

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: P242334

Luminaire Tested: **S122DR-S485D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242334  
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-S485D840-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1909.1 lumens  
Efficiency: N/A  
Efficacy: 101.5 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

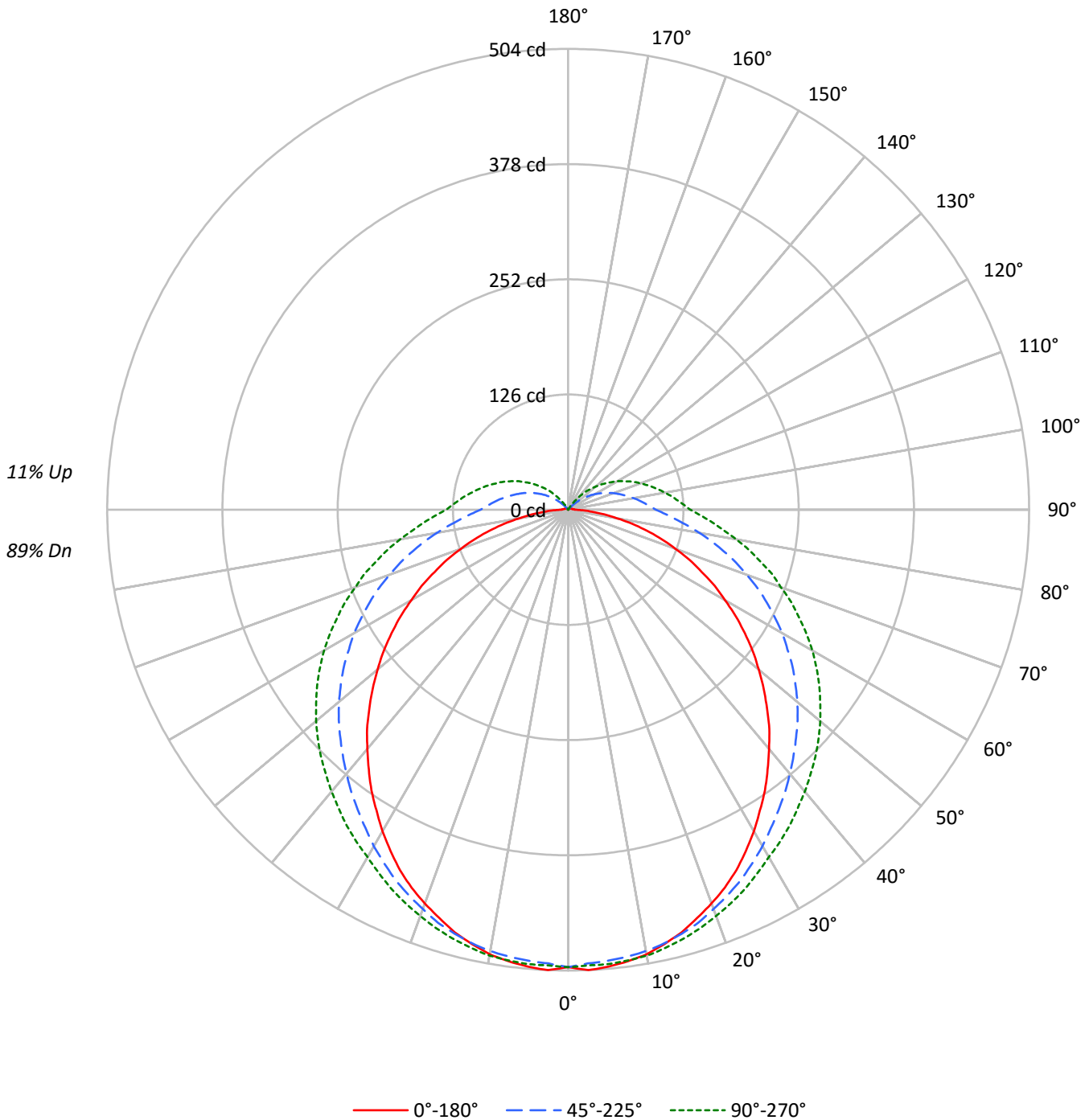
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9530	9530	9530
5°	9577	9135	9085
10°	9515	8829	8703
15°	9384	8509	8308
20°	9218	8174	7934
25°	9054	7853	7592
30°	8822	7524	7255
35°	8588	7208	7009
40°	8341	6936	6763
45°	8106	6689	6550
50°	7856	6462	6341
55°	7594	6221	6126
60°	7272	5970	5901
65°	6936	5679	5638
70°	6557	5368	5359
75°	6077	5056	5093
80°	5319	4732	4822
85°	4579	4434	4588



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.4	2.5
10°-20°	136.0	7.1
20°-30°	206.1	10.8
30°-40°	251.0	13.1
40°-50°	270.0	14.1
50°-60°	262.3	13.7
60°-70°	229.0	12.0
70°-80°	176.3	9.2
80°-90°	118.1	6.2
90°-100°	81.5	4.3
100°-110°	59.5	3.1
110°-120°	39.3	2.1
120°-130°	21.9	1.1
130°-140°	9.2	0.5
140°-150°	1.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	389.6	20.4
0°-40°	640.6	33.6
0°-60°	1172.9	61.4
0°-90°	1696.3	88.9
90°-120°	180.2	9.4
90°-150°	212.8	11.1
90°-180°	213.0	11.2
0°-180°	1909.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	500	500	500	500	500	
5°	502	500	495	500	499	48
15°	479	480	480	486	486	135
25°	435	440	447	455	458	200
35°	375	387	401	417	422	234
45°	307	327	352	375	382	237
55°	236	262	300	326	335	211
65°	161	196	239	269	278	160
75°	89	130	176	207	217	94
85°	26	71	118	148	158	28
90°	7	49	96	125	133	5
95°	6	40	83	111	120	5
105°	4	25	62	88	96	4
115°	3	11	44	65	73	3
125°	2	2	25	44	51	2
135°	1	1	8	23	29	1
145°	0	0	0	4	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°	500.3	500.3	500.3	500.3	500.3
2.5°	504.0	501.8	496.7	500.3	498.9
5°	501.8	499.6	495.3	499.6	498.9
7.5°	498.2	496.7	493.1	498.2	497.4
10°	493.8	492.3	490.2	496.0	495.3
12.5°	486.5	487.3	485.8	491.6	490.9
15°	478.6	480.0	480.0	486.5	485.8
17.5°	468.4	471.3	473.5	480.0	480.0
20°	458.3	461.9	464.8	472.8	472.8
22.5°	447.4	451.7	456.1	464.1	465.5
25°	435.1	440.1	446.7	455.4	457.5
27.5°	420.6	428.5	435.8	446.7	448.1
30°	406.1	415.5	424.9	436.5	438.7
32.5°	390.1	401.0	412.6	426.4	430.7
35°	374.9	387.2	401.0	416.9	422.0
37.5°	358.2	372.0	389.4	406.8	411.9
40°	341.5	357.5	377.1	395.9	402.4
42.5°	325.6	341.5	364.7	385.8	392.3
45°	307.4	327.0	352.4	374.9	382.1
47.5°	290.0	311.1	340.1	363.3	371.3
50°	271.9	294.4	327.0	351.7	359.7
52.5°	254.5	278.4	313.2	338.6	347.3
55°	235.7	261.8	299.5	325.6	335.0
57.5°	217.5	246.5	284.2	312.5	321.9
60°	198.0	229.1	270.5	298.0	308.2
62.5°	180.6	213.2	254.5	284.2	293.7
65°	161.0	196.5	239.3	269.0	278.4
67.5°	143.6	180.6	224.1	253.8	263.9
70°	124.7	162.4	207.4	238.6	247.3
72.5°	107.3	146.5	192.2	222.6	233.5
75°	89.2	129.8	176.2	207.4	216.8
77.5°	71.8	113.8	161.0	192.2	202.3
80°	54.4	98.6	145.7	176.2	186.4
82.5°	39.9	83.4	131.2	161.7	171.1
85°	26.1	71.1	117.5	147.9	158.1
87.5°	16.0	59.5	105.9	135.6	145.0
90°	7.3	49.3	95.7	124.7	133.4
92.5°	6.5	45.0	89.2	117.5	126.2
95°	5.8	39.9	83.4	110.9	119.6
97.5°	5.1	36.3	78.3	105.1	113.8
100°	5.1	31.9	72.5	99.3	107.3
102.5°	4.4	28.3	67.4	93.5	101.5
105°	3.6	24.7	62.4	87.7	95.7
107.5°	3.6	21.0	57.3	81.9	89.9
110°	2.9	17.4	52.9	76.1	84.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	14.5	47.9	71.1	79.0
115°	2.9	10.9	43.5	65.3	73.2
117.5°	2.2	8.0	38.4	60.2	67.4
120°	2.2	5.1	34.1	54.4	62.4
122.5°	2.2	2.9	29.7	49.3	55.8
125°	1.5	1.5	24.7	44.2	50.8
127.5°	1.5	0.7	20.3	38.4	45.0
130°	1.5	0.7	16.0	33.4	39.2
132.5°	1.5	0.7	11.6	28.3	34.1
135°	0.7	0.7	8.0	23.2	29.0
137.5°	0.7	0.7	4.4	18.1	23.2
140°	0.7	0.0	1.5	13.1	17.4
142.5°	0.7	0.0	0.0	8.7	12.3
145°	0.0	0.0	0.0	4.4	8.0
147.5°	0.0	0.0	0.0	0.7	2.9
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)