

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: P1060803

Luminaire Tested: S124RDR-H350D835-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060803  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D835-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

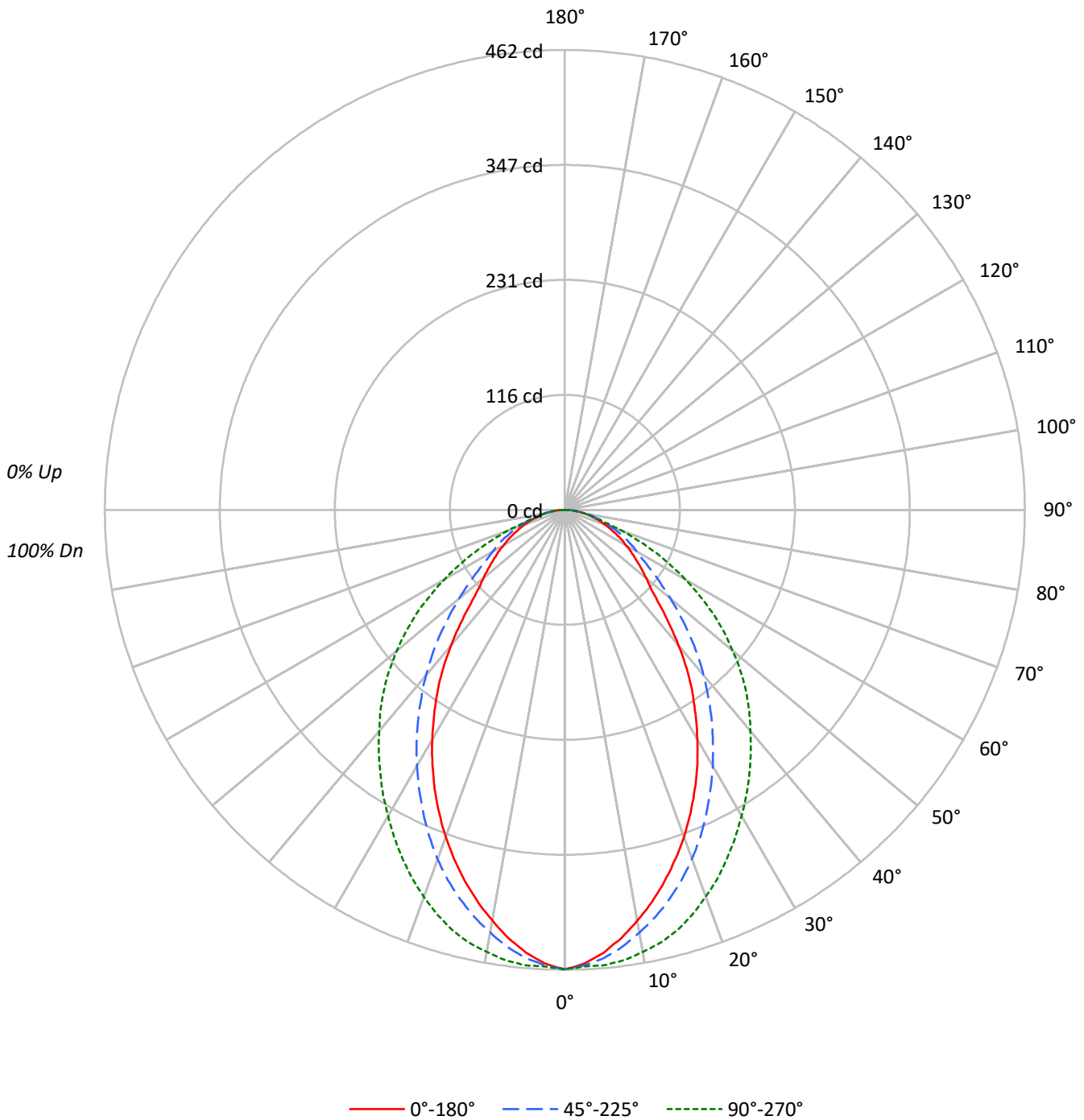
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 847.0 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																				
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87																				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75																				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65																				
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57																				
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50																				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33																				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31																				

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

	0°	45°	90°
0°	3975	3975	3975
5°	3860	3905	3968
10°	3665	3772	3944
15°	3445	3612	3897
20°	3205	3422	3792
25°	2938	3194	3668
30°	2648	2953	3530
35°	2344	2701	3397
40°	1993	2438	3260
45°	1632	2154	3133
50°	1428	1850	2950
55°	1312	1594	2729
60°	1218	1435	2406
65°	1141	1349	2015
70°	1070	1234	1511
75°	1005	1128	1101
80°	932	1031	932
85°	850	1008	810

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3133 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	5.0
10°-20°	114.8	13.6
20°-30°	156.9	18.5
30°-40°	164.9	19.5
40°-50°	143.1	16.9
50°-60°	107.9	12.7
60°-70°	70.0	8.3
70°-80°	35.9	4.2
80°-90°	10.9	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°	314.3	37.1
0°-40°	479.2	56.6
0°-60°	730.2	86.2
0°-90°	847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	847.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	446	453	452	456	459	42
15°	386	396	405	424	437	108
25°	309	320	336	362	386	142
35°	223	235	257	291	323	139
45°	134	147	177	221	257	105
55°	87	90	106	151	182	79
65°	56	57	66	80	99	56
75°	30	34	34	34	33	32
85°	9	11	10	10	8	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	461.6	461.6	461.6	461.6	461.6
2.5°	456.3	462.0	457.9	458.7	459.1
5°	446.5	452.6	451.8	455.5	459.1
7.5°	433.8	441.2	442.8	450.2	456.3
10°	419.1	427.3	431.4	443.2	451.0
12.5°	403.6	411.8	419.1	434.2	445.3
15°	386.4	395.8	405.2	423.6	437.1
17.5°	368.5	378.3	390.1	410.1	426.1
20°	349.7	359.5	373.4	395.0	413.8
22.5°	329.6	340.7	355.4	378.7	400.7
25°	309.2	320.3	336.2	361.9	386.0
27.5°	288.0	299.4	316.6	345.2	370.9
30°	266.3	278.6	297.0	327.2	355.0
32.5°	244.3	257.3	277.0	309.2	339.5
35°	223.0	235.3	256.9	291.3	323.1
37.5°	201.0	213.2	236.5	273.7	306.8
40°	177.3	190.8	216.9	255.3	290.0
42.5°	155.2	168.7	196.9	237.7	274.1
45°	134.0	146.6	176.9	221.0	257.3
47.5°	117.6	126.6	156.9	204.7	239.4
50°	106.6	110.7	138.1	186.7	220.2
52.5°	96.8	100.1	120.9	168.7	201.4
55°	87.4	89.9	106.2	150.7	181.8
57.5°	79.2	80.5	93.1	132.8	160.5
60°	70.7	72.3	83.3	114.4	139.7
62.5°	63.7	64.5	74.8	96.8	118.9
65°	56.0	57.2	66.2	80.1	98.9
67.5°	49.0	51.1	57.2	65.4	78.0
70°	42.5	45.3	49.0	53.1	60.0
72.5°	36.4	39.6	41.7	43.3	42.1
75°	30.2	33.9	33.9	34.3	33.1
77.5°	24.5	27.8	27.4	27.0	25.3
80°	18.8	21.6	20.8	20.4	18.8
82.5°	13.9	15.9	15.1	14.7	12.7
85°	8.6	10.6	10.2	9.8	8.2
87.5°	4.1	6.1	5.7	5.3	3.7
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	11.30	12.79	11.66	13.10	13.41	15.04	16.52	15.40	16.84	17.15
	3H	12.97	14.30	13.34	14.63	14.99	16.16	17.49	16.54	17.82	18.19
	4H	13.63	14.88	14.03	15.23	15.61	16.46	17.71	16.86	18.06	18.44
	6H	14.14	15.29	14.55	15.66	16.05	16.66	17.81	17.07	18.18	18.57
	8H	14.31	15.41	14.74	15.80	16.20	16.71	17.81	17.14	18.20	18.60
	12H	14.43	15.48	14.87	15.87	16.30	16.75	17.80	17.18	18.18	18.61
4H	2H	12.09	13.34	12.49	13.69	14.07	15.20	16.45	15.60	16.80	17.18
	3H	13.96	15.00	14.37	15.40	15.80	16.53	17.57	16.94	17.97	18.37
	4H	14.77	15.70	15.20	16.11	16.55	16.95	17.88	17.38	18.30	18.74
	6H	15.41	16.22	15.87	16.66	17.12	17.27	18.08	17.73	18.52	18.98
	8H	15.63	16.39	16.10	16.83	17.30	17.37	18.12	17.83	18.57	19.03
	12H	15.80	16.47	16.28	16.95	17.42	17.44	18.11	17.92	18.59	19.06
8H	4H	15.11	15.87	15.58	16.32	16.78	17.08	17.84	17.55	18.28	18.75
	6H	15.90	16.53	16.40	17.02	17.50	17.50	18.13	18.00	18.62	19.10
	8H	16.22	16.78	16.74	17.29	17.78	17.66	18.22	18.17	18.73	19.22
	12H	16.48	16.98	16.99	17.47	18.04	17.80	18.29	18.31	18.79	19.35
12H	4H	15.14	15.82	15.63	16.30	16.77	17.09	17.76	17.57	18.24	18.71
	6H	15.96	16.53	16.48	17.04	17.53	17.52	18.08	18.04	18.59	19.08
	8H	16.35	16.84	16.86	17.34	17.90	17.73	18.23	18.24	18.72	19.29