

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



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060892

Luminaire Tested: S124RDR-H575D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060892  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H575D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

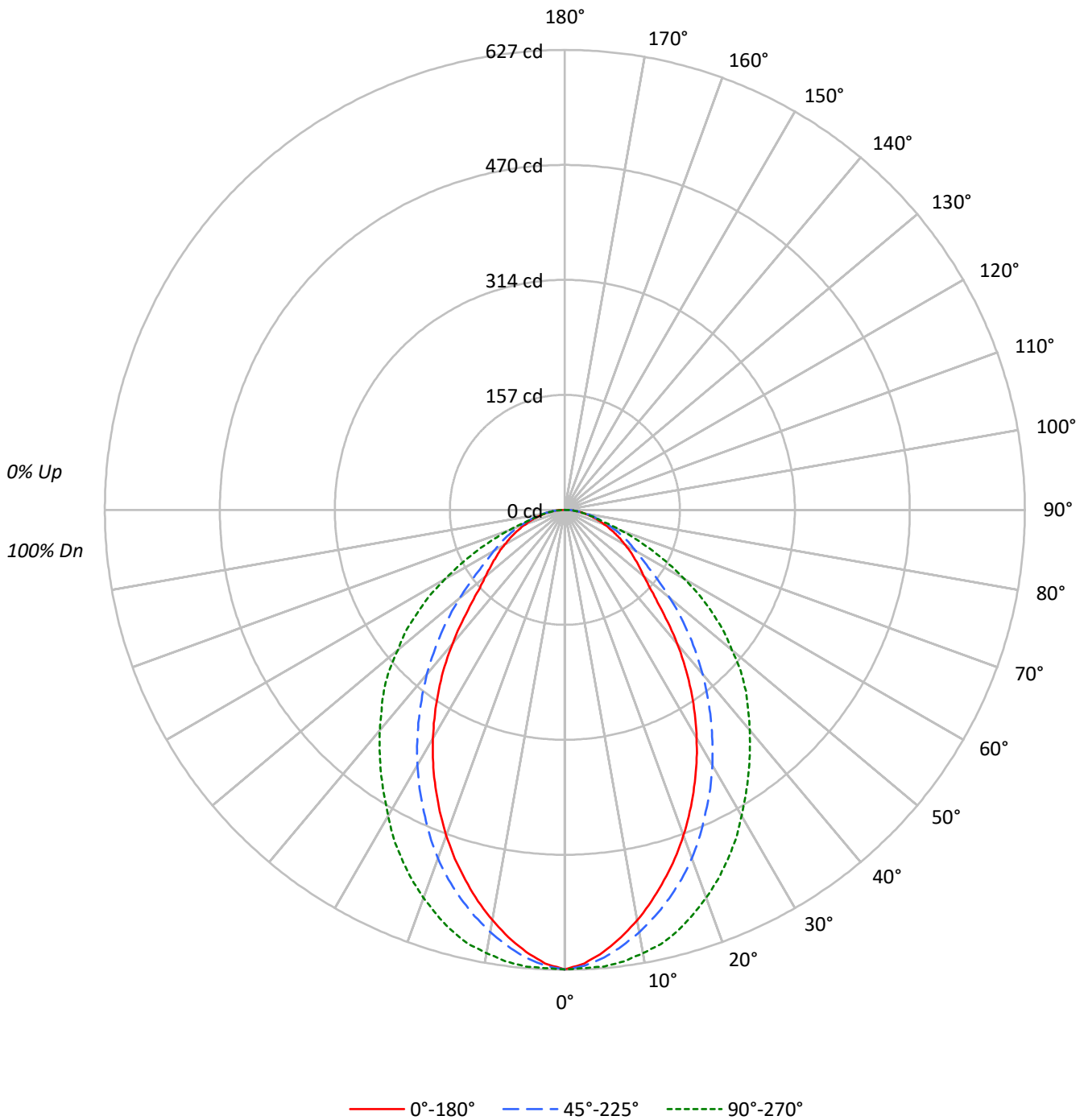
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1140.8 lumens  
Efficiency: N/A  
Efficacy: 65.6 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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									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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87													87															
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75													75															
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65													65															
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57													57															
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50													50															
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45													45															
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41													41															
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37													37															
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34													34															
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31													31															

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

	0°	45°	90°
0°	5396	5396	5396
5°	5230	5297	5400
10°	4968	5112	5364
15°	4662	4890	5299
20°	4328	4635	5158
25°	3963	4318	4993
30°	3573	3997	4788
35°	3148	3646	4592
40°	2680	3286	4408
45°	2176	2903	4248
50°	1884	2498	3977
55°	1746	2120	3689
60°	1629	1912	3236
65°	1526	1793	2690
70°	1423	1654	2034
75°	1354	1530	1464
80°	1269	1398	1240
85°	1166	1294	978

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4248 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.9	5.1
10°-20°	155.5	13.6
20°-30°	212.3	18.6
30°-40°	222.5	19.5
40°-50°	192.6	16.9
50°-60°	144.7	12.7
60°-70°	93.3	8.2
70°-80°	47.8	4.2
80°-90°	14.3	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°	425.7	37.3
0°-40°	648.2	56.8
0°-60°	985.4	86.4
0°-90°	1140.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1140.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	605	614	613	617	625	57
15°	523	536	548	573	594	147
25°	417	433	454	490	526	191
35°	300	317	347	393	437	187
45°	179	197	238	297	349	141
55°	116	120	141	202	246	105
65°	75	76	88	106	132	74
75°	41	45	46	45	44	43
85°	12	14	13	12	10	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	626.6	626.6	626.6	626.6	626.6
2.5°	618.8	626.6	622.0	623.4	625.3
5°	605.0	614.2	612.8	617.4	624.7
7.5°	587.9	597.7	599.7	610.2	620.7
10°	568.2	579.3	584.6	600.4	613.5
12.5°	546.5	558.3	567.5	587.2	606.3
15°	522.9	536.0	548.5	573.4	594.4
17.5°	498.5	511.7	528.1	555.7	579.3
20°	472.3	486.7	505.8	534.7	562.9
22.5°	445.3	460.5	480.8	512.3	545.2
25°	417.1	432.9	454.5	490.0	525.5
27.5°	388.9	404.6	428.9	466.4	505.1
30°	359.3	375.7	402.0	442.7	481.5
32.5°	329.7	347.5	374.4	417.8	459.1
35°	299.5	316.6	346.8	392.8	436.8
37.5°	269.3	287.0	319.2	368.5	414.5
40°	238.4	256.8	292.3	344.2	392.1
42.5°	207.6	227.3	264.7	319.2	369.8
45°	178.7	197.1	238.4	296.9	348.8
47.5°	157.0	169.5	212.2	275.2	325.1
50°	140.6	147.1	186.5	251.6	296.9
52.5°	128.1	132.7	162.9	226.0	273.9
55°	116.3	120.2	141.2	201.7	245.7
57.5°	105.8	107.7	124.8	178.0	218.7
60°	94.6	96.6	111.0	152.4	187.9
62.5°	84.7	86.0	99.8	128.1	159.6
65°	74.9	76.2	88.0	106.4	132.0
67.5°	65.7	67.7	76.9	86.7	105.1
70°	56.5	60.4	65.7	70.3	80.8
72.5°	48.6	52.5	55.2	56.5	57.1
75°	40.7	45.3	46.0	45.3	44.0
77.5°	32.8	36.8	36.8	35.5	34.2
80°	25.6	28.9	28.2	26.9	25.0
82.5°	19.0	21.0	20.4	19.0	17.1
85°	11.8	13.8	13.1	12.5	9.9
87.5°	5.9	7.9	7.2	6.6	3.9
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	12.29	13.77	12.65	14.09	14.40	16.06	17.55	16.43	17.86	18.17
	3H	13.94	15.27	14.32	15.60	15.96	17.18	18.51	17.55	18.83	19.20
	4H	14.61	15.86	15.01	16.21	16.59	17.47	18.71	17.87	19.06	19.44
	6H	15.13	16.28	15.54	16.64	17.04	17.66	18.81	18.08	19.18	19.57
	8H	15.31	16.40	15.73	16.79	17.19	17.72	18.81	18.14	19.20	19.60
	12H	15.43	16.48	15.86	16.86	17.29	17.74	18.79	18.17	19.17	19.60
4H	2H	13.07	14.32	13.47	14.67	15.04	16.22	17.47	16.62	17.82	18.19
	3H	14.93	15.97	15.34	16.37	16.77	17.53	18.57	17.94	18.97	19.37
	4H	15.74	16.67	16.17	17.09	17.53	17.94	18.87	18.37	19.29	19.73
	6H	16.39	17.19	16.85	17.64	18.10	18.26	19.06	18.72	19.51	19.97
	8H	16.62	17.37	17.08	17.81	18.28	18.35	19.10	18.81	19.55	20.02
	12H	16.79	17.46	17.27	17.94	18.41	18.41	19.08	18.89	19.56	20.04
8H	4H	16.09	16.85	16.55	17.29	17.76	18.07	18.83	18.54	19.27	19.74
	6H	16.88	17.51	17.38	18.00	18.48	18.49	19.11	18.98	19.60	20.08
	8H	17.20	17.76	17.72	18.27	18.76	18.64	19.20	19.15	19.71	20.20
	12H	17.47	17.96	17.98	18.45	19.02	18.76	19.26	19.27	19.75	20.31
12H	4H	16.12	16.79	16.60	17.27	17.74	18.08	18.75	18.56	19.23	19.70
	6H	16.95	17.51	17.46	18.02	18.50	18.51	19.07	19.02	19.58	20.07
	8H	17.33	17.83	17.84	18.32	18.88	18.71	19.20	19.22	19.70	20.26