

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: P242344

Luminaire Tested: **S122DR-S485D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242344  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-S485D935-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1627.6 lumens  
Efficiency: N/A  
Efficacy: 86.6 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

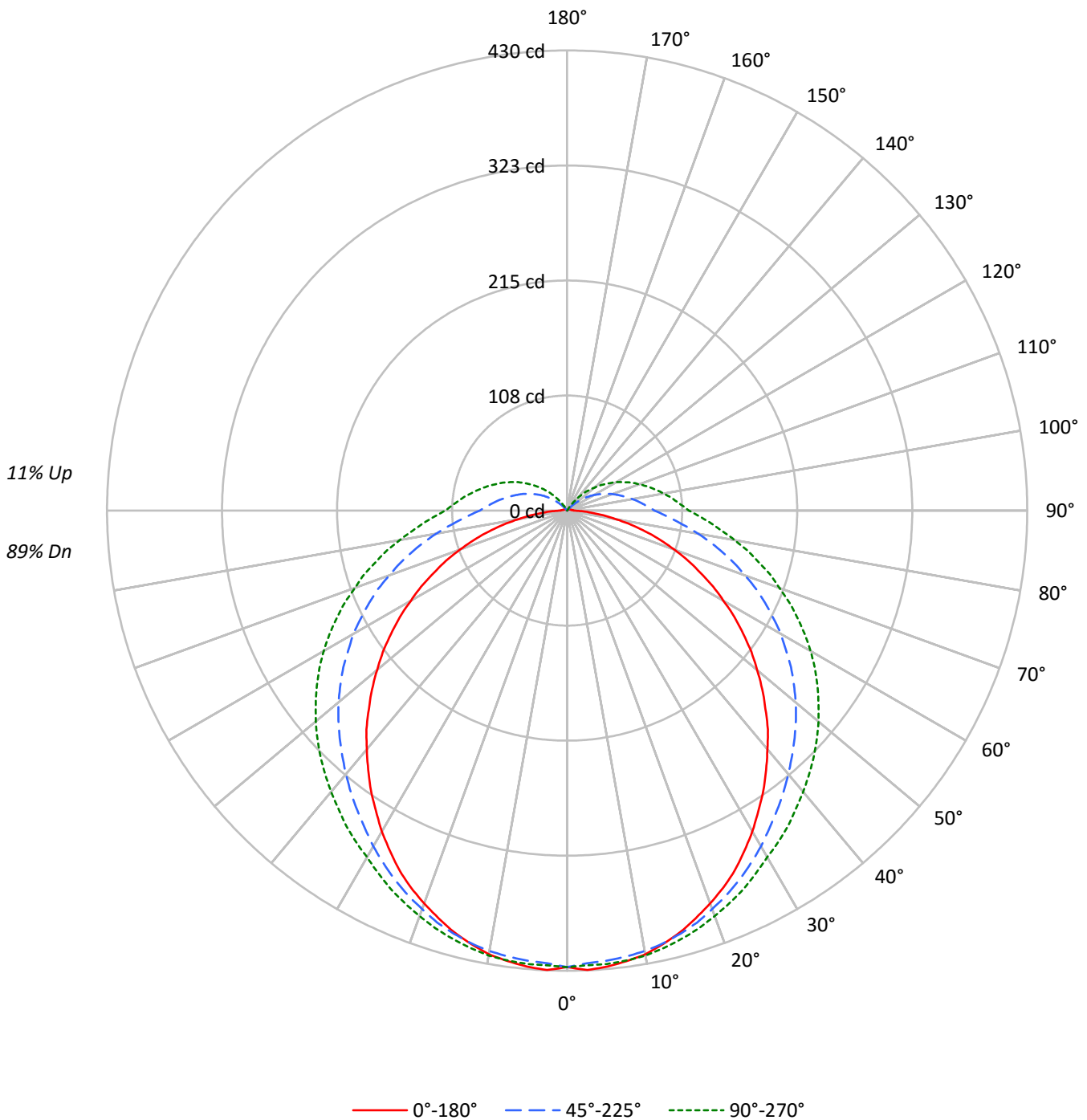
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	85	81	82	79	77	77	75	72	69
2	94	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	42	39
5	71	57	48	41	68	56	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	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	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°	8126	8126	8126
5°	8164	7787	7745
10°	8112	7526	7419
15°	8000	7256	7083
20°	7858	6970	6764
25°	7718	6694	6474
30°	7521	6416	6185
35°	7321	6146	5976
40°	7112	5914	5766
45°	6912	5704	5585
50°	6697	5509	5405
55°	6473	5303	5223
60°	6200	5089	5030
65°	5911	4841	4808
70°	5590	4576	4568
75°	5178	4310	4342
80°	4536	4037	4110
85°	3912	3781	3912



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.4	2.5
10°-20°	116.0	7.1
20°-30°	175.7	10.8
30°-40°	214.0	13.1
40°-50°	230.2	14.1
50°-60°	223.6	13.7
60°-70°	195.3	12.0
70°-80°	150.3	9.2
80°-90°	100.7	6.2
90°-100°	69.4	4.3
100°-110°	50.7	3.1
110°-120°	33.5	2.1
120°-130°	18.6	1.1
130°-140°	7.8	0.5
140°-150°	1.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	332.2	20.4
0°-40°	546.2	33.6
0°-60°	1000.0	61.4
0°-90°	1446.2	88.9
90°-120°	153.6	9.4
90°-150°	181.4	11.1
90°-180°	181.0	11.1
0°-180°	1627.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	428	426	422	426	425	41
15°	408	409	409	415	414	115
25°	371	375	381	388	390	171
35°	320	330	342	356	360	200
45°	262	279	300	320	326	202
55°	201	223	255	278	286	180
65°	137	168	204	229	237	136
75°	76	111	150	177	185	80
85°	22	61	100	126	135	23
90°	6	42	82	106	114	4
95°	5	34	71	95	102	4
105°	3	21	53	75	82	4
115°	2	9	37	56	62	2
125°	1	1	21	38	43	1
135°	1	1	7	20	25	1
145°	0	0	0	4	7	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°	426.6	426.6	426.6	426.6	426.6
2.5°	429.7	427.8	423.5	426.6	425.3
5°	427.8	426.0	422.2	426.0	425.3
7.5°	424.7	423.5	420.4	424.7	424.1
10°	421.0	419.8	417.9	422.9	422.2
12.5°	414.8	415.4	414.2	419.2	418.5
15°	408.0	409.3	409.3	414.8	414.2
17.5°	399.4	401.8	403.7	409.3	409.3
20°	390.7	393.8	396.3	403.1	403.1
22.5°	381.4	385.2	388.9	395.7	396.9
25°	370.9	375.3	380.8	388.2	390.1
27.5°	358.6	365.4	371.6	380.8	382.1
30°	346.2	354.2	362.3	372.2	374.0
32.5°	332.6	341.9	351.8	363.5	367.2
35°	319.6	330.1	341.9	355.5	359.8
37.5°	305.4	317.1	332.0	346.8	351.1
40°	291.2	304.8	321.5	337.5	343.1
42.5°	277.6	291.2	311.0	328.9	334.5
45°	262.1	278.8	300.5	319.6	325.8
47.5°	247.3	265.2	289.9	309.7	316.5
50°	231.8	251.0	278.8	299.8	306.6
52.5°	217.0	237.4	267.1	288.7	296.1
55°	200.9	223.2	255.3	277.6	285.6
57.5°	185.5	210.2	242.3	266.5	274.5
60°	168.8	195.4	230.6	254.1	262.7
62.5°	153.9	181.8	217.0	242.3	250.4
65°	137.2	167.5	204.0	229.4	237.4
67.5°	122.4	153.9	191.0	216.4	225.0
70°	106.3	138.5	176.8	203.4	210.8
72.5°	91.5	124.9	163.8	189.8	199.1
75°	76.0	110.7	150.2	176.8	184.8
77.5°	61.2	97.1	137.2	163.8	172.5
80°	46.4	84.1	124.3	150.2	158.9
82.5°	34.0	71.1	111.9	137.9	145.9
85°	22.3	60.6	100.2	126.1	134.8
87.5°	13.6	50.7	90.3	115.6	123.6
90°	6.2	42.0	81.6	106.3	113.8
92.5°	5.6	38.3	76.0	100.2	107.6
95°	4.9	34.0	71.1	94.6	102.0
97.5°	4.3	30.9	66.8	89.6	97.1
100°	4.3	27.2	61.8	84.7	91.5
102.5°	3.7	24.1	57.5	79.8	86.6
105°	3.1	21.0	53.2	74.8	81.6
107.5°	3.1	17.9	48.8	69.9	76.7
110°	2.5	14.8	45.1	64.9	71.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	12.4	40.8	60.6	67.4
115°	2.5	9.3	37.1	55.6	62.4
117.5°	1.9	6.8	32.8	51.3	57.5
120°	1.9	4.3	29.1	46.4	53.2
122.5°	1.9	2.5	25.3	42.0	47.6
125°	1.2	1.2	21.0	37.7	43.3
127.5°	1.2	0.6	17.3	32.8	38.3
130°	1.2	0.6	13.6	28.4	33.4
132.5°	1.2	0.6	9.9	24.1	29.1
135°	0.6	0.6	6.8	19.8	24.7
137.5°	0.6	0.6	3.7	15.5	19.8
140°	0.6	0.0	1.2	11.1	14.8
142.5°	0.6	0.0	0.0	7.4	10.5
145°	0.0	0.0	0.0	3.7	6.8
147.5°	0.0	0.0	0.0	0.6	2.5
150°	0.0	0.0	0.0	0.0	0.0
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)