

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: P242698

Luminaire Tested: S124RDRP-S575D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242698  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S575D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

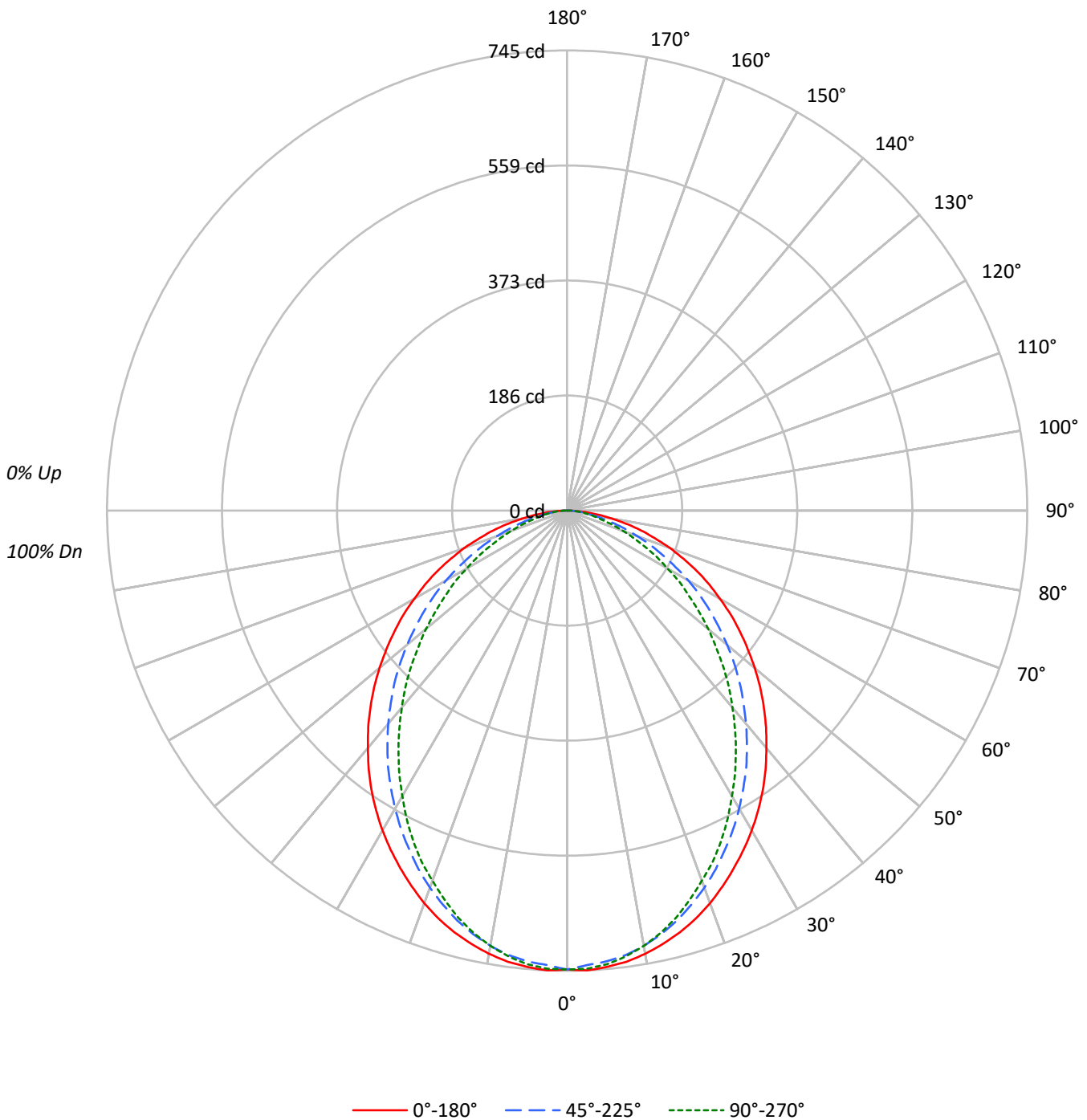
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1716.5 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85				85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72				72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54				54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47				47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41				41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37				37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33				33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27				27

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

	0°	45°	90°
0°	6604	6604	6604
5°	6618	6537	6578
10°	6576	6459	6459
15°	6502	6323	6276
20°	6397	6145	6031
25°	6265	5936	5786
30°	6136	5716	5476
35°	5993	5488	5166
40°	5822	5227	4832
45°	5663	4969	4490
50°	5483	4673	4129
55°	5289	4364	3738
60°	5076	4025	3337
65°	4882	3601	2943
70°	4598	3134	2498
75°	4238	2600	2033
80°	3696	1981	1863
85°	3131	1795	1683

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5663 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.9	4.1
10°-20°	194.8	11.3
20°-30°	281.2	16.4
30°-40°	318.7	18.6
40°-50°	307.7	17.9
50°-60°	255.8	14.9
60°-70°	176.6	10.3
70°-80°	89.2	5.2
80°-90°	22.7	1.3
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°	545.8	31.8
0°-40°	864.5	50.4
0°-60°	1428.0	83.2
0°-90°	1716.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1716.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	742	739	733	738	737	70
15°	706	701	687	686	682	199
25°	639	628	605	596	590	294
35°	552	534	506	486	476	345
45°	450	429	395	367	357	347
55°	341	318	282	252	241	305
65°	232	208	171	147	140	229
75°	123	102	76	63	59	130
85°	31	19	18	16	16	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	742.9	742.9	742.9	742.9	742.9
2.5°	745.1	742.9	736.6	742.9	742.3
5°	741.7	739.4	732.6	738.3	737.2
7.5°	736.6	734.3	725.8	729.8	728.1
10°	728.6	725.8	715.6	717.8	715.6
12.5°	718.4	715.0	702.5	703.6	700.2
15°	706.5	701.3	687.1	686.0	682.0
17.5°	692.8	685.4	668.9	666.1	660.4
20°	676.3	668.9	649.6	645.0	637.6
22.5°	658.1	649.6	628.5	621.1	615.4
25°	638.8	628.5	605.2	595.5	589.9
27.5°	618.9	606.3	581.9	570.5	562.6
30°	597.8	583.6	556.9	542.6	533.5
32.5°	575.6	559.1	531.3	514.2	505.7
35°	552.3	534.1	505.7	486.3	476.1
37.5°	527.9	509.1	477.8	456.8	446.5
40°	501.7	482.9	450.5	426.6	416.4
42.5°	476.7	456.8	422.6	398.2	387.4
45°	450.5	429.4	395.3	367.4	357.2
47.5°	423.8	402.1	366.9	337.9	326.5
50°	396.5	374.3	337.9	309.4	298.6
52.5°	368.6	347.0	309.4	280.4	269.0
55°	341.3	318.5	281.6	252.0	241.2
57.5°	314.6	290.7	254.3	224.1	216.1
60°	285.5	262.8	226.4	196.8	187.7
62.5°	259.4	235.5	197.9	171.2	164.4
65°	232.1	207.6	171.2	146.8	139.9
67.5°	203.6	180.3	146.2	124.6	116.6
70°	176.9	153.0	120.6	101.8	96.1
72.5°	148.5	127.4	97.3	81.9	76.8
75°	123.4	102.4	75.7	62.6	59.2
77.5°	97.3	79.1	56.3	47.2	46.1
80°	72.2	55.7	38.7	37.0	36.4
82.5°	50.6	35.8	27.9	26.7	26.2
85°	30.7	19.3	17.6	16.5	16.5
87.5°	13.1	8.5	8.0	7.4	8.0
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	17.90	19.47	18.27	19.78	20.10	15.93	17.50	16.30	17.81	18.13
	3H	19.67	21.08	20.05	21.41	21.77	17.18	18.59	17.56	18.92	19.28
	4H	20.33	21.66	20.73	22.00	22.38	17.56	18.89	17.96	19.23	19.61
	6H	20.81	22.03	21.22	22.40	22.79	17.82	19.05	18.24	19.41	19.80
	8H	20.96	22.12	21.38	22.51	22.91	17.92	19.08	18.34	19.47	19.87
	12H	21.06	22.17	21.49	22.55	22.98	17.98	19.10	18.41	19.48	19.91
4H	2H	18.24	19.56	18.64	19.91	20.29	16.63	17.95	17.03	18.30	18.68
	3H	20.20	21.31	20.61	21.71	22.11	18.06	19.16	18.47	19.56	19.96
	4H	20.99	21.98	21.42	22.39	22.83	18.51	19.51	18.95	19.92	20.36
	6H	21.58	22.45	22.04	22.89	23.35	18.86	19.73	19.32	20.17	20.63
	8H	21.78	22.58	22.24	23.03	23.49	18.99	19.80	19.45	20.24	20.71
	12H	21.92	22.64	22.40	23.12	23.59	19.09	19.81	19.57	20.29	20.76
8H	4H	21.08	21.89	21.54	22.33	22.80	18.83	19.64	19.29	20.08	20.55
	6H	21.75	22.42	22.25	22.91	23.39	19.26	19.93	19.76	20.42	20.90
	8H	21.99	22.59	22.51	23.10	23.59	19.44	20.04	19.95	20.55	21.04
	12H	22.19	22.72	22.70	23.21	23.77	19.60	20.13	20.10	20.62	21.18
12H	4H	21.07	21.80	21.55	22.27	22.74	18.87	19.59	19.35	20.07	20.54
	6H	21.74	22.34	22.25	22.85	23.34	19.31	19.91	19.83	20.42	20.91
	8H	22.02	22.55	22.53	23.05	23.61	19.54	20.07	20.05	20.56	21.13