

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: P243548

Luminaire Tested: **S124DR-H575D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243548  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-H575D935-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1846.4 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')  
CIE Type: Direct

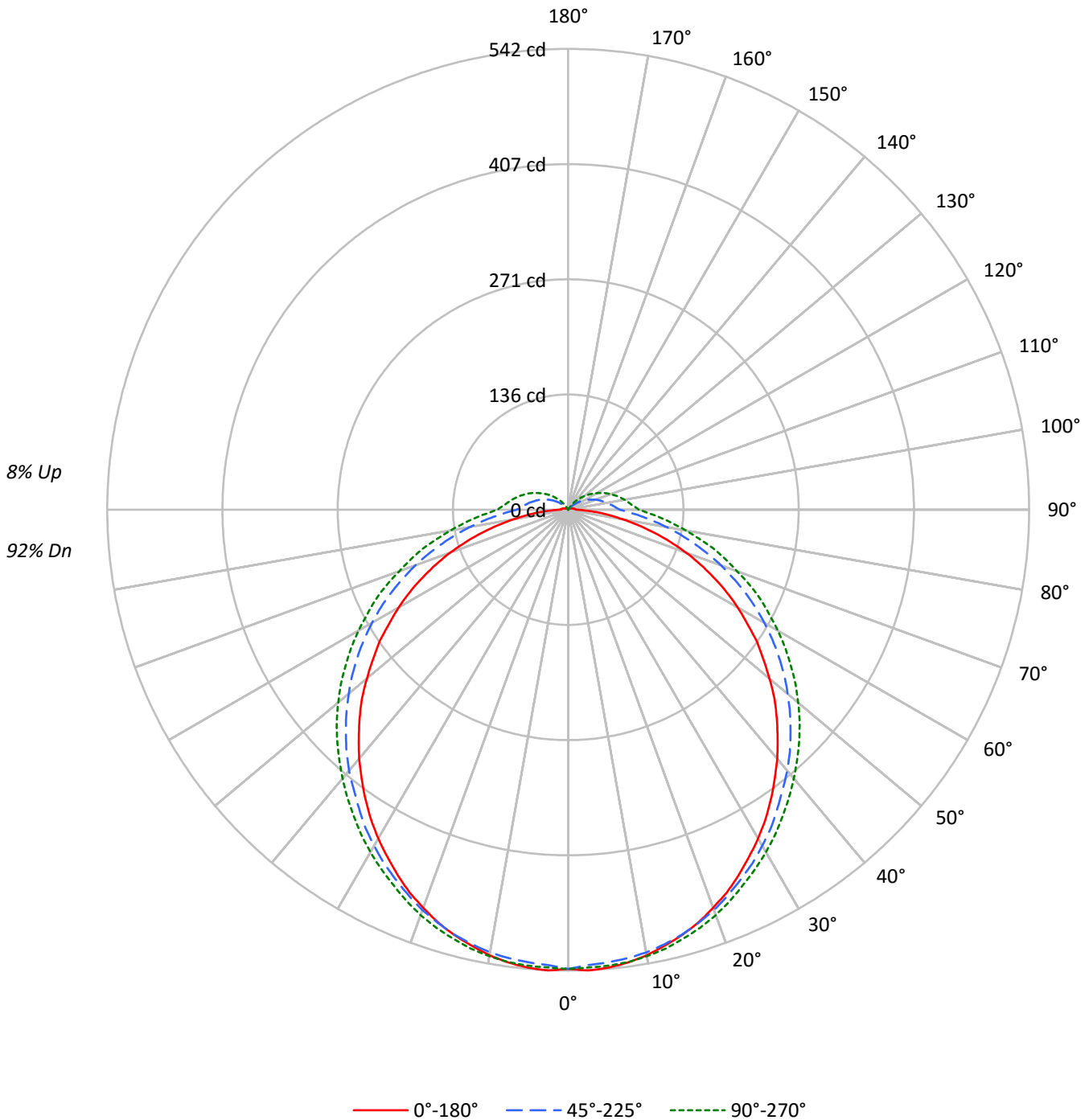
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

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

	0°	45°	90°
0°	4801	4801	4801
5°	4816	4685	4695
10°	4785	4607	4597
15°	4738	4513	4487
20°	4676	4413	4375
25°	4604	4298	4246
30°	4528	4191	4136
35°	4443	4072	4021
40°	4357	3971	3913
45°	4267	3861	3811
50°	4164	3749	3704
55°	4073	3631	3582
60°	3945	3499	3462
65°	3798	3352	3341
70°	3620	3184	3168
75°	3338	2979	3043
80°	2961	2781	2865
85°	2677	2619	2761



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.1	2.8
10°-20°	146.6	7.9
20°-30°	221.9	12.0
30°-40°	268.8	14.6
40°-50°	284.3	15.4
50°-60°	267.8	14.5
60°-70°	222.5	12.1
70°-80°	156.4	8.5
80°-90°	88.1	4.8
90°-100°	52.3	2.8
100°-110°	38.7	2.1
110°-120°	25.8	1.4
120°-130°	14.6	0.8
130°-140°	6.2	0.3
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	419.7	22.7
0°-40°	688.5	37.3
0°-60°	1240.5	67.2
0°-90°	1707.6	92.5
90°-120°	116.8	6.3
90°-150°	138.8	7.5
90°-180°	139.0	7.5
0°-180°	1846.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	541	538	534	539	538	51
15°	518	519	517	523	522	146
25°	474	478	480	487	487	218
35°	416	422	429	438	440	260
45°	347	358	370	381	384	268
55°	271	285	302	316	319	241
65°	189	208	229	243	250	187
75°	105	127	153	170	177	111
85°	33	58	86	104	110	34
90°	10	34	61	78	83	7
95°	8	28	53	70	74	6
105°	6	18	40	55	60	6
115°	4	9	28	41	46	4
125°	2	2	17	28	32	2
135°	1	1	5	15	18	1
145°	1	0	0	3	6	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°	540.1	540.1	540.1	540.1	540.1
2.5°	542.4	540.7	536.1	539.6	539.0
5°	540.7	538.4	534.4	539.0	538.4
7.5°	537.3	535.6	532.1	537.3	536.7
10°	532.1	531.0	528.7	533.3	533.3
12.5°	525.2	525.2	523.5	528.7	528.7
15°	517.8	518.9	517.2	522.9	522.4
17.5°	509.1	510.3	509.7	515.5	515.5
20°	498.2	500.0	501.1	507.4	507.4
22.5°	487.3	489.6	490.8	497.7	497.7
25°	474.1	478.2	479.9	486.8	486.8
27.5°	460.4	465.5	469.0	475.3	476.4
30°	446.6	452.3	456.3	463.2	465.0
32.5°	431.7	437.4	443.7	450.6	452.9
35°	415.6	422.5	428.8	438.0	439.7
37.5°	398.9	407.0	414.4	424.2	426.5
40°	382.3	392.1	400.7	409.8	412.7
42.5°	364.5	374.3	385.7	395.5	398.4
45°	346.7	357.6	369.7	380.6	384.0
47.5°	328.9	340.4	353.6	365.1	369.1
50°	308.8	321.4	336.9	348.4	353.0
52.5°	289.3	303.1	320.3	331.8	336.9
55°	270.9	285.3	302.5	315.7	319.2
57.5°	249.7	265.8	284.7	299.1	302.5
60°	230.2	246.3	266.3	280.7	284.7
62.5°	210.1	227.3	248.0	262.3	266.3
65°	188.9	207.8	229.0	243.4	249.7
67.5°	168.2	187.1	209.5	225.6	230.8
70°	147.5	167.0	191.1	207.2	211.2
72.5°	125.7	146.9	171.6	188.3	194.0
75°	105.0	127.4	152.7	169.9	176.8
77.5°	85.0	108.5	134.9	152.7	157.3
80°	64.9	90.7	117.1	134.9	140.6
82.5°	48.8	72.9	100.5	119.4	124.0
85°	32.7	58.0	85.5	103.9	109.6
87.5°	19.5	45.3	71.8	89.0	94.7
90°	9.8	33.9	60.8	77.5	83.2
92.5°	8.6	30.4	56.3	72.9	78.6
95°	8.0	27.6	52.8	69.5	74.0
97.5°	7.5	25.3	49.4	65.4	70.6
100°	6.9	22.4	46.5	62.0	67.2
102.5°	6.3	20.1	43.1	58.5	63.7
105°	5.7	17.8	40.2	55.1	60.3
107.5°	5.2	15.5	37.3	51.7	56.8
110°	4.6	13.2	34.4	48.2	53.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	11.5	31.0	44.8	49.9
115°	4.0	9.2	28.1	41.3	46.5
117.5°	3.4	6.9	25.3	37.9	42.5
120°	3.4	5.2	22.4	34.4	39.0
122.5°	2.9	3.4	19.5	31.6	35.6
125°	2.3	1.7	16.6	28.1	32.1
127.5°	2.3	1.7	13.8	24.7	28.7
130°	1.7	1.7	10.9	21.2	25.3
132.5°	1.7	1.1	8.0	18.4	21.8
135°	1.1	1.1	5.2	14.9	18.4
137.5°	1.1	0.6	3.4	12.1	15.5
140°	1.1	0.6	1.1	9.2	12.1
142.5°	0.6	0.6	0.0	6.3	8.6
145°	0.6	0.0	0.0	3.4	5.7
147.5°	0.6	0.0	0.0	0.6	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)