

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: P1060873

Luminaire Tested: S124RDR-H575D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060873  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H575D830-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

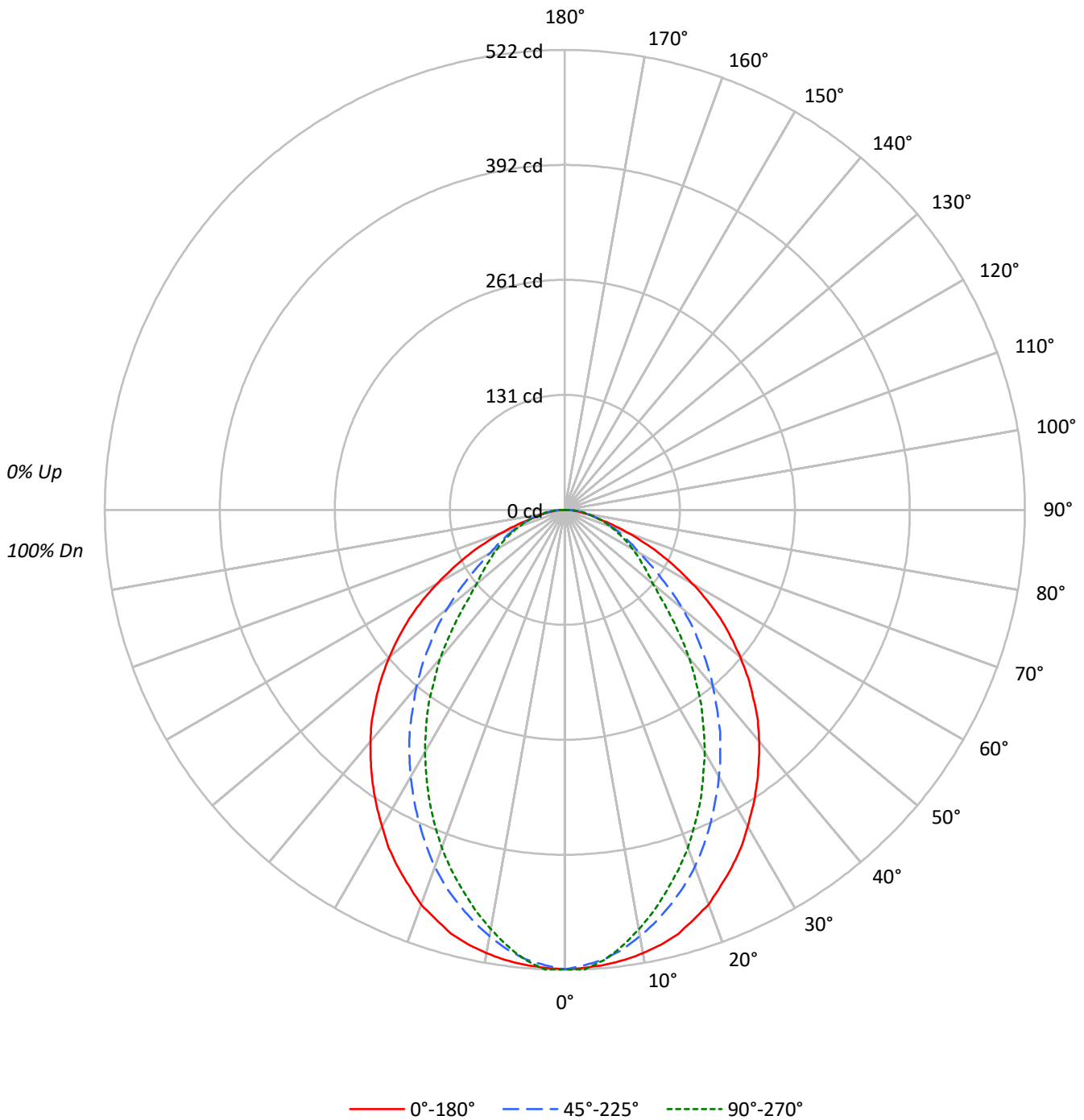
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1005.4 lumens  
Efficiency: N/A  
Efficacy: 57.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
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	
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	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	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30

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

	0°	45°	90°
0°	4490	4490	4490
5°	4481	4427	4433
10°	4468	4297	4227
15°	4441	4135	3988
20°	4368	3953	3740
25°	4256	3720	3458
30°	4124	3479	3156
35°	3994	3227	2834
40°	3857	2941	2473
45°	3686	2641	2067
50°	3480	2331	1748
55°	3238	1977	1618
60°	2871	1677	1529
65°	2447	1549	1449
70°	1913	1435	1372
75°	1304	1324	1324
80°	1126	1245	1274
85°	968	1215	1334

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3686 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.5	4.8
10°-20°	131.7	13.1
20°-30°	182.9	18.2
30°-40°	196.1	19.5
40°-50°	173.7	17.3
50°-60°	130.9	13.0
60°-70°	84.8	8.4
70°-80°	43.5	4.3
80°-90°	13.4	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°	363.2	36.1
0°-40°	559.2	55.6
0°-60°	863.8	85.9
0°-90°	1005.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1005.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	518	519	512	513	513	49
15°	498	487	464	452	447	140
25°	448	424	392	371	364	206
35°	380	346	307	279	270	238
45°	303	264	217	183	170	233
55°	216	180	132	111	108	192
65°	120	97	76	72	71	119
75°	39	41	40	40	40	46
85°	10	10	12	14	14	11
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	521.4	521.4	521.4	521.4	521.4
2.5°	520.2	522.0	517.1	520.8	522.0
5°	518.4	519.0	512.2	512.8	512.8
7.5°	515.3	514.1	503.0	500.0	499.4
10°	511.0	507.3	491.4	485.3	483.4
12.5°	505.5	498.8	478.5	470.0	466.3
15°	498.1	487.1	463.8	452.2	447.3
17.5°	487.1	473.0	448.5	433.8	428.3
20°	476.7	457.7	431.4	413.0	408.1
22.5°	462.0	441.8	411.7	392.1	386.0
25°	447.9	424.0	391.5	370.7	364.0
27.5°	432.6	405.6	370.7	348.6	340.1
30°	414.8	386.0	349.9	326.6	317.4
32.5°	397.7	367.0	328.4	302.7	292.9
35°	379.9	345.6	307.0	279.4	269.6
37.5°	361.5	325.4	283.1	256.1	243.2
40°	343.1	305.1	261.6	231.0	220.0
42.5°	324.1	284.3	239.6	207.7	193.6
45°	302.7	263.5	216.9	183.2	169.7
47.5°	281.9	243.2	196.1	159.3	147.1
50°	259.8	221.8	174.0	138.5	130.5
52.5°	237.7	199.7	152.6	122.5	118.9
55°	215.7	179.5	131.7	110.9	107.8
57.5°	191.2	158.7	113.4	100.5	98.0
60°	166.7	136.0	97.4	90.7	88.8
62.5°	142.8	116.4	86.4	80.9	79.7
65°	120.1	96.8	76.0	71.7	71.1
67.5°	98.0	79.7	66.2	63.7	62.5
70°	76.0	63.7	57.0	55.8	54.5
72.5°	56.4	51.5	48.4	47.8	47.2
75°	39.2	41.1	39.8	39.8	39.8
77.5°	31.2	31.9	32.5	33.1	32.5
80°	22.7	24.5	25.1	26.3	25.7
82.5°	15.9	17.2	19.0	19.6	20.2
85°	9.8	10.4	12.3	13.5	13.5
87.5°	4.3	4.9	6.1	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	15.66	17.16	16.02	17.47	17.78	12.22	13.72	12.59	14.03	14.35
	3H	16.86	18.21	17.24	18.53	18.90	13.92	15.26	14.30	15.59	15.95
	4H	17.17	18.43	17.57	18.78	19.16	14.59	15.85	14.99	16.20	16.58
	6H	17.37	18.54	17.78	18.90	19.29	15.14	16.31	15.56	16.67	17.07
	8H	17.43	18.54	17.86	18.93	19.33	15.36	16.47	15.79	16.86	17.26
	12H	17.46	18.52	17.89	18.90	19.33	15.53	16.59	15.96	16.98	17.40
4H	2H	15.80	17.06	16.20	17.41	17.79	12.88	14.14	13.28	14.49	14.87
	3H	17.20	18.25	17.61	18.65	19.05	14.79	15.84	15.20	16.24	16.64
	4H	17.63	18.57	18.06	18.98	19.42	15.59	16.53	16.03	16.95	17.39
	6H	17.95	18.77	18.41	19.21	19.67	16.28	17.10	16.74	17.54	18.00
	8H	18.05	18.81	18.51	19.26	19.73	16.55	17.32	17.02	17.76	18.23
	12H	18.12	18.80	18.60	19.28	19.75	16.78	17.47	17.27	17.95	18.42
8H	4H	17.76	18.52	18.22	18.96	19.43	15.91	16.67	16.37	17.12	17.59
	6H	18.18	18.81	18.67	19.30	19.78	16.74	17.37	17.24	17.86	18.34
	8H	18.33	18.90	18.85	19.41	19.90	17.10	17.67	17.62	18.18	18.67
	12H	18.46	18.96	18.97	19.46	20.02	17.44	17.94	17.95	18.43	19.00
12H	4H	17.76	18.44	18.24	18.92	19.39	15.94	16.62	16.42	17.10	17.57
	6H	18.20	18.77	18.72	19.28	19.77	16.80	17.37	17.31	17.88	18.36
	8H	18.41	18.91	18.92	19.40	19.97	17.23	17.73	17.74	18.22	18.79