

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: P1059751

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059751
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-H775D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

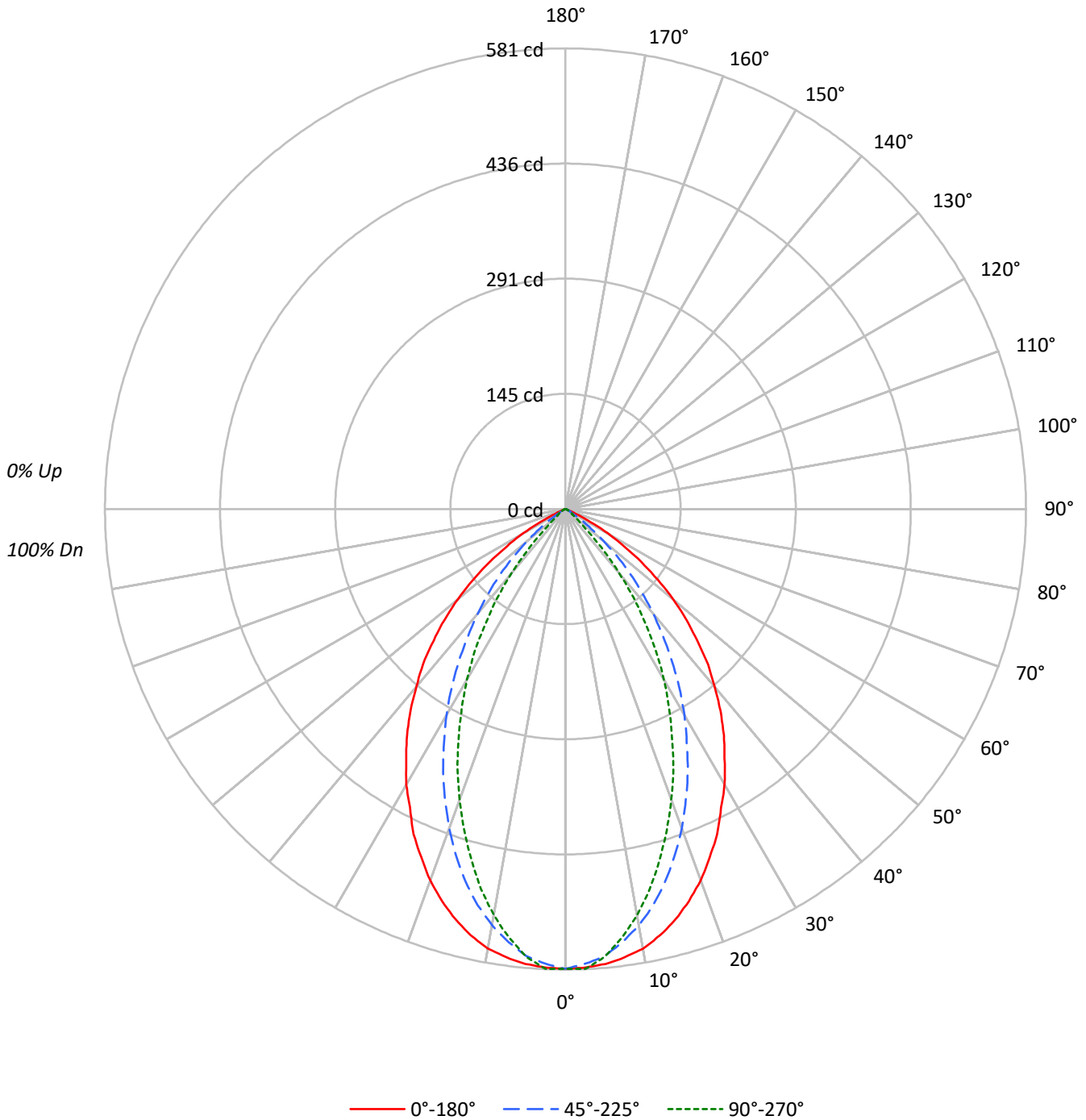
Lumens per Lamp: N/A
Luminaire Lumens: 661.8 lumens
Efficiency: N/A
Efficacy: 28.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6811	6811	6811
5°	6792	6672	6682
10°	6715	6359	6203
15°	6517	5915	5575
20°	6232	5357	4878
25°	5869	4732	4127
30°	5445	4065	3368
35°	4994	3360	2503
40°	4481	2633	1603
45°	3907	1923	668
50°	3241	1144	256
55°	2389	477	190
60°	1447	176	110
65°	389	103	53
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: 3907 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	8.1
10°-20°	137.8	20.8
20°-30°	171.7	25.9
30°-40°	153.5	23.2
40°-50°	96.9	14.6
50°-60°	40.5	6.1
60°-70°	7.6	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°	362.9	54.8
0°-40°	516.5	78.0
0°-60°	653.9	98.8
0°-90°	661.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	661.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	576	575	566	568	567	55
15°	536	523	487	466	459	150
25°	453	416	365	333	318	207
35°	348	298	234	192	175	217
45°	235	183	116	62	40	181
55°	117	80	23	9	9	105
65°	14	10	4	2	2	20
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°	580.0	580.0	580.0	580.0	580.0
2.5°	579.0	580.0	574.4	580.0	580.9
5°	576.2	575.3	566.0	567.8	566.9
7.5°	570.6	567.8	551.0	547.3	545.4
10°	563.2	555.7	533.3	523.9	520.2
12.5°	551.0	540.7	511.8	496.8	491.2
15°	536.1	523.0	486.6	466.0	458.6
17.5°	518.3	499.6	458.6	436.1	424.9
20°	498.7	472.6	428.7	401.6	390.4
22.5°	475.4	446.4	396.9	368.0	355.8
25°	453.0	416.5	365.2	333.4	318.5
27.5°	424.9	386.6	331.5	298.9	283.0
30°	401.6	357.7	299.8	263.4	248.4
32.5°	373.6	327.8	267.1	226.9	212.9
35°	348.4	297.9	234.4	192.4	174.6
37.5°	321.3	269.0	201.7	157.8	141.0
40°	292.3	240.0	171.8	123.3	104.6
42.5°	266.2	211.1	142.0	91.5	72.8
45°	235.3	183.0	115.8	61.6	40.2
47.5°	207.3	156.9	87.8	34.6	21.5
50°	177.4	129.8	62.6	17.7	14.0
52.5°	146.6	103.7	41.1	12.1	11.2
55°	116.7	80.3	23.3	9.3	9.3
57.5°	87.8	57.9	12.1	7.5	6.5
60°	61.6	38.3	7.5	5.6	4.7
62.5°	35.5	22.4	5.6	3.7	3.7
65°	14.0	10.3	3.7	1.9	1.9
67.5°	0.9	2.8	1.9	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	11.86	13.03	12.22	13.34	13.66	0.00	0.00	0.00	0.00	0.00
	3H	11.70	12.73	12.08	13.06	13.43	0.00	0.00	0.00	0.00	0.00
	4H	11.61	12.56	12.02	12.92	13.30	0.00	0.00	0.00	0.00	0.00
	6H	11.52	12.39	11.93	12.76	13.16	0.00	0.00	0.00	0.00	0.00
	8H	11.47	12.29	11.90	12.68	13.09	0.00	0.00	0.00	0.00	0.00
	12H	11.42	12.20	11.85	12.59	13.02	0.00	0.00	0.00	0.00	0.00
4H	2H	11.61	12.57	12.02	12.92	13.31	0.00	0.00	0.00	0.00	0.00
	3H	11.45	12.22	11.86	12.62	13.03	0.00	0.00	0.00	0.00	0.00
	4H	11.35	12.03	11.78	12.45	12.90	0.00	0.00	0.00	0.00	0.00
	6H	11.25	11.83	11.72	12.28	12.75	0.00	0.00	0.00	0.00	0.00
	8H	11.18	11.73	11.66	12.18	12.65	0.00	0.00	0.00	0.00	0.00
	12H	11.13	11.60	11.62	12.09	12.57	0.00	0.00	0.00	0.00	0.00
8H	4H	11.18	11.73	11.66	12.18	12.65	0.00	0.00	0.00	0.00	0.00
	6H	11.07	11.51	11.57	12.01	12.49	0.00	0.00	0.00	0.00	0.00
	8H	11.00	11.39	11.52	11.91	12.41	0.00	0.00	0.00	0.00	0.00
	12H	10.94	11.29	11.46	11.79	12.36	0.00	0.00	0.00	0.00	0.00
12H	4H	11.13	11.60	11.62	12.09	12.57	0.00	0.00	0.00	0.00	0.00
	6H	11.00	11.39	11.52	11.91	12.41	0.00	0.00	0.00	0.00	0.00
	8H	10.94	11.29	11.46	11.79	12.36	0.00	0.00	0.00	0.00	0.00