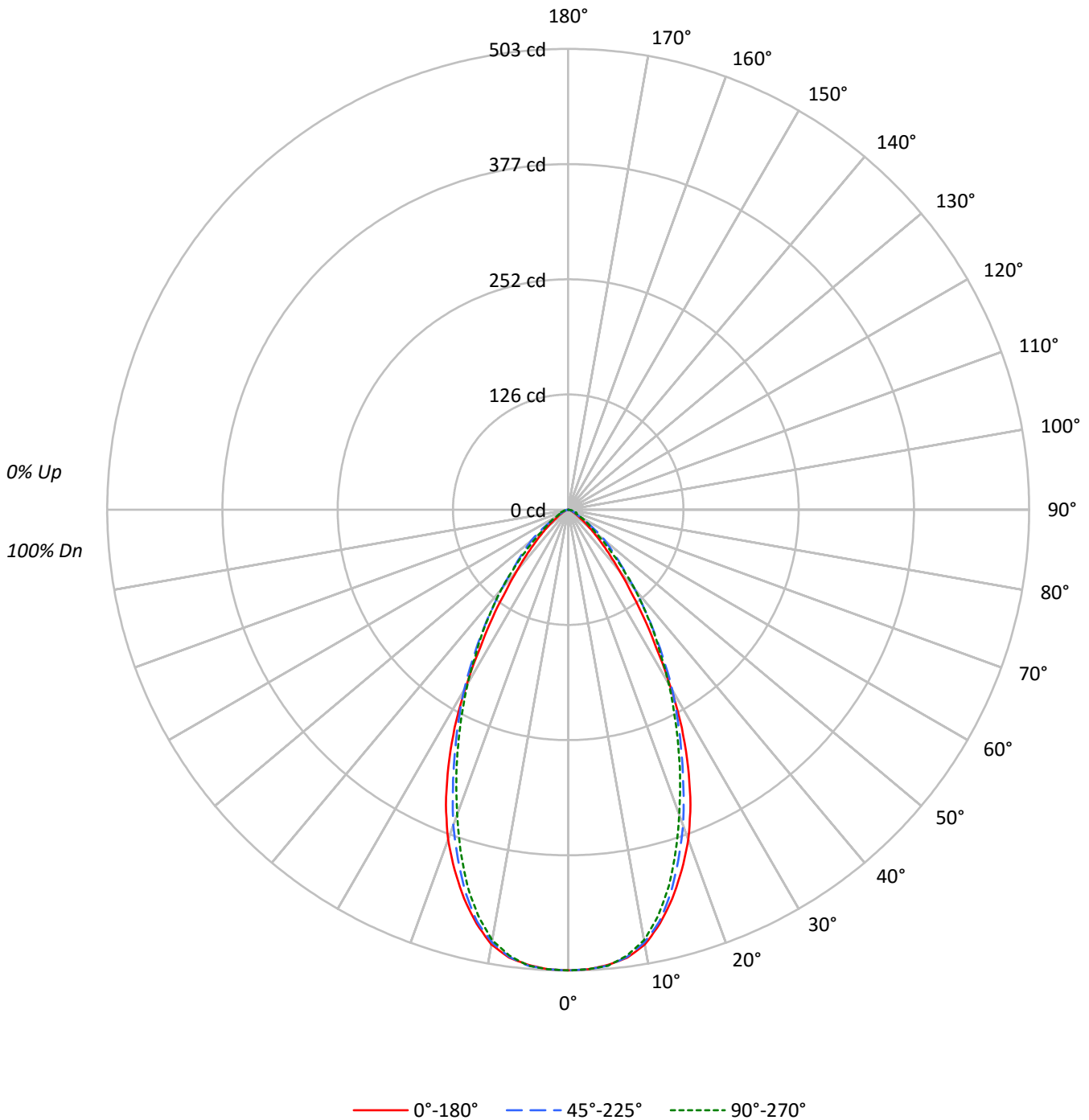
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61					61			
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56					56			
8	76	66	59	55	75	65	59	55	64	58	54	63	58	54	62	57	54	52					52			
9	72	62	55	51	71	61	55	51	60	55	51	59	54	51	58	54	50	49					49			
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46					46			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	248071	248071	248071
5°	247038	247434	247434
10°	241427	240225	239023
15°	224439	221118	217032
20°	201144	192323	185970
25°	168324	159178	154768
30°	127215	129494	124936
35°	86611	98718	97754
40°	55840	72457	72972
45°	35864	52680	48772
50°	22797	40067	30242
55°	13849	22795	22107
60°	8683	12729	14308
65°	6538	9339	10273
70°	5770	8078	13848
75°	4575	6100	9150
80°	2273	4546	6819
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.0	9.6
10°-20°	119.9	24.5
20°-30°	135.0	27.6
30°-40°	99.8	20.4
40°-50°	53.2	10.9
50°-60°	21.9	4.5
60°-70°	8.5	1.7
70°-80°	3.8	0.8
80°-90°	0.4	0.1
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°	301.9	61.7
0°-40°	401.7	82.1
0°-60°	476.8	97.4
0°-90°	489.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	489.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	499	499	500	500	500	47
15°	439	435	433	427	425	122
25°	309	305	292	287	284	140
35°	144	157	164	162	162	91
45°	51	58	76	75	70	41
55°	16	19	26	25	26	15
65°	6	8	8	10	9	6
75°	2	2	3	5	5	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8
2.5°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
5°	498.8	498.8	498.8	498.8	498.8	498.8	498.8	499.6	498.8	499.6	499.6
7.5°	493.2	492.4	492.4	492.4	492.4	492.4	492.4	492.4	492.4	492.4	492.4
10°	481.9	481.1	481.1	479.5	480.3	479.5	479.5	479.5	479.5	479.5	479.5
12.5°	462.7	462.7	461.9	461.1	460.3	460.3	460.3	460.3	460.3	460.3	460.3
15°	439.4	439.4	438.6	437.0	436.2	435.4	434.6	434.6	433.7	433.7	432.9
17.5°	412.1	412.1	410.5	408.8	407.2	406.4	404.8	403.2	402.4	401.6	400.0
20°	383.1	383.1	380.7	379.9	376.7	375.9	373.5	371.1	367.9	367.1	366.3
22.5°	348.6	347.0	346.2	346.2	343.8	342.2	340.6	337.4	332.5	330.9	328.5
25°	309.2	308.4	308.4	307.6	306.8	305.2	306.0	303.6	299.6	296.4	292.4
27.5°	268.3	267.5	266.7	267.5	269.1	269.1	268.3	266.7	265.1	261.1	258.6
30°	223.3	223.3	224.9	227.3	229.7	230.5	231.3	230.5	229.7	227.3	227.3
32.5°	179.1	180.7	182.3	188.0	190.4	192.0	192.8	195.2	195.2	195.2	193.6
35°	143.8	143.8	147.0	151.0	154.2	157.4	158.2	161.5	163.9	163.9	163.9
37.5°	111.6	112.5	115.7	118.9	122.9	124.5	126.1	130.9	134.1	135.7	136.5
40°	86.7	88.4	90.0	93.2	97.2	98.0	99.6	103.6	107.6	110.8	112.5
42.5°	67.5	67.5	69.1	71.5	73.9	76.3	77.9	80.3	85.1	87.6	90.8
45°	51.4	52.2	53.0	54.6	57.0	57.8	59.4	62.7	65.9	69.1	75.5
47.5°	39.4	39.4	40.2	41.0	43.4	44.2	45.0	48.2	51.4	57.8	62.7
50°	29.7	29.7	29.7	30.5	32.1	33.7	34.5	36.9	43.4	48.2	52.2
52.5°	21.7	21.7	21.7	23.3	24.1	24.9	25.7	28.9	36.9	37.8	39.4
55°	16.1	16.1	16.1	16.9	18.5	19.3	20.1	25.7	27.3	29.7	26.5
57.5°	12.0	12.0	12.0	12.9	13.7	14.5	16.1	20.1	22.5	19.3	18.5
60°	8.8	8.8	8.8	9.6	11.2	12.0	13.7	15.3	15.3	13.7	12.9
62.5°	7.2	7.2	7.2	7.2	8.8	10.4	10.4	12.0	10.4	9.6	9.6
65°	5.6	5.6	5.6	6.4	7.2	8.0	8.8	8.0	7.2	7.2	8.0
67.5°	4.8	4.8	4.8	4.8	6.4	6.4	6.4	5.6	5.6	5.6	6.4
70°	4.0	4.0	4.0	4.0	4.8	4.8	4.8	4.0	4.0	4.8	5.6
72.5°	3.2	3.2	3.2	4.0	4.0	4.0	3.2	3.2	3.2	4.0	4.0
75°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.2
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8
85°	0.0	0.0	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	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8
2.5°	502.0	502.0	502.8	502.0	502.0	502.0	502.0	502.0	502.0	502.0
5°	499.6	499.6	499.6	499.6	499.6	499.6	499.6	499.6	499.6	499.6
7.5°	492.4	492.4	492.4	491.6	491.6	491.6	491.6	491.6	491.6	490.8
10°	479.5	479.5	478.7	477.9	478.7	477.1	477.1	476.3	476.3	477.1
12.5°	459.5	458.6	457.0	457.0	456.2	455.4	454.6	454.6	453.8	453.8
15°	432.9	431.3	429.7	428.9	427.3	428.1	427.3	425.7	425.7	424.9
17.5°	400.8	399.2	396.8	394.4	394.4	393.6	393.6	392.0	391.2	390.4
20°	363.9	363.1	362.3	359.8	359.0	357.4	355.8	355.8	353.4	354.2
22.5°	326.9	326.1	324.5	323.7	322.1	322.1	320.5	320.5	318.9	318.9
25°	291.6	290.8	289.2	288.4	286.8	286.8	285.1	286.0	284.3	284.3
27.5°	256.2	255.4	253.8	254.6	253.0	252.2	251.4	251.4	250.6	250.6
30°	224.1	221.7	221.7	220.9	220.1	220.1	220.1	218.5	218.5	219.3
32.5°	192.8	191.2	190.4	190.4	191.2	190.4	189.6	189.6	188.8	188.0
35°	163.9	163.1	162.3	162.3	162.3	162.3	162.3	162.3	162.3	162.3
37.5°	136.5	137.4	136.5	137.4	138.2	137.4	136.5	135.7	135.7	135.7
40°	113.3	114.9	115.7	114.1	113.3	113.3	112.5	113.3	112.5	113.3
42.5°	94.8	95.6	94.0	94.8	95.6	95.6	94.0	91.6	90.0	89.2
45°	77.1	78.7	82.7	77.1	74.7	73.9	71.5	70.7	69.9	69.9
47.5°	65.9	69.1	61.0	58.6	57.0	57.0	55.4	53.8	53.8	53.0
50°	53.8	47.4	45.8	44.2	42.6	41.8	41.0	40.2	40.2	39.4
52.5°	36.1	34.5	32.9	32.1	31.3	31.3	31.3	31.3	31.3	31.3
55°	25.7	24.9	24.1	24.9	24.9	25.7	26.5	26.5	26.5	25.7
57.5°	17.7	17.7	19.3	20.9	20.9	20.9	20.9	20.1	20.1	20.1
60°	13.7	14.5	16.1	16.1	16.1	16.9	16.1	15.3	14.5	14.5
62.5°	10.4	12.0	12.9	12.9	12.0	12.0	11.2	11.2	11.2	11.2
65°	8.8	9.6	9.6	9.6	9.6	8.8	8.0	8.0	8.8	8.8
67.5°	7.2	7.2	7.2	6.4	6.4	7.2	8.0	8.8	8.8	9.6
70°	5.6	5.6	5.6	6.4	7.2	7.2	8.8	8.8	9.6	9.6
72.5°	4.0	4.0	5.6	6.4	7.2	7.2	7.2	6.4	6.4	6.4
75°	3.2	4.0	5.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8
77.5°	2.4	3.2	3.2	2.4	3.2	3.2	3.2	4.0	4.0	4.8
80°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.0	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	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)