

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: SURE-LITES

Report Number: P10323

Luminaire Tested: **20W/MR11**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: P10323
Test Lab: PEACHTREE CITY
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SURE-LITES
Catalog Number: 20W/MR11
Description: LUMEN AND BEAM SPREAD TEST ON NEW EMERGENCY LAMP (FTD)
FROM BENSHINE INC.
-----THIS TEST WAS PERFORMED USING ABSOLUTE PHOTOMETRY TECHNIQUES.
Light Source: ONE BI-PIN MR11 HALOGEN INCANDESCENT LAMP
20W/MR11 BI PIN LAMP
Ballast/Driver: -

Summary

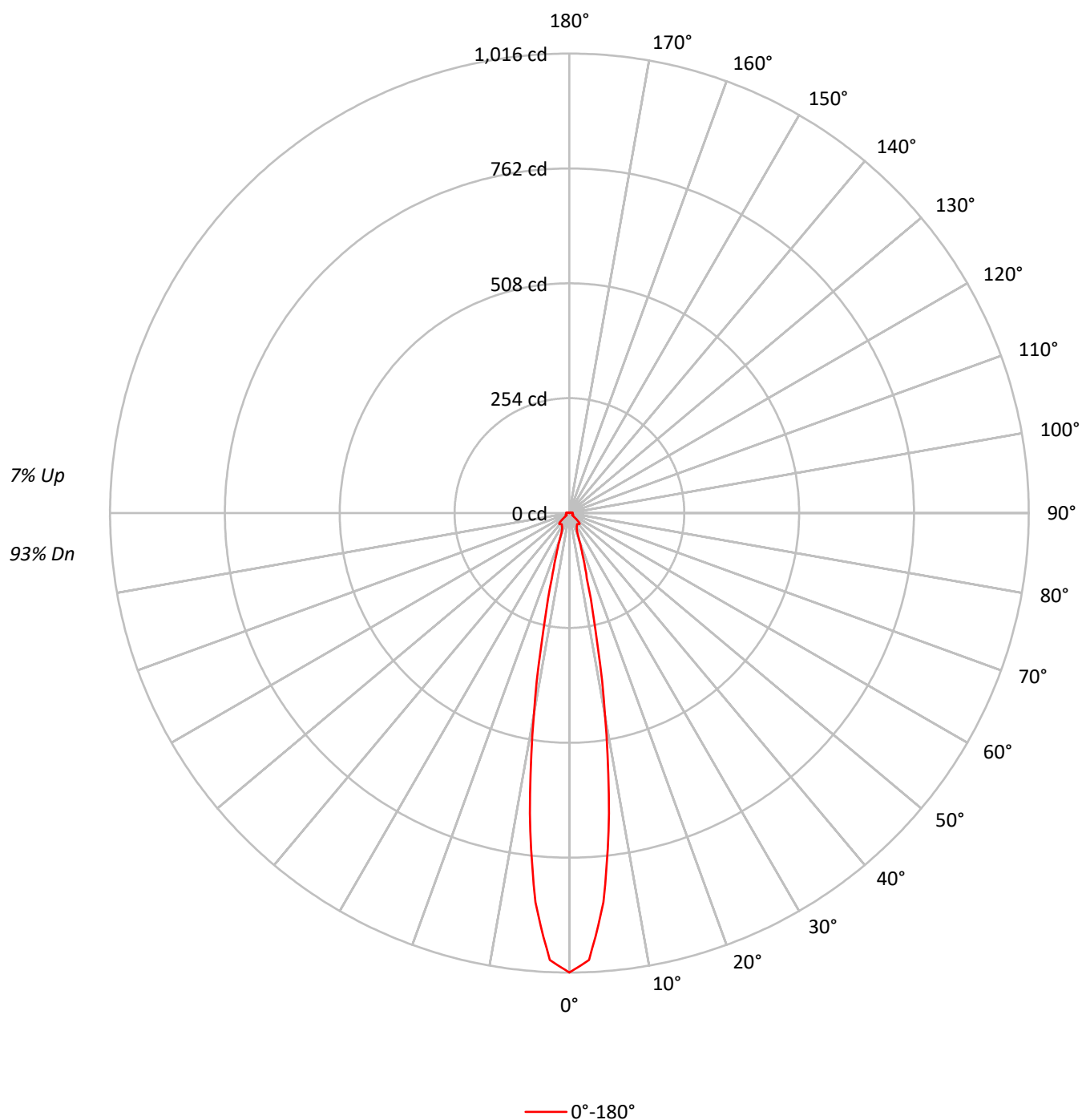
Lumens per Lamp: 224 (1 lamp)
Luminaire Lumens: 224.5 lumens
Efficiency: 100.2%
Efficacy: 11.2 lumens/watt
Spacing Criteria (0/90/45): 0.32 / 0.32 / 0.31
Luminous Opening: Circular (Dia: 0.09' x H: 0')
CIE Type: Direct

Input Watts (W): 20
Input Voltage (V): NR
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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	
RCR																						
0	118	118	118	118		114	114	114	114		107	107	107		101	101	101		95	95	95	
1	110	107	103	101		107	104	101	98		98	96	94		93	91	90		89	87	86	
2	104	98	94	90		101	96	92	88		91	88	85		87	84	82		83	81	79	
3	99	91	86	81		96	89	84	80		86	82	78		82	79	76		79	76	74	
4	94	86	80	75		91	84	79	75		81	76	73		78	74	71		75	72	70	
5	90	81	75	71		87	80	74	70		77	72	69		75	70	67		72	69	66	
6	86	77	71	67		84	76	70	66		73	69	65		71	67	64		69	66	63	
7	82	73	67	63		81	72	67	63		70	66	62		69	64	61		67	63	60	
8	79	70	64	61		78	69	64	60		68	63	60		66	62	59		65	61	58	
9	77	68	62	58		75	67	61	58		65	61	57		64	60	57		63	59	56	
10	74	65	60	56		73	64	59	56		63	59	55		62	58	55		61	57	54	

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1584279
5°	1352407
10°	717273
15°	240536
20°	102883
25°	65380
30°	59418
35°	57108
40°	65138
45°	70567
50°	33962
55°	19030
60°	24949
65°	33207
70°	41033
75°	42173
80°	53879
85°	107348



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp	0°	Flux
0°-10°	68.9	30.7	30.8	0°	1016
10°-20°	49.0	21.8	21.9	5°	864
20°-30°	18.8	8.4	8.4	15°	149
30°-40°	19.5	8.7	8.7	25°	38
40°-50°	21.5	9.6	9.6	35°	30
50°-60°	7.4	3.3	3.3	45°	32
60°-70°	8.6	3.8	3.8	55°	7
70°-80°	7.8	3.5	3.5	65°	9
80°-90°	6.5	2.9	2.9	75°	7
90°-100°	7.0	3.1	3.1	85°	6
100°-110°	5.3	2.4	2.4	90°	6
110°-120°	2.9	1.3	1.3	95°	6
120°-130°	1.2	0.6	0.6	105°	5
130°-140°	0.1	0.0	0.0	115°	3
140°-150°	0.0	0.0	0.0	125°	1
150°-160°	0.0	0.0	0.0	135°	0
160°-170°	0.0	0.0	0.0	145°	0
170°-180°	0.0	0.0	0.0	155°	0
0°-30°	136.7	60.9	61.0	165°	0
0°-40°	156.2	69.6	69.7	175°	0
0°-60°	185.1	82.5	82.6	180°	0
0°-90°	208.0	92.7	92.9		
90°-120°	15.1	6.7	6.7		
90°-150°	16.5	7.3	7.4		
90°-180°	16.0	7.1	7.1		
0°-180°	224.5	100.0	100.2		



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CANDELA DISTRIBUTION (FULL):

0°	
0°	1016
2.5°	989
5°	864
7.5°	670
10°	453
12.5°	265
15°	149
17.5°	95
20°	62
22.5°	45
25°	38
27.5°	35
30°	33
32.5°	31
35°	30
37.5°	31
40°	32
42.5°	33
45°	32
47.5°	24
50°	14
52.5°	8
55°	7
57.5°	7
60°	8
62.5°	8
65°	9
67.5°	9
70°	9
72.5°	8
75°	7
77.5°	7
80°	6
82.5°	6
85°	6
87.5°	6
90°	6
92.5°	6
95°	6
97.5°	7
100°	7
102.5°	6
105°	5
107.5°	4
110°	3



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CANDELA DISTRIBUTION (continued):

	0°
112.5°	3
115°	3
117.5°	3
120°	2
122.5°	2
125°	1
127.5°	1
130°	1
132.5°	0
135°	0
137.5°	0
140°	0
142.5°	0
145°	0
147.5°	0
150°	0
152.5°	0
155°	0
157.5°	0
160°	0
162.5°	0
165°	0
167.5°	0
170°	0
172.5°	0
175°	0
177.5°	0
180°	0

(END OF REPORT)