

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: P1059748

Luminaire Tested: S123RDR-H775D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059748  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H775D835-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

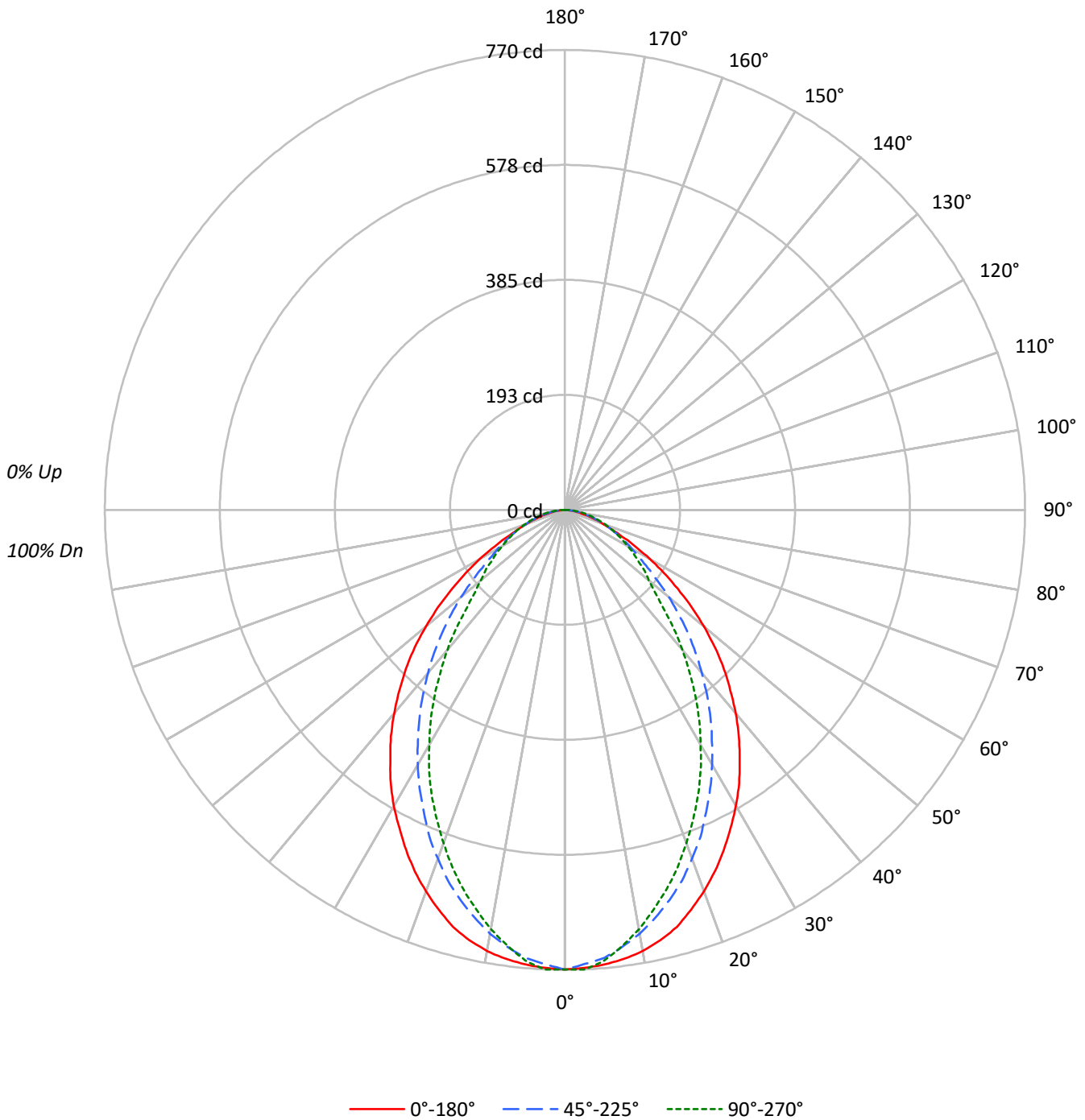
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1345.8 lumens  
Efficiency: N/A  
Efficacy: 57.3 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
Luminous Opening: Rectangular (W 0.23' 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				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

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

	0°	45°	90°
0°	9036	9036	9036
5°	9004	8873	8929
10°	8944	8591	8503
15°	8792	8219	7994
20°	8495	7766	7420
25°	8148	7237	6831
30°	7763	6683	6157
35°	7305	6085	5449
40°	6820	5459	4692
45°	6251	4822	3854
50°	5543	4140	3345
55°	4715	3464	3067
60°	3844	3020	2846
65°	2929	2673	2648
70°	2287	2383	2475
75°	1847	2141	2309
80°	1373	1751	2123
85°	741	1118	1873

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6251 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.4	5.3
10°-20°	192.2	14.3
20°-30°	261.3	19.4
30°-40°	270.8	20.1
40°-50°	228.4	17.0
50°-60°	162.1	12.0
60°-70°	99.1	7.4
70°-80°	49.3	3.7
80°-90°	11.2	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°	524.9	39.0
0°-40°	795.7	59.1
0°-60°	1186.2	88.1
0°-90°	1345.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1345.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	764	764	753	758	758	72
15°	723	709	676	664	658	203
25°	629	601	559	538	527	289
35°	510	471	424	395	380	319
45°	376	337	290	251	232	289
55°	230	206	169	154	150	207
65°	105	102	96	96	95	108
75°	41	44	47	49	51	44
85°	6	6	8	12	14	8
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	769.5	769.5	769.5	769.5	769.5
2.5°	767.6	768.6	761.2	769.5	770.4
5°	763.9	763.9	752.8	757.5	757.5
7.5°	758.4	756.5	738.0	738.0	736.2
10°	750.1	744.5	720.5	715.8	713.1
12.5°	738.0	728.8	699.2	690.9	685.3
15°	723.2	709.4	676.1	664.0	657.6
17.5°	702.0	688.1	651.1	634.4	627.1
20°	679.8	659.4	621.5	604.9	593.8
22.5°	655.7	629.8	592.8	572.5	560.5
25°	628.9	601.2	558.6	538.3	527.2
27.5°	600.2	569.7	526.2	503.1	492.0
30°	572.5	537.3	492.9	467.1	454.1
32.5°	542.9	503.1	457.8	431.0	418.0
35°	509.6	470.8	424.5	394.9	380.1
37.5°	478.1	438.4	390.3	358.8	342.2
40°	444.9	405.1	356.1	323.7	306.1
42.5°	409.7	371.8	323.7	285.8	269.1
45°	376.4	336.6	290.4	250.6	232.1
47.5°	340.3	303.4	258.0	217.3	204.4
50°	303.4	269.1	226.6	189.6	183.1
52.5°	267.3	238.6	195.1	171.1	168.3
55°	230.3	206.2	169.2	154.5	149.8
57.5°	196.1	178.5	145.2	137.8	136.0
60°	163.7	148.9	128.6	123.9	121.2
62.5°	132.3	123.9	111.9	110.1	108.2
65°	105.4	101.7	96.2	96.2	95.3
67.5°	83.2	83.2	82.3	84.2	83.2
70°	66.6	67.5	69.4	71.2	72.1
72.5°	52.7	55.5	57.3	60.1	61.0
75°	40.7	43.5	47.2	49.0	50.9
77.5°	29.6	32.4	36.1	38.8	40.7
80°	20.3	22.2	25.9	29.6	31.4
82.5°	12.9	13.9	16.6	20.3	22.2
85°	5.5	6.5	8.3	12.0	13.9
87.5°	0.0	0.0	0.9	3.7	6.5
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	16.46	17.91	16.82	18.22	18.54	14.55	16.00	14.92	16.32	16.63
	3H	17.35	18.65	17.73	18.98	19.34	16.13	17.42	16.50	17.75	18.11
	4H	17.64	18.85	18.04	19.20	19.58	16.72	17.93	17.12	18.28	18.66
	6H	17.79	18.90	18.20	19.27	19.66	17.17	18.29	17.59	18.66	19.05
	8H	17.81	18.87	18.24	19.26	19.66	17.32	18.38	17.75	18.77	19.18
	12H	17.80	18.82	18.23	19.20	19.63	17.42	18.44	17.85	18.82	19.25
4H	2H	16.70	17.91	17.10	18.26	18.64	15.10	16.31	15.50	16.66	17.04
	3H	17.81	18.81	18.23	19.22	19.62	16.87	17.87	17.28	18.27	18.67
	4H	18.20	19.10	18.64	19.52	19.96	17.58	18.48	18.01	18.90	19.34
	6H	18.45	19.22	18.90	19.67	20.13	18.15	18.93	18.61	19.37	19.84
	8H	18.49	19.22	18.95	19.66	20.13	18.34	19.07	18.81	19.51	19.98
	12H	18.50	19.14	18.98	19.62	20.10	18.48	19.13	18.96	19.61	20.08
8H	4H	18.36	19.09	18.83	19.53	20.00	17.79	18.52	18.26	18.96	19.43
	6H	18.67	19.27	19.17	19.77	20.25	18.46	19.06	18.96	19.56	20.04
	8H	18.75	19.29	19.27	19.80	20.29	18.72	19.26	19.24	19.77	20.26
	12H	18.79	19.26	19.30	19.75	20.32	18.93	19.40	19.44	19.90	20.46
12H	4H	18.37	19.01	18.85	19.49	19.97	17.79	18.43	18.27	18.91	19.39
	6H	18.69	19.23	19.21	19.74	20.23	18.47	19.01	18.99	19.52	20.01
	8H	18.80	19.28	19.32	19.77	20.34	18.78	19.25	19.29	19.74	20.31