

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: 08545

Luminaire Tested: **SURE LITES 029-135**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: 08545
Test Lab: LUMINAIRE TESTING LABORATORY, INC.
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SURE-LITES
Catalog Number: SURE LITES 029-135
Description: PAR36 HALOGEN SEALED BEAM LAMP
Light Source: ONE VBU 50 WATT PAR36 SEALED BEAM HALOGEN LAMP RATED AT 1100 LUMENS.
GE H7604
Ballast/Driver: -

Summary

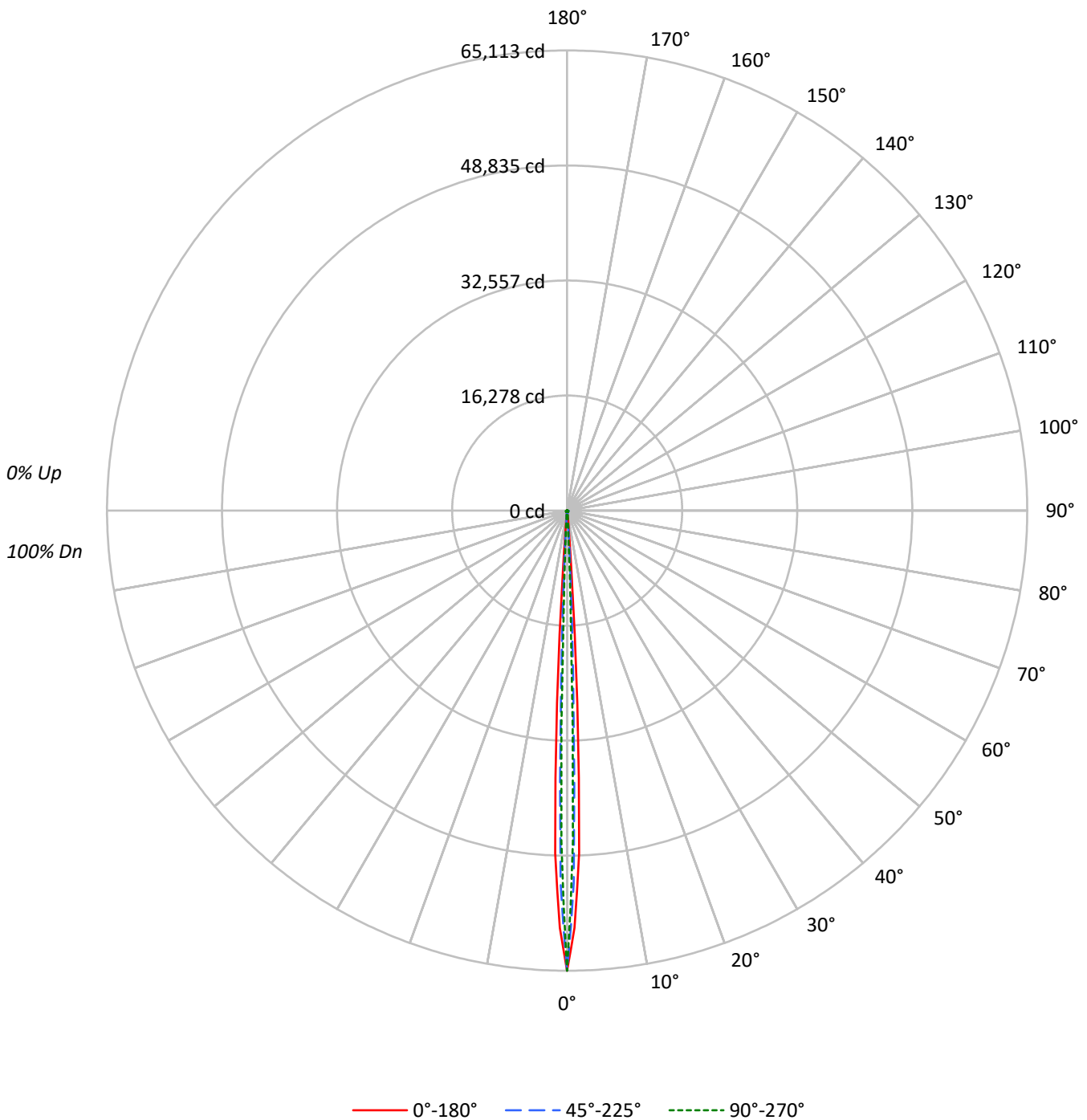
Lumens per Lamp: 1100 (1 lamp)
Luminaire Lumens: 1123.1 lumens
Efficiency: 102.1%
Efficacy: 17.8 lumens/watt
Spacing Criteria (0/90/45): 0.1 / 0.05 / 0.06
Luminous Opening: (L: 0 ' x W: -0.38 ' x H: 0.06 '
CIE Type: Direct

Input Watts (W): 63.1
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

TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

Luminous Intensity Polar Plot





TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

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	0
RCR																				
0	122	122	122	122	119	119	119	119	113	113	113		109	109	109		104	104	104	102
1	111	106	102	98	108	104	100	97	100	97	94		96	93	91		92	90	88	86
2	102	94	88	82	100	92	86	81	89	84	79		86	81	78		83	79	76	74
3	95	85	78	72	93	84	77	71	81	75	70		78	73	68		75	71	67	65
4	89	78	70	64	87	77	69	64	74	68	63		72	67	62		70	65	61	59
5	84	73	65	59	82	72	64	58	69	63	58		68	62	57		66	61	57	55
6	80	68	60	55	78	67	60	55	66	59	54		64	58	54		62	57	53	52
7	76	65	57	52	75	64	57	52	62	56	51		61	55	51		60	55	51	49
8	73	62	54	49	72	61	54	49	60	54	49		59	53	49		57	52	49	47
9	70	59	52	48	69	59	52	47	57	51	47		56	51	47		56	51	47	45
10	68	57	50	46	67	56	50	46	56	50	46		55	49	46		54	49	45	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	373.2	33.2	33.9	0°	65113	65113	65113	65113	65113	
10°-20°	53.8	4.8	4.9	5°	1732	1392	1117	1077	1072	588
20°-30°	63.7	5.7	5.8	15°	216	192	177	138	128	58
30°-40°	93.1	8.3	8.5	25°	148	153	138	123	128	68
40°-50°	114.7	10.2	10.4	35°	108	133	123	138	138	80
50°-60°	123.6	11.0	11.2	45°	167	138	128	118	108	111
60°-70°	138.0	12.3	12.5	55°	138	128	133	133	128	121
70°-80°	134.1	11.9	12.2	65°	98	138	148	157	157	101
80°-90°	28.9	2.6	2.6	75°	49	74	123	138	128	54
90°-100°	0.0	0.0	0.0	85°	0	20	25	20	20	6
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	490.7	43.7	44.6	165°	0	0	0	0	0	0
0°-40°	583.8	52.0	53.1	175°	0	0	0	0	0	0
0°-60°	822.1	73.2	74.7	180°	0	0	0	0	0	0
0°-90°	1123.1	100.0	102.1							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	1123.1	100.0	102.1							



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	65113	65113	65113	65113	65113
1°	59052	56873	52706	46896	46793
2°	48525	38829	24184	16519	14276
3°	27214	16947	7074	4063	3483
4°	7861	4629	2533	1869	1820
5°	1732	1392	1117	1077	1072
6°	620	777	703	826	856
7°	423	541	580	718	787
8°	325	428	482	635	738
9°	285	320	423	482	561
10°	295	290	344	379	423
11°	285	285	305	330	354
12°	236	241	266	275	256
13°	246	246	275	271	275
14°	236	226	251	177	177
15°	216	192	177	138	128
16°	187	153	133	128	138
17°	177	148	128	148	138
18°	157	128	143	138	138
19°	157	143	143	118	128
20°	138	133	123	123	138
21°	148	148	143	148	157
22°	167	143	133	138	138
23°	138	133	128	138	138
24°	148	143	138	138	128
25°	148	153	138	123	128
26°	157	157	143	128	157
27°	138	133	138	133	138
28°	138	133	133	128	138
29°	138	143	138	123	108
30°	148	133	128	133	138
31°	177	167	167	157	157
32°	167	167	177	157	138
33°	118	143	162	133	157
34°	98	138	123	133	138
35°	108	133	123	138	138
36°	118	113	108	148	157
37°	118	108	133	162	197
38°	118	118	148	212	216
39°	118	128	162	226	236
40°	128	143	153	192	207
41°	118	153	153	167	157
42°	108	138	157	157	138
43°	118	123	148	148	148
44°	157	148	153	157	157



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	167	138	128	118	108
46°	157	162	133	123	128
47°	177	177	172	143	138
48°	148	157	153	128	148
49°	138	138	148	157	167
50°	148	153	172	177	167
51°	128	128	148	148	148
52°	138	123	148	153	138
53°	138	128	148	153	157
54°	148	128	162	133	118
55°	138	128	133	133	128
56°	157	148	172	133	167
57°	148	143	148	118	118
58°	138	128	157	128	118
59°	79	93	123	128	89
60°	128	138	157	138	138
61°	138	148	182	153	138
62°	118	133	153	162	148
63°	118	133	143	153	148
64°	118	148	167	167	157
65°	98	138	148	157	157
66°	89	133	148	153	118
67°	89	128	138	138	118
68°	79	133	123	143	128
69°	79	128	128	153	118
70°	69	138	162	143	148
71°	49	103	143	143	157
72°	30	108	143	153	157
73°	59	128	153	172	167
74°	39	89	128	138	157
75°	49	74	123	138	128
76°	59	98	153	153	167
77°	69	128	162	172	167
78°	69	128	133	143	157
79°	30	108	177	138	128
80°	49	128	187	108	98
81°	10	39	74	98	89
82°	10	30	30	49	49
83°	10	25	44	39	59
84°	0	30	10	34	30
85°	0	20	25	20	20
86°	0	10	30	25	39
87°	0	0	0	5	10
88°	0	0	0	5	20
89°	0	0	0	0	0



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	0	0	0	0	0
91°	0	0	0	0	0
92°	0	0	0	0	0
93°	0	0	0	0	0
94°	0	0	0	0	0
95°	0	0	0	0	0
96°	0	0	0	0	0
97°	0	0	0	0	0
98°	0	0	0	0	0
99°	0	0	0	0	0
100°	0	0	0	0	0
101°	0	0	0	0	0
102°	0	0	0	0	0
103°	0	0	0	0	0
104°	0	0	0	0	0
105°	0	0	0	0	0
106°	0	0	0	0	0
107°	0	0	0	0	0
108°	0	0	0	0	0
109°	0	0	0	0	0
110°	0	0	0	0	0
111°	0	0	0	0	0
112°	0	0	0	0	0
113°	0	0	0	0	0
114°	0	0	0	0	0
115°	0	0	0	0	0
116°	0	0	0	0	0
117°	0	0	0	0	0
118°	0	0	0	0	0
119°	0	0	0	0	0
120°	0	0	0	0	0
121°	0	0	0	0	0
122°	0	0	0	0	0
123°	0	0	0	0	0
124°	0	0	0	0	0
125°	0	0	0	0	0
126°	0	0	0	0	0
127°	0	0	0	0	0
128°	0	0	0	0	0
129°	0	0	0	0	0
130°	0	0	0	0	0
131°	0	0	0	0	0
132°	0	0	0	0	0
133°	0	0	0	0	0
134°	0	0	0	0	0



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
135°	0	0	0	0	0
136°	0	0	0	0	0
137°	0	0	0	0	0
138°	0	0	0	0	0
139°	0	0	0	0	0
140°	0	0	0	0	0
141°	0	0	0	0	0
142°	0	0	0	0	0
143°	0	0	0	0	0
144°	0	0	0	0	0
145°	0	0	0	0	0
146°	0	0	0	0	0
147°	0	0	0	0	0
148°	0	0	0	0	0
149°	0	0	0	0	0
150°	0	0	0	0	0
151°	0	0	0	0	0
152°	0	0	0	0	0
153°	0	0	0	0	0
154°	0	0	0	0	0
155°	0	0	0	0	0
156°	0	0	0	0	0
157°	0	0	0	0	0
158°	0	0	0	0	0
159°	0	0	0	0	0
160°	0	0	0	0	0
161°	0	0	0	0	0
162°	0	0	0	0	0
163°	0	0	0	0	0
164°	0	0	0	0	0
165°	0	0	0	0	0
166°	0	0	0	0	0
167°	0	0	0	0	0
168°	0	0	0	0	0
169°	0	0	0	0	0
170°	0	0	0	0	0
171°	0	0	0	0	0
172°	0	0	0	0	0
173°	0	0	0	0	0
174°	0	0	0	0	0
175°	0	0	0	0	0
176°	0	0	0	0	0
177°	0	0	0	0	0
178°	0	0	0	0	0
179°	0	0	0	0	0



TEST NUMBER: 08545

CATALOG NUMBER: SURE LITES 029-135

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
180°	0	0	0	0	0

(END OF REPORT)