

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: P1059733

Luminaire Tested: S123RDR-H775D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059733
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-H775D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

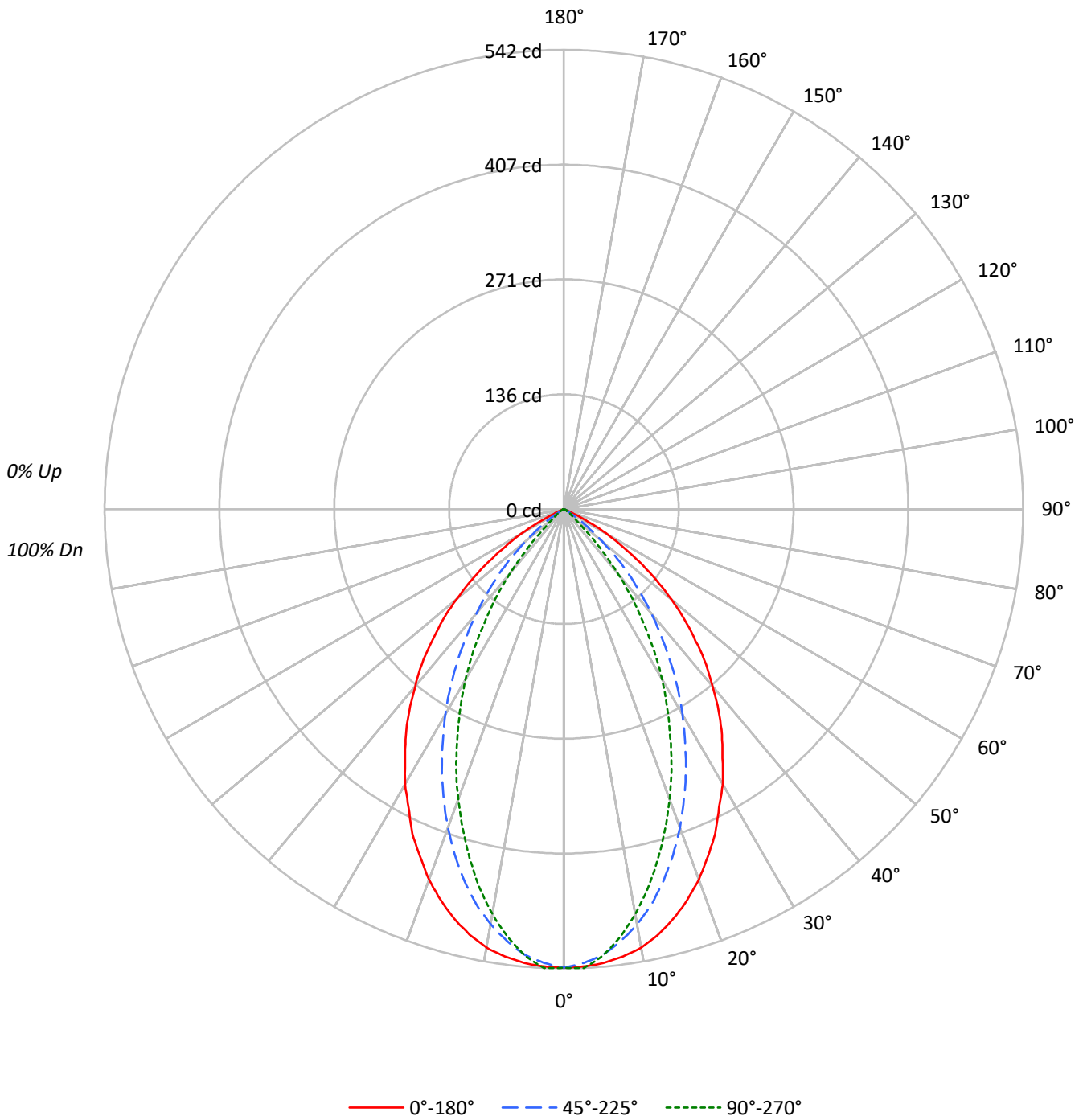
Lumens per Lamp: N/A
Luminaire Lumens: 617.7 lumens
Efficiency: N/A
Efficacy: 26.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	
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	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°	6356	6356	6356
5°	6339	6226	6237
10°	6267	5934	5789
15°	6082	5520	5203
20°	5817	5000	4554
25°	5478	4416	3851
30°	5082	3794	3144
35°	4660	3136	2337
40°	4182	2459	1496
45°	3648	1795	623
50°	3025	1067	239
55°	2231	446	178
60°	1350	164	103
65°	364	97	47
70°	0	31	31
75°	0	0	41
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	8.1
10°-20°	128.6	20.8
20°-30°	160.3	25.9
30°-40°	143.3	23.2
40°-50°	90.4	14.6
50°-60°	37.9	6.1
60°-70°	7.1	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°	338.7	54.8
0°-40°	482.0	78.0
0°-60°	610.3	98.8
0°-90°	617.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	617.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	538	537	528	530	529	51
15°	500	488	454	435	428	140
25°	423	389	341	311	297	194
35°	325	278	219	180	163	203
45°	220	171	108	58	38	169
55°	109	75	22	9	9	98
65°	13	10	4	2	2	18
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°	541.3	541.3	541.3	541.3	541.3
2.5°	540.4	541.3	536.1	541.3	542.2
5°	537.8	536.9	528.2	530.0	529.1
7.5°	532.6	530.0	514.3	510.8	509.1
10°	525.6	518.6	497.7	489.0	485.5
12.5°	514.3	504.7	477.7	463.7	458.5
15°	500.3	488.1	454.1	435.0	428.0
17.5°	483.8	466.3	428.0	407.1	396.6
20°	465.5	441.1	400.1	374.8	364.4
22.5°	443.7	416.7	370.5	343.4	332.1
25°	422.8	388.8	340.8	311.2	297.2
27.5°	396.6	360.9	309.4	278.9	264.1
30°	374.8	333.8	279.8	245.8	231.9
32.5°	348.7	306.0	249.3	211.8	198.7
35°	325.1	278.1	218.8	179.6	163.0
37.5°	299.9	251.0	188.3	147.3	131.6
40°	272.8	224.0	160.4	115.1	97.6
42.5°	248.4	197.0	132.5	85.4	68.0
45°	219.7	170.8	108.1	57.5	37.5
47.5°	193.5	146.4	81.9	32.3	20.0
50°	165.6	121.2	58.4	16.6	13.1
52.5°	136.9	96.8	38.4	11.3	10.5
55°	109.0	75.0	21.8	8.7	8.7
57.5°	81.9	54.0	11.3	7.0	6.1
60°	57.5	35.7	7.0	5.2	4.4
62.5°	33.1	20.9	5.2	3.5	3.5
65°	13.1	9.6	3.5	1.7	1.7
67.5°	0.9	2.6	1.7	0.9	0.9
70°	0.0	0.0	0.9	0.9	0.9
72.5°	0.0	0.0	0.9	0.9	0.9
75°	0.0	0.0	0.0	0.0	0.9
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	11.61	12.79	11.98	13.10	13.42	0.00	0.00	0.00	0.00	0.00
	3H	11.45	12.48	11.83	12.81	13.18	0.00	0.00	0.00	0.00	0.00
	4H	11.37	12.32	11.77	12.67	13.06	0.00	0.00	0.00	0.00	0.00
	6H	11.27	12.14	11.69	12.52	12.91	0.00	0.00	0.00	0.00	0.00
	8H	11.22	12.04	11.66	12.44	12.84	0.00	0.00	0.00	0.00	0.00
	12H	11.17	11.96	11.61	12.34	12.77	0.00	0.00	0.00	0.00	0.00
4H	2H	11.37	12.32	11.77	12.68	13.06	0.00	0.00	0.00	0.00	0.00
	3H	11.21	11.97	11.62	12.38	12.78	0.00	0.00	0.00	0.00	0.00
	4H	11.10	11.78	11.54	12.20	12.65	0.00	0.00	0.00	0.00	0.00
	6H	11.00	11.59	11.47	12.04	12.51	0.00	0.00	0.00	0.00	0.00
	8H	10.94	11.48	11.41	11.93	12.41	0.00	0.00	0.00	0.00	0.00
	12H	10.88	11.36	11.37	11.84	12.32	0.00	0.00	0.00	0.00	0.00
8H	4H	10.94	11.48	11.41	11.93	12.41	0.00	0.00	0.00	0.00	0.00
	6H	10.82	11.26	11.33	11.76	12.25	0.00	0.00	0.00	0.00	0.00
	8H	10.75	11.15	11.28	11.67	12.16	0.00	0.00	0.00	0.00	0.00
	12H	10.70	11.05	11.21	11.54	12.12	0.00	0.00	0.00	0.00	0.00
12H	4H	10.88	11.36	11.37	11.84	12.32	0.00	0.00	0.00	0.00	0.00
	6H	10.75	11.15	11.28	11.67	12.16	0.00	0.00	0.00	0.00	0.00
	8H	10.70	11.05	11.21	11.54	12.12	0.00	0.00	0.00	0.00	0.00