

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: 08544

Luminaire Tested: **SURE LITES 029-134**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: 08544
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 029-134
Description: PAR36 HALOGEN SEALED BEAM LAMP
Light Source: ONE VBU 37.5 WATT PAR36 SEALED BEAM HALOGEN LAMP RATED AT 825 LUMENS.
GE H7616
Ballast/Driver: -

Summary

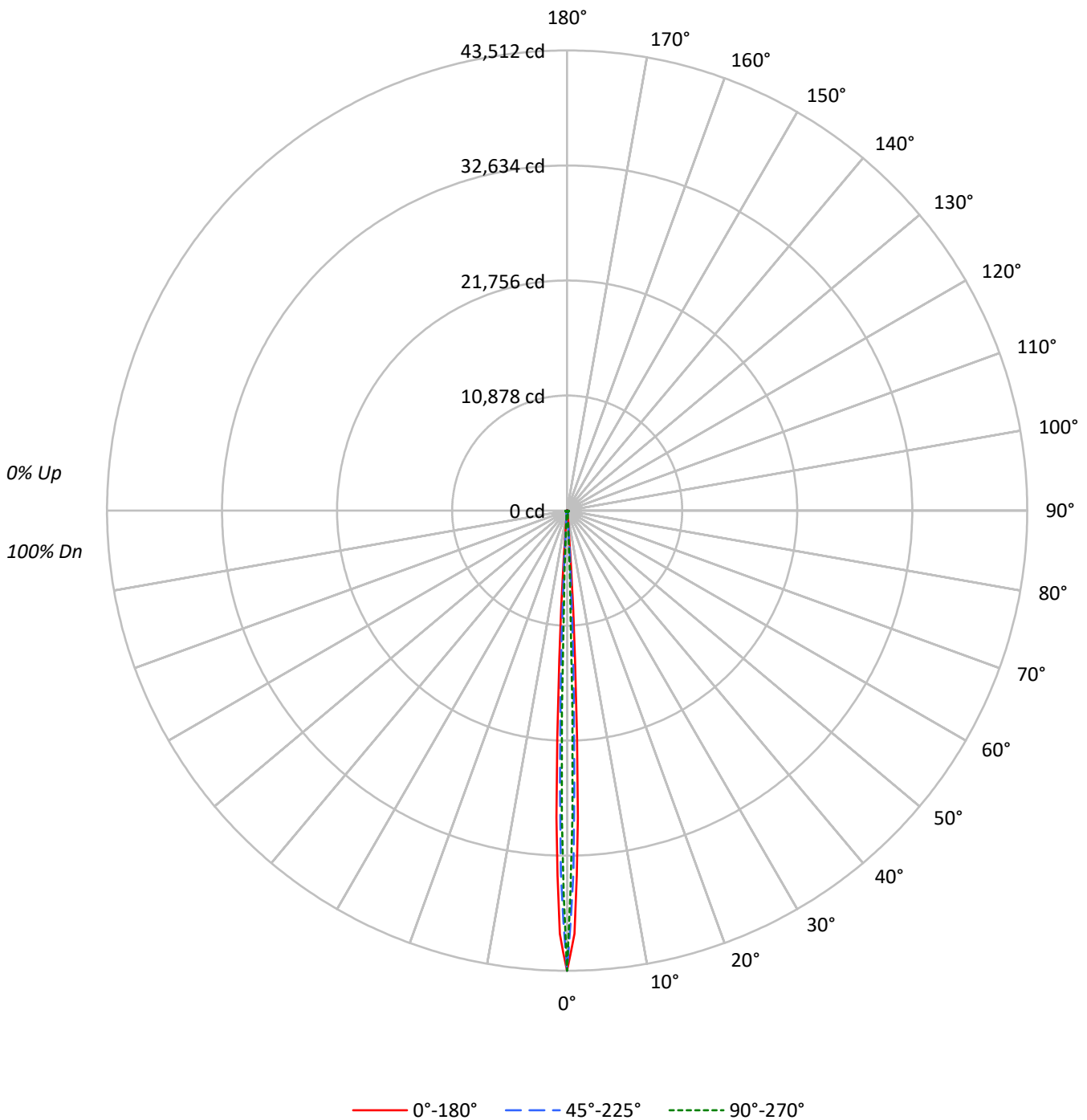
Lumens per Lamp: 825 (1 lamp)
Luminaire Lumens: 828.3 lumens
Efficiency: 100.4%
Efficacy: 17.4 lumens/watt
Spacing Criteria (0/90/45): 0.09 / 0.05 / 0.06
Luminous Opening: Vertical Cylinder (Dia: 0.38' x H: 0.06')
CIE Type: Direct

Input Watts (W): 47.7
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					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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	102	102	102	100					100			
1	110	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87					85				
2	101	93	87	81	98	91	85	80	88	83	79	85	80	77	82	78	75					73				
3	94	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66					64				
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60					58				
5	82	71	63	57	80	70	63	57	68	62	57	66	60	56	64	59	55					54				
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52					50				
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49					47				
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47					45				
9	68	57	50	46	67	57	50	46	56	50	45	55	49	45	54	49	45					44				
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44					42				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4240596	4240596	4240596
5°	150026	89036	74629
10°	24420	27759	31956
15°	11838	17662	16898
20°	13575	11938	11072
25°	9491	8219	6067
30°	9724	5714	7118
35°	11912	10048	10048
40°	15227	15227	13391
45°	14099	13075	15008
50°	10649	15006	15006
55°	13822	18386	17212
60°	8837	16961	16391
65°	5547	18226	16799
70°	4680	17460	20700
75°	9246	24165	26056
80°	8915	22414	20122
85°	0	2938	5876



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	256.8	31.0	31.1	0°	43512	43512	43512	43512	43512	
10°-20°	49.5	6.0	6.0	5°	1562	1439	927	746	777	363
20°-30°	45.0	5.4	5.5	15°	124	154	185	194	177	42
30°-40°	69.8	8.4	8.5	25°	97	106	84	79	62	51
40°-50°	99.5	12.0	12.1	35°	115	97	97	93	97	77
50°-60°	101.3	12.2	12.3	45°	124	119	115	124	132	93
60°-70°	97.3	11.7	11.8	55°	106	115	141	141	132	73
70°-80°	95.9	11.6	11.6	65°	35	75	115	119	106	43
80°-90°	13.2	1.6	1.6	75°	44	66	115	132	124	38
90°-100°	0.0	0.0	0.0	85°	0	9	9	9	18	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°	351.3	42.4	42.6	165°	0	0	0	0	0	0
0°-40°	421.1	50.8	51.0	175°	0	0	0	0	0	0
0°-60°	622.0	75.1	75.4	180°	0	0	0	0	0	0
0°-90°	828.3	100.0	100.4							
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°	828.3	100.0	100.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	43512	43512	43512	43512	43512
1°	40008	37065	34245	29854	28879
2°	29055	25040	17498	11200	8950
3°	14025	11955	6434	3001	2515
4°	4607	4263	1915	1333	1156
5°	1562	1439	927	746	777
6°	662	715	583	587	609
7°	415	521	494	534	521
8°	291	406	397	485	450
9°	238	304	331	424	388
10°	256	256	291	344	335
11°	212	234	247	260	238
12°	203	234	252	265	238
13°	194	203	252	256	256
14°	132	159	203	216	221
15°	124	154	185	194	177
16°	115	141	168	163	150
17°	115	150	159	141	132
18°	124	141	132	132	115
19°	124	132	124	124	115
20°	141	119	124	115	115
21°	132	132	119	101	88
22°	97	110	88	71	62
23°	88	106	93	66	71
24°	106	124	93	101	88
25°	97	106	84	79	62
26°	124	128	97	84	97
27°	106	106	75	66	79
28°	115	124	97	79	97
29°	124	124	101	97	97
30°	97	75	57	71	71
31°	124	110	97	101	88
32°	106	93	79	79	79
33°	124	110	97	115	79
34°	132	115	106	106	106
35°	115	97	97	93	97
36°	115	110	110	119	97
37°	132	132	137	128	150
38°	115	128	132	124	106
39°	132	124	128	106	124
40°	141	141	141	146	124
41°	124	128	124	119	106
42°	124	119	124	119	132
43°	115	124	128	124	124
44°	124	124	132	124	115



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	124	119	115	124	132
46°	124	137	137	150	132
47°	124	132	146	137	132
48°	124	124	150	146	132
49°	106	132	146	132	132
50°	88	106	124	119	124
51°	97	128	132	146	141
52°	97	119	137	132	141
53°	88	101	119	119	124
54°	71	101	115	119	124
55°	106	115	141	141	132
56°	62	84	110	93	97
57°	88	115	141	141	141
58°	71	79	128	119	106
59°	62	62	119	124	115
60°	62	66	119	106	115
61°	71	84	141	146	141
62°	62	88	128	137	132
63°	62	84	137	110	132
64°	44	75	106	93	124
65°	35	75	115	119	106
66°	44	97	132	128	141
67°	18	66	106	124	115
68°	35	66	97	110	115
69°	26	57	101	106	106
70°	26	44	97	101	115
71°	26	44	97	106	124
72°	26	40	97	106	124
73°	53	66	119	132	132
74°	44	71	128	128	132
75°	44	66	115	132	124
76°	26	62	106	124	124
77°	44	79	106	124	141
78°	44	62	110	132	124
79°	18	26	119	119	79
80°	35	35	88	97	79
81°	26	35	40	53	35
82°	9	13	18	18	9
83°	0	18	4	13	18
84°	0	4	4	9	18
85°	0	9	9	9	18
86°	0	4	4	4	18
87°	0	0	0	4	0
88°	0	0	0	0	0
89°	0	0	0	0	0



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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



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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



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)