

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: P242595

Luminaire Tested: S124DRP-S575D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242595  
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-S575D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

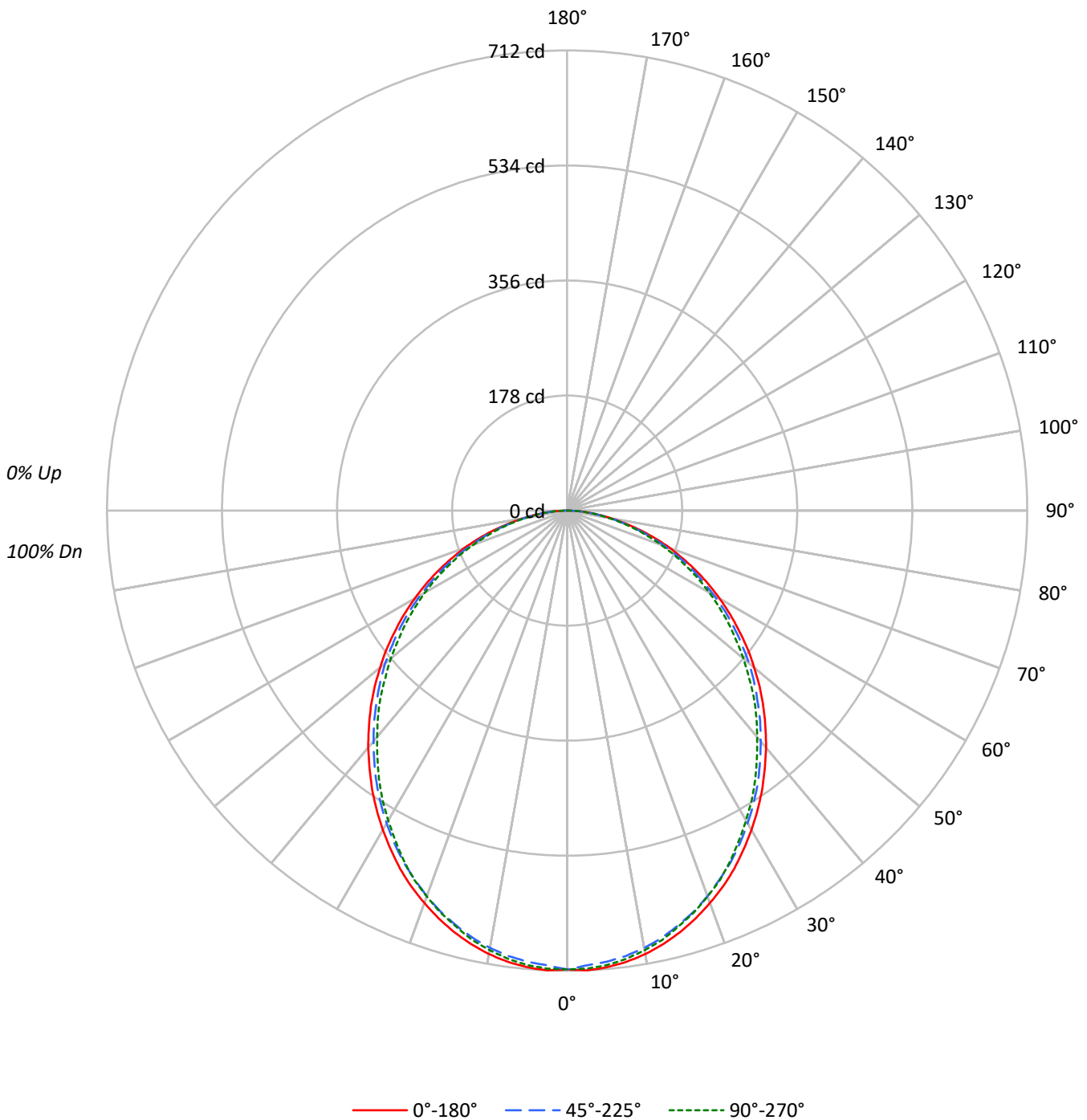
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1822.1 lumens  
Efficiency: N/A  
Efficacy: 96.9 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 (Ain): 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																		
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°	6310	6310	6310
5°	6329	6253	6299
10°	6289	6202	6232
15°	6214	6114	6130
20°	6113	6005	6010
25°	5997	5880	5863
30°	5856	5733	5681
35°	5709	5580	5506
40°	5557	5406	5306
45°	5399	5234	5134
50°	5223	5082	4924
55°	5034	4883	4725
60°	4844	4661	4521
65°	4629	4451	4272
70°	4390	4169	4005
75°	4025	3829	3730
80°	3583	3435	3348
85°	3131	3019	2958

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5399 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.9	3.7
10°-20°	188.5	10.3
20°-30°	277.4	15.2
30°-40°	322.5	17.7
40°-50°	322.5	17.7
50°-60°	282.0	15.5
60°-70°	209.4	11.5
70°-80°	118.8	6.5
80°-90°	34.0	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°	532.8	29.2
0°-40°	855.3	46.9
0°-60°	1459.8	80.1
0°-90°	1822.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	709	707	701	707	706	67
15°	675	673	664	668	666	190
25°	612	608	600	600	598	281
35°	526	522	514	510	507	329
45°	430	426	416	410	408	331
55°	325	323	315	308	305	291
65°	220	217	212	206	203	218
75°	117	114	112	109	109	124
85°	31	31	30	30	29	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	709.9	709.9	709.9	709.9	709.9
2.5°	712.1	710.4	704.2	709.9	709.3
5°	709.3	707.0	700.8	707.0	705.9
7.5°	704.2	701.9	695.1	700.2	699.6
10°	696.8	694.5	687.1	691.7	690.5
12.5°	687.1	684.8	676.9	682.0	680.3
15°	675.2	672.9	664.4	667.8	666.1
17.5°	661.5	658.7	650.7	653.0	651.9
20°	646.2	643.3	634.8	636.5	635.4
22.5°	629.7	625.7	617.2	620.6	618.3
25°	611.5	607.5	599.5	600.1	597.8
27.5°	591.0	587.0	579.6	578.5	575.6
30°	570.5	566.0	558.6	556.3	553.5
32.5°	548.9	544.9	537.0	534.1	531.3
35°	526.1	522.2	514.2	510.2	507.4
37.5°	502.3	498.8	490.3	486.3	482.3
40°	478.9	474.4	465.9	460.2	457.3
42.5°	453.9	451.6	442.0	435.1	433.4
45°	429.5	425.5	416.4	410.1	408.4
47.5°	403.9	401.0	392.5	385.7	381.1
50°	377.7	375.4	367.5	359.5	356.1
52.5°	352.1	349.2	340.7	333.9	329.3
55°	324.8	323.1	315.1	308.3	304.9
57.5°	299.2	297.5	289.5	282.7	279.3
60°	272.5	269.6	262.2	257.1	254.3
62.5°	246.3	244.0	236.1	231.5	228.7
65°	220.1	217.3	211.6	205.9	203.1
67.5°	193.4	191.1	185.4	179.7	179.2
70°	168.9	165.0	160.4	155.9	154.1
72.5°	142.8	138.8	135.4	132.0	130.3
75°	117.2	114.3	111.5	109.2	108.6
77.5°	92.1	91.0	88.2	87.6	85.9
80°	70.0	68.3	67.1	66.0	65.4
82.5°	48.3	47.8	47.8	47.2	46.6
85°	30.7	30.7	29.6	29.6	29.0
87.5°	14.8	14.2	13.7	13.7	13.7
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	17.70	19.31	18.06	19.63	19.94	17.32	18.94	17.69	19.25	19.57
	3H	19.46	20.92	19.84	21.24	21.60	19.04	20.49	19.41	20.82	21.18
	4H	20.11	21.49	20.51	21.83	22.21	19.68	21.05	20.08	21.40	21.78
	6H	20.59	21.86	21.00	22.23	22.62	20.16	21.43	20.57	21.79	22.18
	8H	20.74	21.95	21.16	22.34	22.74	20.31	21.53	20.74	21.92	22.32
	12H	20.84	22.01	21.27	22.39	22.82	20.42	21.59	20.85	21.97	22.40
4H	2H	18.27	19.64	18.67	19.99	20.37	17.97	19.35	18.37	19.69	20.07
	3H	20.25	21.40	20.66	21.80	22.20	19.90	21.05	20.31	21.45	21.85
	4H	21.03	22.07	21.46	22.49	22.92	20.67	21.71	21.10	22.12	22.56
	6H	21.64	22.54	22.09	22.99	23.44	21.27	22.18	21.72	22.62	23.08
	8H	21.83	22.68	22.29	23.13	23.59	21.48	22.33	21.94	22.77	23.23
	12H	21.98	22.75	22.46	23.22	23.69	21.63	22.39	22.11	22.87	23.34
8H	4H	21.31	22.16	21.77	22.60	23.07	20.99	21.84	21.45	22.28	22.75
	6H	22.03	22.74	22.52	23.23	23.70	21.71	22.42	22.20	22.91	23.38
	8H	22.30	22.94	22.81	23.44	23.93	21.99	22.63	22.50	23.13	23.62
	12H	22.53	23.09	23.04	23.58	24.14	22.22	22.78	22.73	23.28	23.84
12H	4H	21.34	22.10	21.82	22.58	23.05	21.02	21.79	21.50	22.26	22.73
	6H	22.08	22.72	22.59	23.22	23.71	21.77	22.41	22.28	22.91	23.40
	8H	22.41	22.97	22.91	23.46	24.02	22.11	22.67	22.62	23.16	23.72