

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: NEO-RAY

Report Number: P243190

Luminaire Tested: **S122DR-H485D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243190  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-H485D835-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1836.8 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

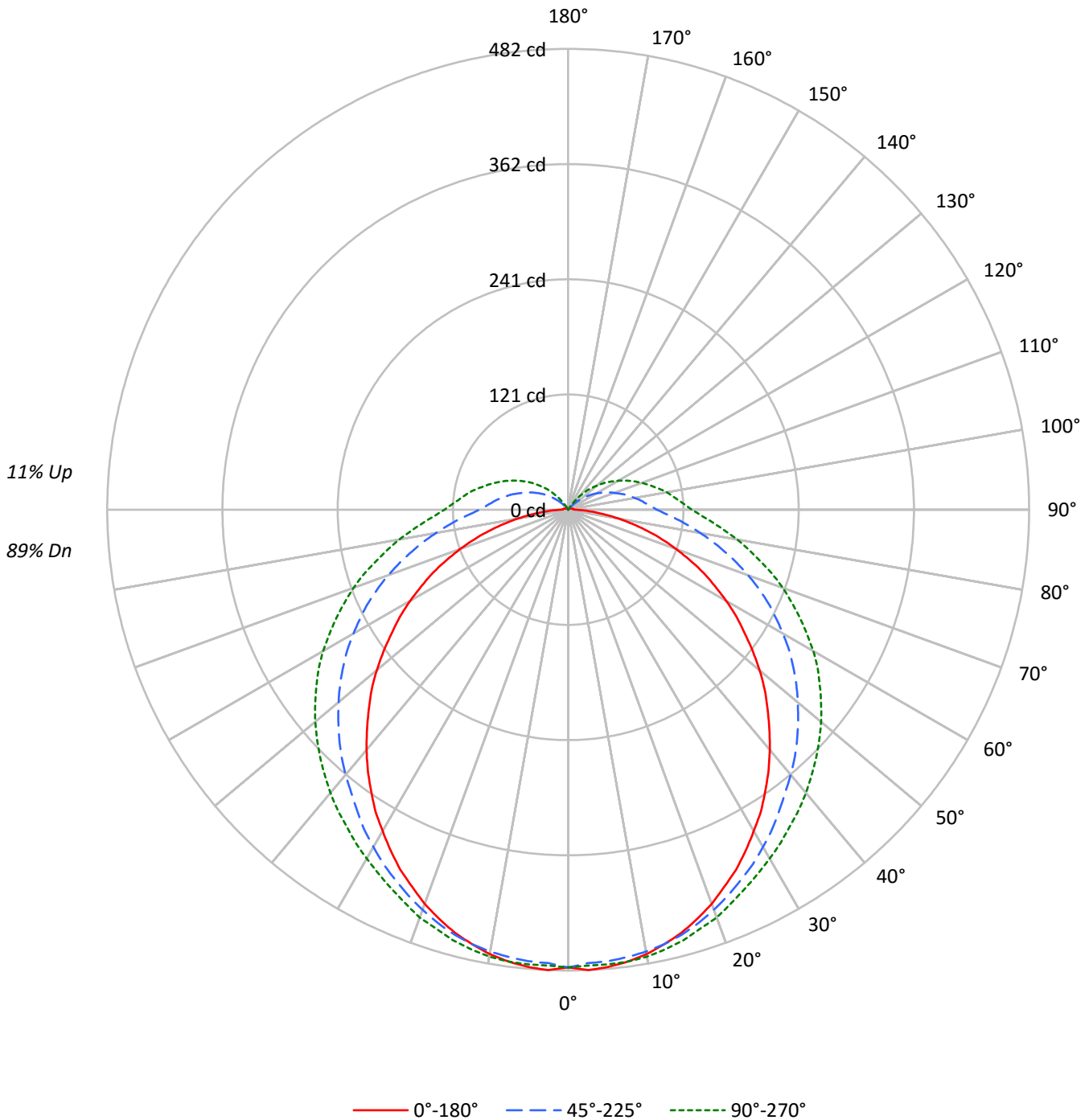
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9118	9118	9118
5°	9161	8742	8692
10°	9095	8452	8341
15°	8980	8155	7969
20°	8823	7831	7618
25°	8642	7512	7257
30°	8429	7212	6968
35°	8231	6915	6710
40°	8011	6659	6499
45°	7771	6429	6286
50°	7550	6191	6087
55°	7259	5968	5875
60°	7004	5723	5667
65°	6721	5475	5414
70°	6310	5176	5173
75°	5859	4858	4887
80°	5211	4547	4638
85°	4561	4301	4391



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.4	2.5
10°-20°	130.3	7.1
20°-30°	197.4	10.7
30°-40°	240.7	13.1
40°-50°	259.1	14.1
50°-60°	251.9	13.7
60°-70°	220.2	12.0
70°-80°	169.5	9.2
80°-90°	113.9	6.2
90°-100°	78.8	4.3
100°-110°	58.0	3.2
110°-120°	38.6	2.1
120°-130°	21.8	1.2
130°-140°	9.4	0.5
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	373.1	20.3
0°-40°	613.8	33.4
0°-60°	1124.8	61.2
0°-90°	1628.4	88.7
90°-120°	175.4	9.5
90°-150°	208.4	11.3
90°-180°	208.0	11.3
0°-180°	1836.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	479	479	479	479	479	
5°	480	478	474	478	477	46
15°	458	460	460	466	466	129
25°	415	422	427	437	437	191
35°	359	371	385	399	404	225
45°	295	313	339	359	367	228
55°	225	252	287	313	321	202
65°	156	189	231	259	267	154
75°	86	125	169	199	208	91
85°	26	69	114	143	151	27
90°	7	48	93	121	129	5
95°	5	39	81	107	115	4
105°	4	24	61	85	93	4
115°	3	11	43	64	71	3
125°	2	1	25	43	50	2
135°	1	1	9	23	29	1
145°	1	0	0	5	8	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	478.7	478.7	478.7	478.7	478.7
2.5°	482.0	480.0	474.7	478.7	477.3
5°	480.0	478.0	474.0	478.0	477.3
7.5°	476.7	475.3	472.0	477.3	476.7
10°	472.0	471.3	469.3	474.7	474.7
12.5°	465.3	466.0	465.3	471.3	470.7
15°	458.0	460.0	460.0	466.0	466.0
17.5°	448.7	452.0	453.3	460.0	459.3
20°	438.7	442.7	445.3	452.7	454.0
22.5°	426.7	432.7	436.7	444.7	445.3
25°	415.3	422.0	427.3	436.7	437.3
27.5°	402.0	410.0	418.0	427.3	429.3
30°	388.0	398.0	407.3	418.7	421.3
32.5°	374.7	384.7	396.7	408.7	413.3
35°	359.3	371.3	384.7	399.3	404.0
37.5°	344.0	356.7	372.7	390.0	396.0
40°	328.0	342.7	362.0	380.7	386.7
42.5°	311.3	327.3	350.7	370.0	376.7
45°	294.7	312.7	338.7	359.3	366.7
47.5°	278.7	298.0	326.0	349.3	356.0
50°	261.3	282.7	313.3	337.3	345.3
52.5°	243.3	267.3	300.7	325.3	333.3
55°	225.3	252.0	287.3	313.3	321.3
57.5°	208.7	236.7	274.0	300.0	309.3
60°	190.7	220.7	259.3	286.7	296.0
62.5°	172.7	205.3	244.7	272.7	281.3
65°	156.0	189.3	230.7	258.7	267.3
67.5°	137.3	172.7	215.3	244.7	252.7
70°	120.0	157.3	200.0	229.3	238.7
72.5°	102.7	140.7	184.7	214.0	224.0
75°	86.0	125.3	169.3	199.3	208.0
77.5°	68.7	110.0	154.7	184.7	193.3
80°	53.3	94.7	140.0	170.0	179.3
82.5°	38.0	80.7	126.7	156.0	164.7
85°	26.0	68.7	114.0	142.7	151.3
87.5°	15.3	57.3	102.0	130.7	139.3
90°	7.3	48.0	92.7	120.7	129.3
92.5°	6.0	43.3	86.0	113.3	122.0
95°	5.3	38.7	80.7	107.3	115.3
97.5°	5.3	35.3	76.0	102.0	110.0
100°	4.7	31.3	70.7	96.0	104.7
102.5°	4.7	27.3	66.0	90.7	98.7
105°	4.0	24.0	61.3	85.3	92.7
107.5°	3.3	20.7	56.0	80.0	87.3
110°	3.3	17.3	51.3	74.7	82.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.7	14.7	47.3	69.3	76.7
115°	2.7	11.3	42.7	64.0	71.3
117.5°	2.7	8.0	38.0	58.7	66.0
120°	2.0	5.3	34.0	54.0	60.7
122.5°	2.0	3.3	29.3	48.7	55.3
125°	2.0	1.3	25.3	43.3	50.0
127.5°	1.3	1.3	20.7	38.7	44.7
130°	1.3	0.7	16.7	33.3	39.3
132.5°	1.3	0.7	12.7	28.7	34.0
135°	0.7	0.7	8.7	23.3	29.3
137.5°	0.7	0.7	4.7	18.7	23.3
140°	0.7	0.0	2.0	14.0	18.0
142.5°	0.7	0.0	0.0	9.3	13.3
145°	0.7	0.0	0.0	5.3	8.0
147.5°	0.0	0.0	0.0	1.3	4.0
150°	0.0	0.0	0.0	0.0	0.7
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)