

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: P1060968

Luminaire Tested: S124RDR-H795D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060968  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H795D840-X4F0-XX-UDD-BVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

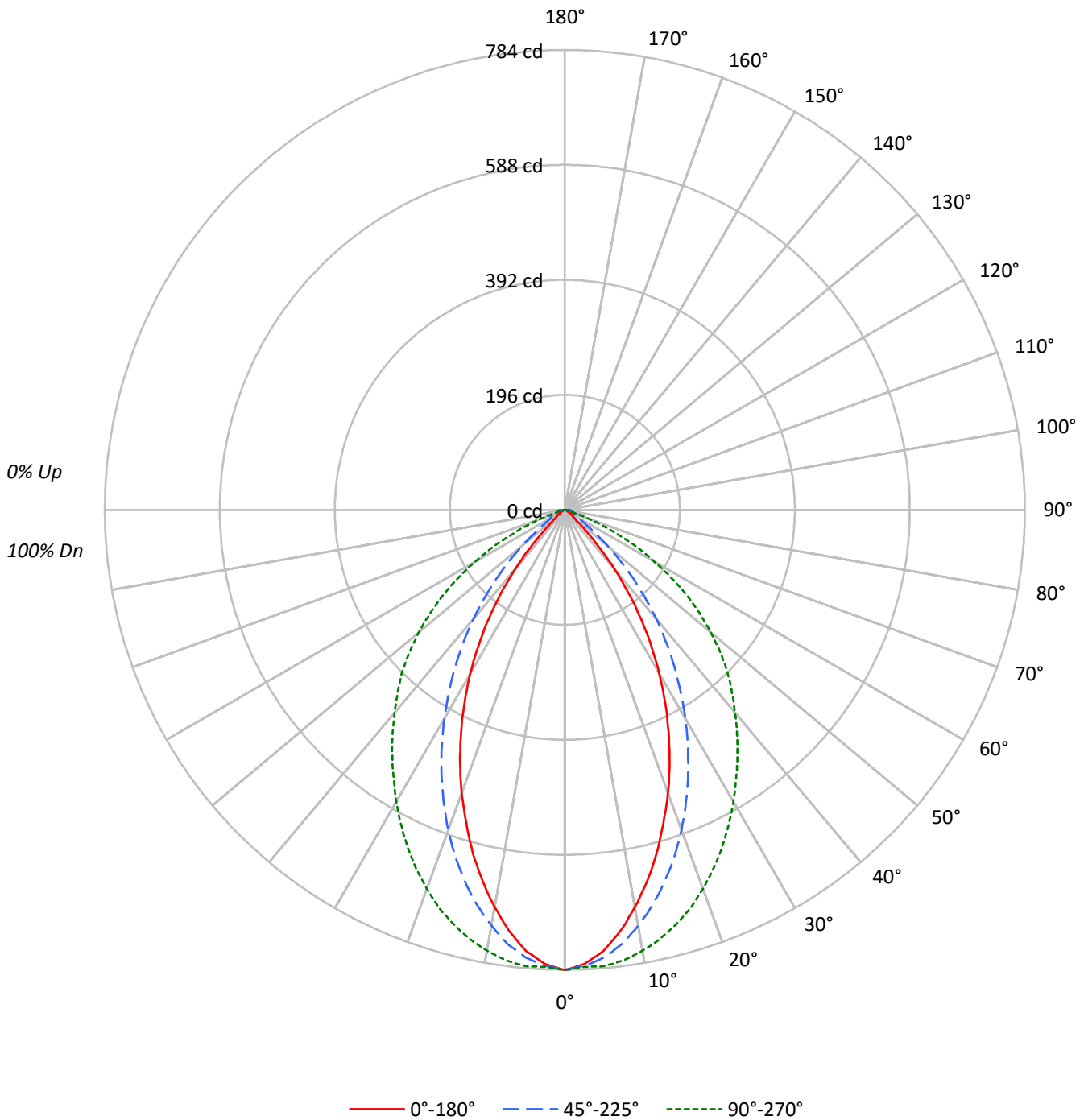
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 988.5 lumens  
Efficiency: N/A  
Efficacy: 42.1 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
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	
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90	
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81			81	
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72			72	
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65			65	
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59			59	
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54			54	
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49			49	
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45			45	
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42			42	
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39			39	

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

	0°	45°	90°
0°	6755	6755	6755
5°	6525	6620	6748
10°	6013	6295	6673
15°	5401	5852	6525
20°	4707	5323	6302
25°	3972	4723	6027
30°	3204	4083	5712
35°	2371	3416	5391
40°	1469	2721	5071
45°	583	1984	4776
50°	259	1246	4342
55°	207	650	3801
60°	143	491	3028
65°	94	487	2082
70°	93	441	974
75°	123	429	429
80°	183	501	501
85°	366	998	731

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4776 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	7.3
10°-20°	185.7	18.8
20°-30°	234.4	23.7
30°-40°	215.0	21.8
40°-50°	146.5	14.8
50°-60°	79.8	8.1
60°-70°	34.5	3.5
70°-80°	12.6	1.3
80°-90°	8.1	0.8
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°	492.0	49.8
0°-40°	707.1	71.5
0°-60°	933.3	94.4
0°-90°	988.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	988.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	755	765	766	774	781	70
15°	606	627	656	703	732	168
25°	418	447	497	576	634	191
35°	226	259	325	428	513	139
45°	48	80	163	289	392	44
55°	14	15	43	159	253	12
65°	5	6	24	50	102	5
75°	4	12	13	13	13	4
85°	4	8	10	10	7	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	784.4	784.4	784.4	784.4	784.4
2.5°	775.1	784.4	777.9	779.7	779.7
5°	754.9	765.0	765.9	774.2	780.7
7.5°	724.5	739.2	746.6	763.2	774.2
10°	687.7	705.2	719.9	748.4	763.2
12.5°	648.1	668.4	690.4	728.2	749.4
15°	605.8	626.9	656.4	703.3	731.9
17.5°	558.8	584.6	620.5	676.6	711.6
20°	513.7	539.5	580.9	644.4	687.7
22.5°	466.7	493.4	539.5	610.4	661.9
25°	418.0	447.4	497.1	576.3	634.3
27.5°	370.1	401.4	453.9	540.4	604.8
30°	322.2	353.5	410.6	503.6	574.5
32.5°	273.4	305.6	367.3	464.9	543.2
35°	225.5	258.7	325.0	428.1	512.8
37.5°	176.8	211.7	282.6	392.2	482.4
40°	130.7	165.7	242.1	356.3	451.1
42.5°	87.5	122.4	200.7	321.3	421.6
45°	47.9	80.1	162.9	289.1	392.2
47.5°	25.8	44.2	126.1	257.8	359.0
50°	19.3	23.9	93.0	224.6	324.1
52.5°	16.6	18.4	64.4	189.6	289.1
55°	13.8	14.7	43.3	159.3	253.2
57.5°	11.0	12.0	32.2	128.9	214.5
60°	8.3	10.1	28.5	99.4	175.8
62.5°	6.4	8.3	26.7	72.7	139.0
65°	4.6	6.4	23.9	49.7	102.2
67.5°	4.6	7.4	20.3	32.2	69.0
70°	3.7	10.1	17.5	21.2	38.7
72.5°	3.7	11.0	14.7	14.7	14.7
75°	3.7	12.0	12.9	12.9	12.9
77.5°	3.7	11.0	12.0	11.0	11.0
80°	3.7	10.1	10.1	10.1	10.1
82.5°	3.7	9.2	10.1	10.1	8.3
85°	3.7	8.3	10.1	10.1	7.4
87.5°	2.8	8.3	9.2	9.2	5.5
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	0.00	0.00	0.00	0.00	0.00	15.05	16.32	15.41	16.64	16.95
	3H	0.00	0.24	0.00	0.57	0.94	15.42	16.55	15.80	16.88	17.25
	4H	0.33	1.38	0.73	1.73	2.12	15.40	16.45	15.80	16.80	17.19
	6H	1.51	2.48	1.93	2.85	3.24	15.39	16.35	15.80	16.72	17.12
	8H	2.10	3.02	2.53	3.41	3.81	15.39	16.30	15.82	16.69	17.10
	12H	2.78	3.65	3.21	4.03	4.46	15.40	16.27	15.83	16.66	17.09
4H	2H	1.29	2.34	1.69	2.69	3.07	14.86	15.91	15.26	16.26	16.64
	3H	2.87	3.73	3.28	4.13	4.54	15.28	16.13	15.69	16.54	16.94
	4H	4.17	4.94	4.60	5.36	5.80	15.27	16.04	15.71	16.46	16.91
	6H	5.29	5.96	5.76	6.40	6.87	15.31	15.98	15.78	16.42	16.89
	8H	5.81	6.42	6.28	6.87	7.34	15.34	15.96	15.81	16.41	16.88
	12H	6.36	6.90	6.85	7.39	7.86	15.41	15.95	15.89	16.44	16.91
8H	4H	5.25	5.87	5.72	6.32	6.79	15.18	15.80	15.65	16.25	16.72
	6H	6.79	7.30	7.29	7.79	8.28	15.26	15.77	15.76	16.26	16.75
	8H	7.60	8.06	8.12	8.57	9.06	15.34	15.80	15.87	16.32	16.81
	12H	8.44	8.84	8.95	9.33	9.91	15.51	15.92	16.03	16.41	16.98
12H	4H	5.44	5.99	5.93	6.47	6.95	15.15	15.69	15.63	16.18	16.65
	6H	7.15	7.60	7.67	8.12	8.61	15.23	15.69	15.76	16.21	16.70
	8H	8.16	8.56	8.67	9.06	9.63	15.37	15.77	15.89	16.27	16.84