

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: P243553

Luminaire Tested: **S124DR-H575D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243553  
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-H575D940-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1912.2 lumens  
Efficiency: N/A  
Efficacy: 111.2 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

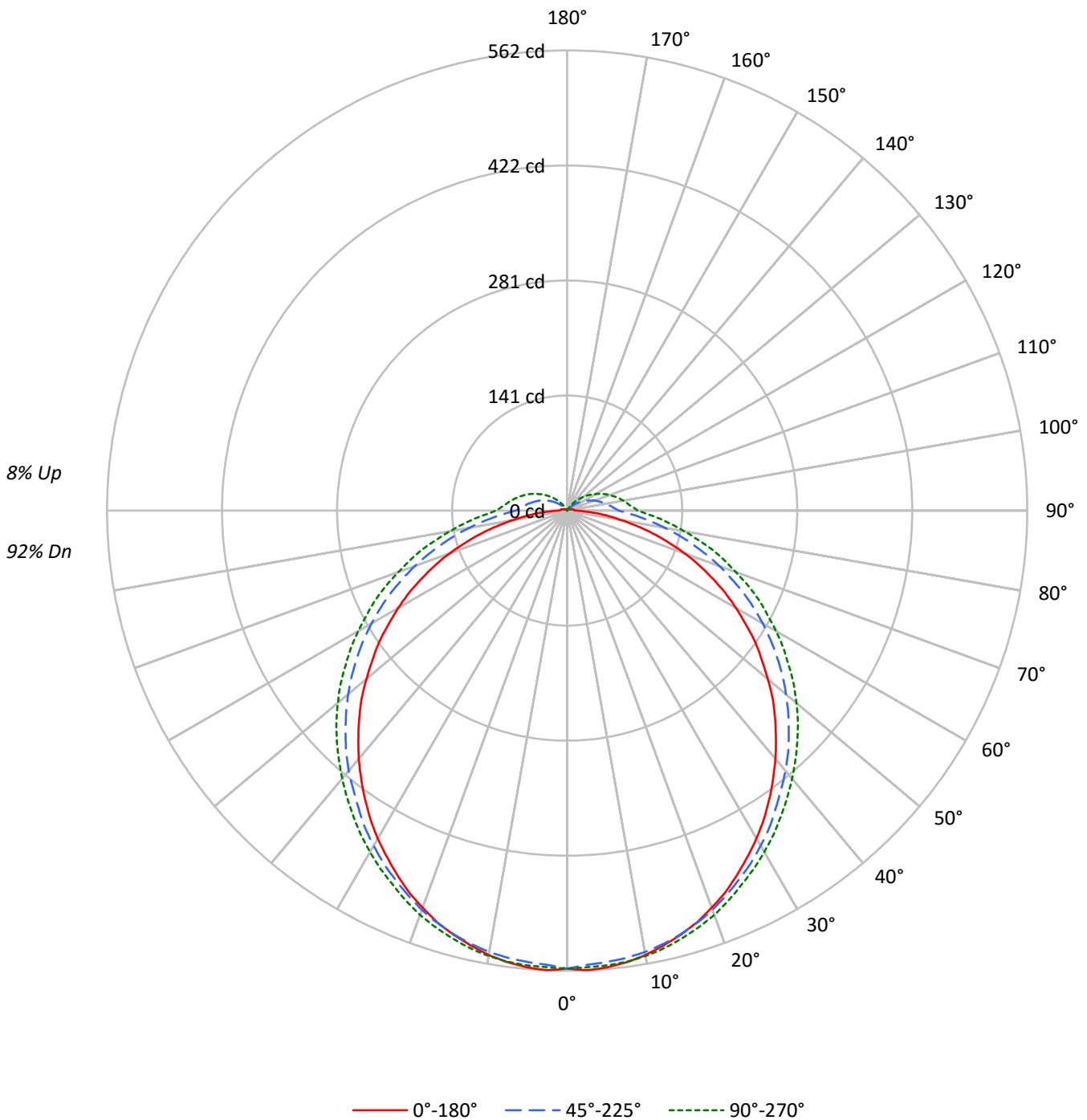
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4972	4972	4972
5°	4987	4852	4862
10°	4955	4770	4761
15°	4906	4674	4647
20°	4843	4570	4531
25°	4768	4452	4397
30°	4689	4340	4283
35°	4601	4217	4164
40°	4512	4112	4053
45°	4419	3998	3947
50°	4312	3883	3837
55°	4219	3761	3709
60°	4086	3624	3586
65°	3933	3472	3460
70°	3750	3299	3282
75°	3459	3084	3152
80°	3066	2881	2967
85°	2775	2714	2860



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	2.8
10°-20°	151.9	7.9
20°-30°	229.9	12.0
30°-40°	278.3	14.6
40°-50°	294.4	15.4
50°-60°	277.3	14.5
60°-70°	230.5	12.1
70°-80°	162.0	8.5
80°-90°	91.2	4.8
90°-100°	54.1	2.8
100°-110°	40.1	2.1
110°-120°	26.7	1.4
120°-130°	15.1	0.8
130°-140°	6.5	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°	434.7	22.7
0°-40°	713.0	37.3
0°-60°	1284.8	67.2
0°-90°	1768.5	92.5
90°-120°	121.0	6.3
90°-150°	143.8	7.5
90°-180°	144.0	7.5
0°-180°	1912.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	560	558	554	558	558	53
15°	536	537	536	542	541	151
25°	491	495	497	504	504	226
35°	430	438	444	454	455	269
45°	359	370	383	394	398	277
55°	281	296	313	327	330	250
65°	196	215	237	252	259	194
75°	109	132	158	176	183	115
85°	34	60	89	108	114	35
90°	10	35	63	80	86	7
95°	8	28	55	72	77	7
105°	6	18	42	57	62	6
115°	4	10	29	43	48	4
125°	2	2	17	29	33	2
135°	1	1	5	16	19	1
145°	1	0	0	4	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°	559.4	559.4	559.4	559.4	559.4
2.5°	561.8	560.0	555.3	558.8	558.2
5°	560.0	557.6	553.5	558.2	557.6
7.5°	556.4	554.7	551.1	556.4	555.8
10°	551.1	549.9	547.5	552.3	552.3
12.5°	544.0	544.0	542.2	547.5	547.5
15°	536.2	537.4	535.6	541.6	541.0
17.5°	527.3	528.5	527.9	533.8	533.8
20°	516.0	517.8	519.0	525.5	525.5
22.5°	504.7	507.1	508.3	515.4	515.4
25°	491.0	495.2	497.0	504.1	504.1
27.5°	476.8	482.1	485.7	492.2	493.4
30°	462.5	468.5	472.6	479.8	481.5
32.5°	447.1	453.0	459.5	466.7	469.1
35°	430.4	437.5	444.1	453.6	455.4
37.5°	413.2	421.5	429.2	439.3	441.7
40°	395.9	406.0	415.0	424.5	427.4
42.5°	377.5	387.6	399.5	409.6	412.6
45°	359.1	370.4	382.8	394.1	397.7
47.5°	340.6	352.5	366.2	378.1	382.3
50°	319.8	332.9	349.0	360.9	365.6
52.5°	299.6	313.9	331.7	343.6	349.0
55°	280.6	295.5	313.3	327.0	330.5
57.5°	258.6	275.2	294.9	309.7	313.3
60°	238.4	255.0	275.8	290.7	294.9
62.5°	217.6	235.4	256.8	271.7	275.8
65°	195.6	215.2	237.2	252.1	258.6
67.5°	174.2	193.8	217.0	233.6	239.0
70°	152.8	173.0	198.0	214.6	218.8
72.5°	130.2	152.2	177.8	195.0	200.9
75°	108.8	132.0	158.1	176.0	183.1
77.5°	88.0	112.4	139.7	158.1	162.9
80°	67.2	93.9	121.3	139.7	145.6
82.5°	50.5	75.5	104.0	123.7	128.4
85°	33.9	60.0	88.6	107.6	113.5
87.5°	20.2	47.0	74.3	92.1	98.1
90°	10.1	35.1	63.0	80.3	86.2
92.5°	8.9	31.5	58.3	75.5	81.4
95°	8.3	28.5	54.7	71.9	76.7
97.5°	7.7	26.2	51.1	67.8	73.1
100°	7.1	23.2	48.2	64.2	69.6
102.5°	6.5	20.8	44.6	60.6	66.0
105°	5.9	18.4	41.6	57.1	62.4
107.5°	5.4	16.1	38.6	53.5	58.9
110°	4.8	13.7	35.7	49.9	55.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	11.9	32.1	46.4	51.7
115°	4.2	9.5	29.1	42.8	48.2
117.5°	3.6	7.1	26.2	39.2	44.0
120°	3.6	5.4	23.2	35.7	40.4
122.5°	3.0	3.6	20.2	32.7	36.9
125°	2.4	1.8	17.2	29.1	33.3
127.5°	2.4	1.8	14.3	25.6	29.7
130°	1.8	1.8	11.3	22.0	26.2
132.5°	1.8	1.2	8.3	19.0	22.6
135°	1.2	1.2	5.4	15.5	19.0
137.5°	1.2	0.6	3.6	12.5	16.1
140°	1.2	0.6	1.2	9.5	12.5
142.5°	0.6	0.6	0.0	6.5	8.9
145°	0.6	0.0	0.0	3.6	5.9
147.5°	0.6	0.0	0.0	0.6	3.0
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)