

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: P1060981

Luminaire Tested: S124RDR-H795D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060981  
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-H795D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

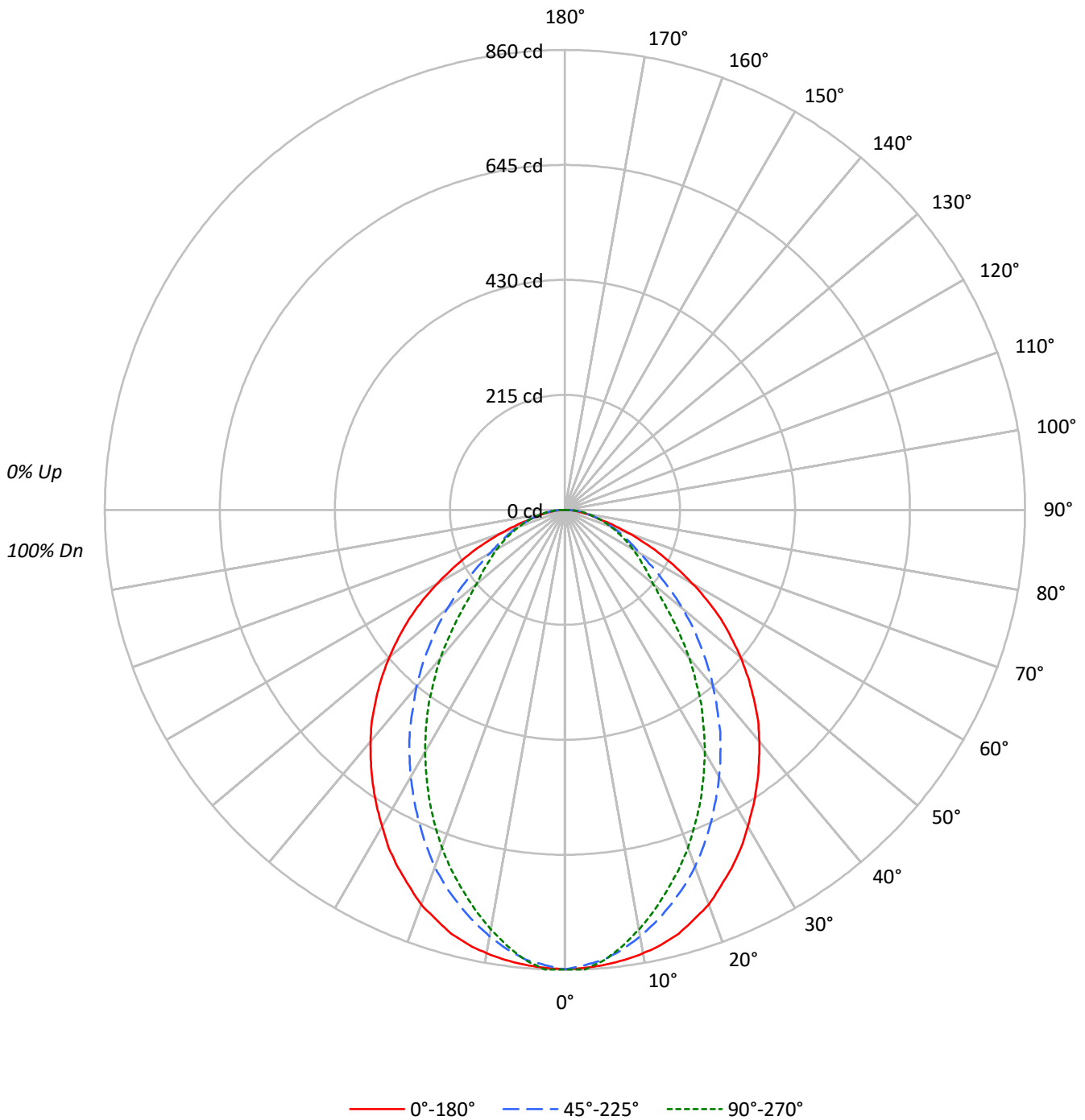
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1656.7 lumens  
Efficiency: N/A  
Efficacy: 70.5 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): 23.5  
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	100	100	100	100	100	100	100	100	100	100	100																
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86	86	86	86	86	86	86	86	86	86	86	86	86																
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74	74	74	74	74	74	74	74	74	74	74	74	74																
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64	64	64	64	64	64	64	64	64	64	64	64	64																
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56	56	56	56	56	56	56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50	50	50	50	50	50	50																
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44	44	44	44	44	44	44	44	44	44	44	44	44																
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40	40	40	40	40	40	40	40	40	40	40	40	40																
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36	36	36	36	36	36	36	36	36	36	36	36	36																
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33	33	33	33	33	33	33	33	33	33	33	33	33																
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30	30	30	30	30	30	30	30	30	30	30	30	30																

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

	0°	45°	90°
0°	7399	7399	7399
5°	7384	7296	7305
10°	7363	7080	6965
15°	7317	6814	6570
20°	7198	6514	6162
25°	7013	6130	5698
30°	6796	5732	5200
35°	6581	5317	4670
40°	6356	4846	4075
45°	6074	4352	3406
50°	5735	3841	2882
55°	5336	3259	2668
60°	4729	2764	2521
65°	4032	2551	2386
70°	3152	2364	2263
75°	2149	2183	2183
80°	1855	2053	2103
85°	1601	1996	2193

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6074 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	4.8
10°-20°	217.1	13.1
20°-30°	301.4	18.2
30°-40°	323.1	19.5
40°-50°	286.2	17.3
50°-60°	215.7	13.0
60°-70°	139.7	8.4
70°-80°	71.7	4.3
80°-90°	22.0	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°	598.4	36.1
0°-40°	921.5	55.6
0°-60°	1423.4	85.9
0°-90°	1656.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1656.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	859	859	859	859	859	
5°	854	855	844	845	845	81
15°	821	803	764	745	737	231
25°	738	699	645	611	600	340
35°	626	569	506	460	444	391
45°	499	434	357	302	280	385
55°	355	296	217	183	178	316
65°	198	160	125	118	117	196
75°	65	68	66	66	66	76
85°	16	17	20	22	22	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	859.2	859.2	859.2	859.2	859.2
2.5°	857.2	860.2	852.1	858.2	860.2
5°	854.2	855.2	844.1	845.1	845.1
7.5°	849.1	847.1	828.9	823.9	822.9
10°	842.1	836.0	809.7	799.6	796.6
12.5°	833.0	821.9	788.5	774.4	768.3
15°	820.8	802.7	764.3	745.1	737.0
17.5°	802.7	779.5	739.1	714.8	705.7
20°	785.5	754.2	710.8	680.5	672.4
22.5°	761.3	728.0	678.5	646.2	636.1
25°	738.1	698.7	645.2	610.8	599.7
27.5°	712.8	668.4	610.8	574.5	560.4
30°	683.5	636.1	576.5	538.1	523.0
32.5°	655.3	604.8	541.2	498.8	482.6
35°	626.0	569.4	505.8	460.4	444.2
37.5°	595.7	536.1	466.5	422.0	400.8
40°	565.4	502.8	431.1	380.6	362.5
42.5°	534.1	468.5	394.8	342.3	319.1
45°	498.8	434.2	357.4	301.9	279.7
47.5°	464.4	400.8	323.1	262.5	242.3
50°	428.1	365.5	286.7	228.2	215.1
52.5°	391.7	329.1	251.4	201.9	195.9
55°	355.4	295.8	217.1	182.7	177.7
57.5°	315.0	261.5	186.8	165.6	161.5
60°	274.6	224.1	160.5	149.4	146.4
62.5°	235.2	191.8	142.4	133.3	131.3
65°	197.9	159.5	125.2	118.1	117.1
67.5°	161.5	131.3	109.0	105.0	103.0
70°	125.2	105.0	93.9	91.9	89.9
72.5°	92.9	84.8	79.8	78.8	77.7
75°	64.6	67.6	65.6	65.6	65.6
77.5°	51.5	52.5	53.5	54.5	53.5
80°	37.4	40.4	41.4	43.4	42.4
82.5°	26.3	28.3	31.3	32.3	33.3
85°	16.2	17.2	20.2	22.2	22.2
87.5°	7.1	8.1	10.1	12.1	13.1
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	17.39	18.89	17.76	19.20	19.52	13.96	15.46	14.32	15.77	16.08
	3H	18.60	19.94	18.98	20.27	20.63	15.65	17.00	16.03	17.32	17.69
	4H	18.90	20.16	19.30	20.51	20.89	16.33	17.59	16.73	17.94	18.32
	6H	19.11	20.27	19.52	20.64	21.03	16.88	18.04	17.29	18.41	18.80
	8H	19.16	20.27	19.59	20.66	21.06	17.10	18.20	17.52	18.59	18.99
	12H	19.20	20.26	19.63	20.64	21.07	17.27	18.33	17.70	18.71	19.14
4H	2H	17.53	18.79	17.93	19.14	19.52	14.62	15.88	15.02	16.23	16.60
	3H	18.94	19.98	19.35	20.38	20.78	16.53	17.57	16.94	17.97	18.37
	4H	19.36	20.30	19.80	20.72	21.16	17.33	18.27	17.76	18.68	19.12
	6H	19.69	20.50	20.14	20.95	21.41	18.02	18.83	18.47	19.28	19.74
	8H	19.79	20.55	20.25	20.99	21.46	18.29	19.05	18.75	19.50	19.97
	12H	19.86	20.54	20.34	21.02	21.49	18.52	19.20	19.00	19.68	20.15
8H	4H	19.49	20.25	19.95	20.70	21.17	17.65	18.41	18.11	18.85	19.32
	6H	19.91	20.54	20.41	21.03	21.51	18.47	19.11	18.97	19.60	20.07
	8H	20.07	20.64	20.58	21.15	21.63	18.84	19.41	19.35	19.92	20.40
	12H	20.20	20.70	20.71	21.19	21.76	19.17	19.67	19.68	20.17	20.73
12H	4H	19.50	20.18	19.98	20.66	21.13	17.67	18.36	18.16	18.84	19.31
	6H	19.94	20.50	20.45	21.01	21.50	18.53	19.10	19.05	19.61	20.10
	8H	20.15	20.65	20.66	21.14	21.70	18.97	19.47	19.48	19.96	20.52