

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242624

Luminaire Tested: S124DRP-S575D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242624  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S575D940-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

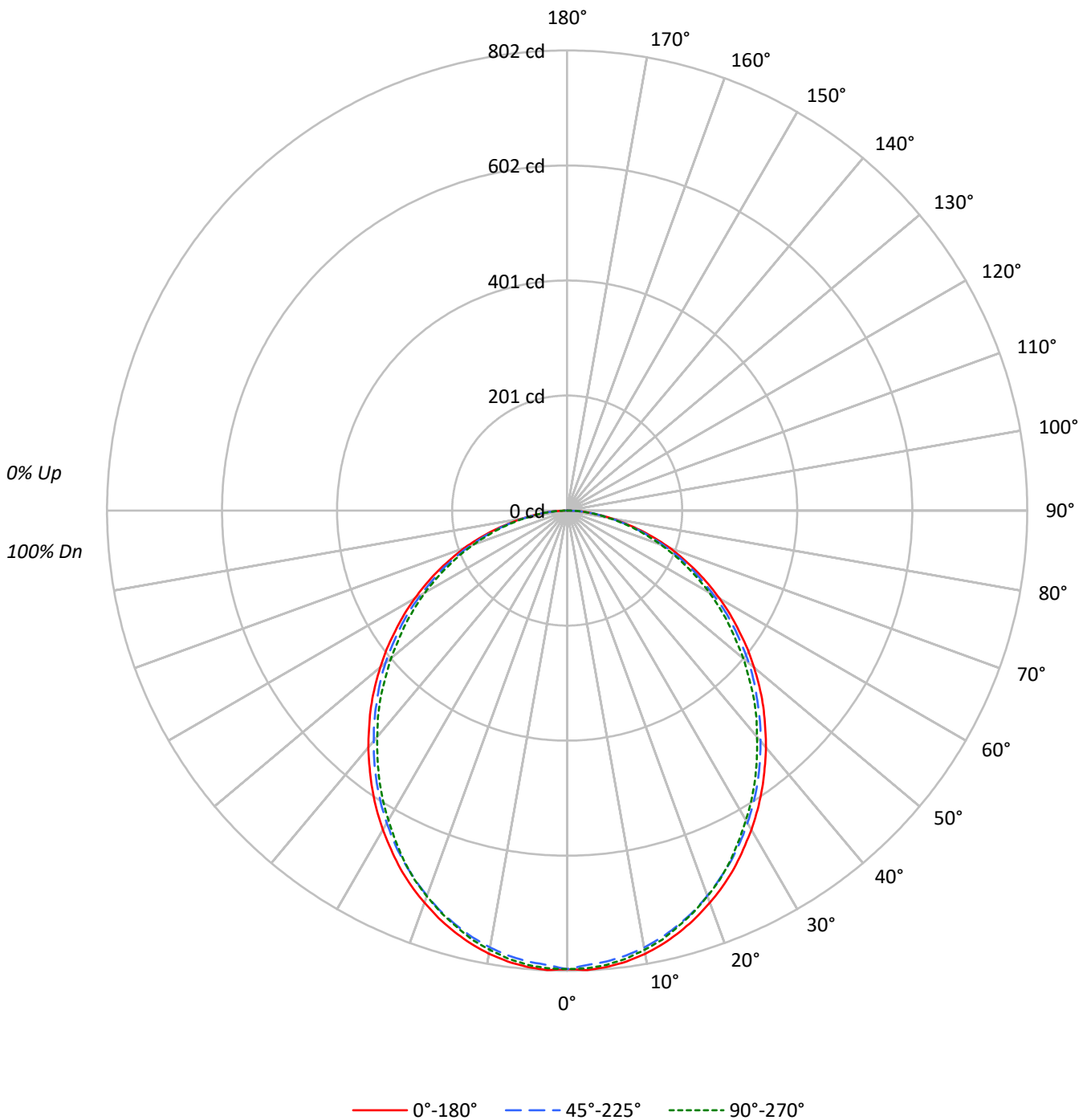
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2050.9 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: 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: 24 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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100													100															
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84													84															
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70													70															
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60													60															
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51													51															
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44													44															
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39													39															
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35													35															
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31													31															
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28													28															
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25													25															

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

	0°	45°	90°
0°	7103	7103	7103
5°	7124	7038	7090
10°	7079	6981	7016
15°	6994	6882	6900
20°	6880	6759	6765
25°	6751	6618	6600
30°	6592	6453	6394
35°	6427	6281	6197
40°	6256	6085	5974
45°	6077	5892	5779
50°	5879	5720	5543
55°	5666	5497	5319
60°	5452	5248	5088
65°	5212	5010	4808
70°	4943	4694	4509
75°	4530	4310	4200
80°	4034	3870	3768
85°	3529	3396	3335

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6077 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.3	3.7
10°-20°	212.2	10.3
20°-30°	312.3	15.2
30°-40°	363.0	17.7
40°-50°	363.0	17.7
50°-60°	317.5	15.5
60°-70°	235.7	11.5
70°-80°	133.7	6.5
80°-90°	38.3	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	599.8	29.2
0°-40°	962.8	46.9
0°-60°	1643.2	80.1
0°-90°	2050.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2050.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	798	796	789	796	795	76
15°	760	757	748	752	750	214
25°	688	684	675	676	673	317
35°	592	588	579	574	571	370
45°	483	479	469	462	460	373
55°	366	364	355	347	343	327
65°	248	245	238	232	229	245
75°	132	129	126	123	122	140
85°	35	35	33	33	33	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	799.1	799.1	799.1	799.1	799.1
2.5°	801.6	799.7	792.7	799.1	798.4
5°	798.4	795.9	788.8	795.9	794.6
7.5°	792.7	790.1	782.4	788.2	787.5
10°	784.3	781.8	773.4	778.6	777.3
12.5°	773.4	770.9	761.9	767.7	765.8
15°	760.0	757.4	747.8	751.7	749.8
17.5°	744.6	741.4	732.5	735.0	733.8
20°	727.3	724.1	714.5	716.5	715.2
22.5°	708.8	704.3	694.7	698.5	696.0
25°	688.3	683.8	674.8	675.5	672.9
27.5°	665.2	660.8	652.4	651.2	648.0
30°	642.2	637.1	628.7	626.2	623.0
32.5°	617.9	613.4	604.4	601.2	598.0
35°	592.3	587.8	578.8	574.3	571.1
37.5°	565.4	561.5	551.9	547.4	543.0
40°	539.1	534.0	524.4	518.0	514.8
42.5°	510.9	508.4	497.5	489.8	487.9
45°	483.4	478.9	468.7	461.6	459.7
47.5°	454.6	451.4	441.8	434.1	429.0
50°	425.1	422.6	413.6	404.7	400.8
52.5°	396.3	393.1	383.5	375.8	370.7
55°	365.6	363.7	354.7	347.0	343.2
57.5°	336.8	334.9	325.9	318.2	314.4
60°	306.7	303.5	295.2	289.4	286.2
62.5°	277.2	274.7	265.7	260.6	257.4
65°	247.8	244.6	238.2	231.8	228.6
67.5°	217.7	215.1	208.7	202.3	201.7
70°	190.2	185.7	180.6	175.4	173.5
72.5°	160.7	156.2	152.4	148.5	146.6
75°	131.9	128.7	125.5	122.9	122.3
77.5°	103.7	102.4	99.2	98.6	96.7
80°	78.8	76.8	75.6	74.3	73.6
82.5°	54.4	53.8	53.8	53.1	52.5
85°	34.6	34.6	33.3	33.3	32.7
87.5°	16.6	16.0	15.4	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.11	19.72	18.48	20.04	20.35	17.73	19.35	18.10	19.66	19.98
	3H	19.87	21.33	20.25	21.66	22.02	19.45	20.90	19.82	21.23	21.59
	4H	20.53	21.90	20.92	22.25	22.62	20.09	21.46	20.49	21.81	22.19
	6H	21.00	22.27	21.41	22.64	23.03	20.57	21.84	20.98	22.20	22.59
	8H	21.15	22.36	21.57	22.75	23.15	20.72	21.94	21.15	22.33	22.73
	12H	21.25	22.42	21.68	22.80	23.23	20.83	22.00	21.26	22.38	22.81
4H	2H	18.68	20.05	19.08	20.40	20.78	18.38	19.76	18.78	20.10	20.48
	3H	20.66	21.81	21.07	22.21	22.61	20.31	21.46	20.72	21.86	22.26
	4H	21.44	22.48	21.87	22.90	23.33	21.08	22.12	21.51	22.53	22.97
	6H	22.05	22.96	22.50	23.40	23.85	21.68	22.59	22.14	23.03	23.49
	8H	22.25	23.10	22.71	23.54	24.00	21.89	22.74	22.35	23.18	23.65
	12H	22.40	23.16	22.88	23.64	24.11	22.04	22.81	22.52	23.28	23.75
8H	4H	21.72	22.57	22.18	23.01	23.48	21.40	22.25	21.86	22.69	23.16
	6H	22.44	23.15	22.94	23.64	24.11	22.12	22.83	22.62	23.32	23.79
	8H	22.71	23.35	23.22	23.85	24.34	22.40	23.04	22.91	23.54	24.03
	12H	22.94	23.50	23.45	23.99	24.55	22.63	23.20	23.14	23.69	24.25
12H	4H	21.75	22.51	22.23	22.99	23.46	21.43	22.20	21.91	22.67	23.14
	6H	22.49	23.13	23.00	23.63	24.12	22.18	22.82	22.69	23.32	23.81
	8H	22.82	23.38	23.33	23.87	24.43	22.52	23.08	23.03	23.57	24.13