

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: P1059778

Luminaire Tested: S123RDR-H775D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059778  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H775D930-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

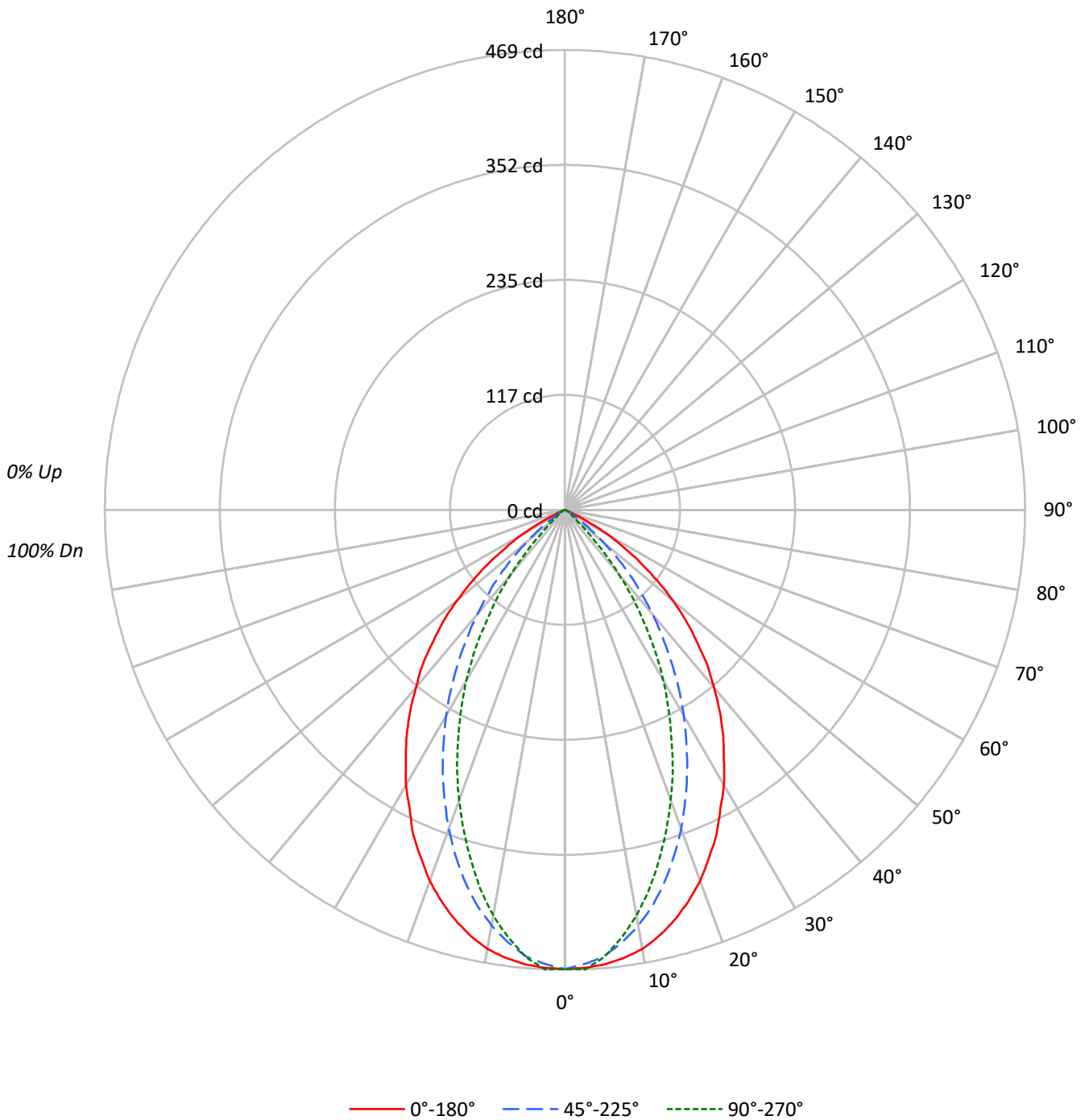
Lumens per Lamp: N/A  
Luminaire Lumens: 534.3 lumens  
Efficiency: N/A  
Efficacy: 22.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

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									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																												
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92																												
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84																												
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76																												
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69																												
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63																												
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58																												
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53																												
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49																												
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46																												
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42																												

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

	0°	45°	90°
0°	5498	5498	5498
5°	5483	5386	5395
10°	5422	5133	5008
15°	5261	4775	4500
20°	5031	4325	3939
25°	4738	3820	3331
30°	4396	3281	2720
35°	4031	2714	2021
40°	3618	2126	1294
45°	3155	1553	538
50°	2618	923	206
55°	1928	385	154
60°	1170	141	89
65°	314	83	42
70°	0	27	27
75°	0	0	36
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3155 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	8.1
10°-20°	111.2	20.8
20°-30°	138.6	25.9
30°-40°	124.0	23.2
40°-50°	78.2	14.6
50°-60°	32.7	6.1
60°-70°	6.2	1.2
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	293.0	54.8
0°-40°	417.0	78.0
0°-60°	527.9	98.8
0°-90°	534.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	534.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	465	464	457	458	458	44
15°	433	422	393	376	370	121
25°	366	336	295	269	257	167
35°	281	240	189	155	141	175
45°	190	148	94	50	32	147
55°	94	65	19	8	8	84
65°	11	8	3	2	2	16
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	468.2	468.2	468.2	468.2	468.2
2.5°	467.5	468.2	463.7	468.2	469.0
5°	465.2	464.5	456.9	458.4	457.7
7.5°	460.7	458.4	444.9	441.8	440.3
10°	454.7	448.6	430.5	423.0	420.0
12.5°	444.9	436.6	413.2	401.1	396.6
15°	432.8	422.2	392.8	376.2	370.2
17.5°	418.5	403.4	370.2	352.1	343.1
20°	402.6	381.5	346.1	324.2	315.2
22.5°	383.8	360.4	320.4	297.1	287.3
25°	365.7	336.3	294.8	269.2	257.1
27.5°	343.1	312.2	267.7	241.3	228.5
30°	324.2	288.8	242.0	212.6	200.6
32.5°	301.6	264.6	215.6	183.2	171.9
35°	281.2	240.5	189.3	155.3	141.0
37.5°	259.4	217.1	162.9	127.4	113.9
40°	236.0	193.8	138.7	99.5	84.4
42.5°	214.9	170.4	114.6	73.9	58.8
45°	190.0	147.8	93.5	49.8	32.4
47.5°	167.4	126.7	70.9	27.9	17.3
50°	143.3	104.8	50.5	14.3	11.3
52.5°	118.4	83.7	33.2	9.8	9.0
55°	94.2	64.8	18.8	7.5	7.5
57.5°	70.9	46.7	9.8	6.0	5.3
60°	49.8	30.9	6.0	4.5	3.8
62.5°	28.7	18.1	4.5	3.0	3.0
65°	11.3	8.3	3.0	1.5	1.5
67.5°	0.8	2.3	1.5	0.8	0.8
70°	0.0	0.0	0.8	0.8	0.8
72.5°	0.0	0.0	0.8	0.8	0.8
75°	0.0	0.0	0.0	0.0	0.8
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	11.11	12.28	11.47	12.60	12.91	0.00	0.00	0.00	0.00	0.00
	3H	10.95	11.98	11.33	12.31	12.68	0.00	0.00	0.00	0.00	0.00
	4H	10.86	11.82	11.27	12.17	12.56	0.00	0.00	0.00	0.00	0.00
	6H	10.77	11.64	11.19	12.01	12.41	0.00	0.00	0.00	0.00	0.00
	8H	10.72	11.54	11.15	11.93	12.34	0.00	0.00	0.00	0.00	0.00
	12H	10.67	11.45	11.10	11.84	12.27	0.00	0.00	0.00	0.00	0.00
4H	2H	10.87	11.82	11.27	12.17	12.56	0.00	0.00	0.00	0.00	0.00
	3H	10.70	11.47	11.12	11.88	12.28	0.00	0.00	0.00	0.00	0.00
	4H	10.60	11.28	11.03	11.70	12.15	0.00	0.00	0.00	0.00	0.00
	6H	10.50	11.09	10.97	11.53	12.01	0.00	0.00	0.00	0.00	0.00
	8H	10.44	10.98	10.91	11.43	11.90	0.00	0.00	0.00	0.00	0.00
	12H	10.38	10.85	10.87	11.34	11.82	0.00	0.00	0.00	0.00	0.00
8H	4H	10.44	10.98	10.91	11.43	11.90	0.00	0.00	0.00	0.00	0.00
	6H	10.32	10.76	10.83	11.26	11.74	0.00	0.00	0.00	0.00	0.00
	8H	10.25	10.64	10.78	11.16	11.66	0.00	0.00	0.00	0.00	0.00
	12H	10.19	10.54	10.71	11.04	11.62	0.00	0.00	0.00	0.00	0.00
12H	4H	10.38	10.86	10.87	11.34	11.82	0.00	0.00	0.00	0.00	0.00
	6H	10.25	10.64	10.78	11.16	11.66	0.00	0.00	0.00	0.00	0.00
	8H	10.19	10.54	10.71	11.04	11.62	0.00	0.00	0.00	0.00	0.00