

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: P1062178

Luminaire Tested: S125RDR-H850D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1062178  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-46)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDR-H850D835-X4F0-XX-UDD-WVL-B  
Description: DEFINE 5 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: -

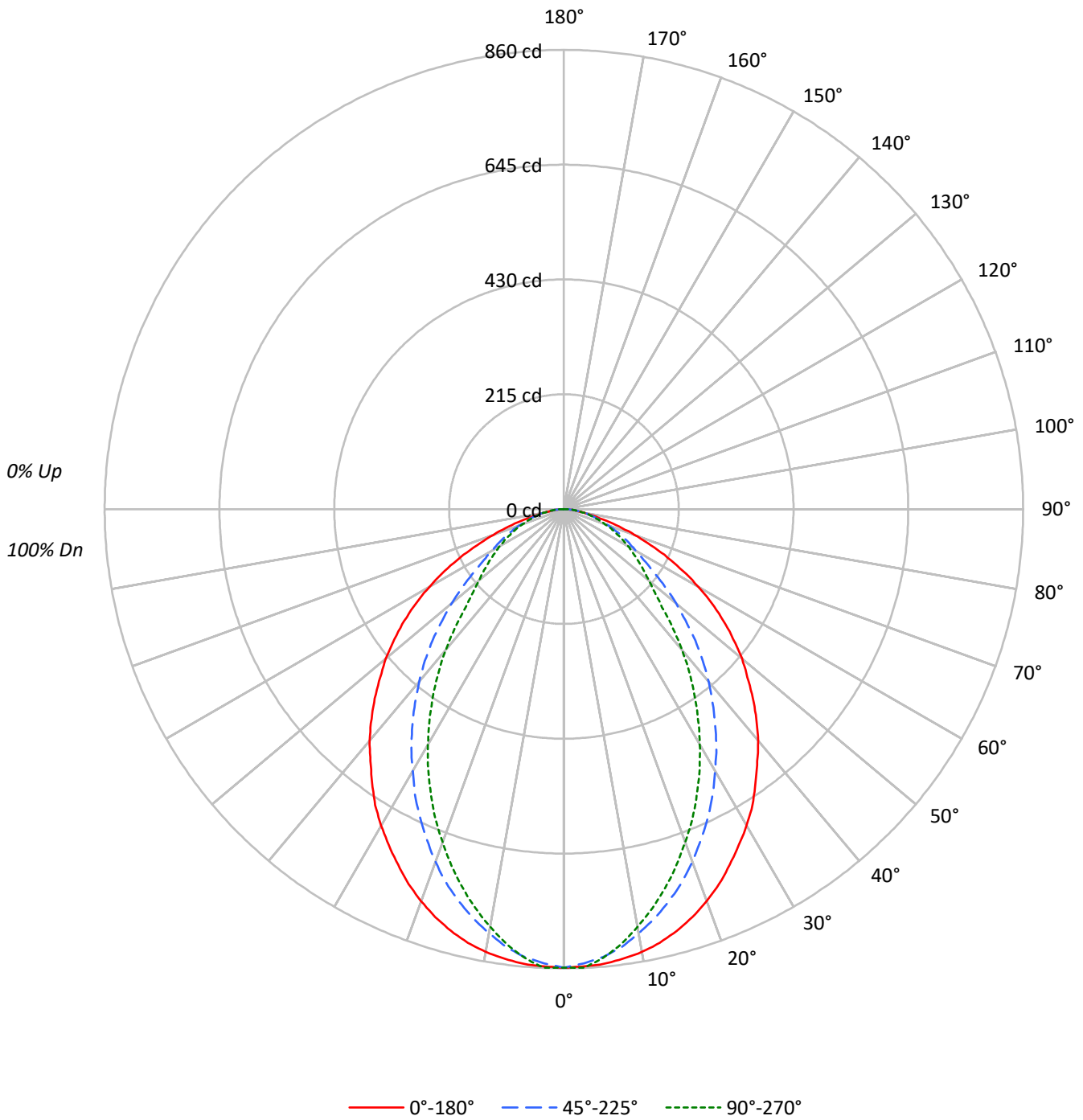
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1626.8 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11  
Luminous Opening: Rectangular (W 0.39' 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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75	75	
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65	65	65	65	
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57	57	57	57	
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50	50	50	50	
6	74	62	54	48	73	61	53	48	59	53	47	58	52	47	56	51	47	45	45	45	45	
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40	40	40	40	
8	65	52	44	39	63	52	44	39	50	43	39	49	43	38	48	42	38	36	36	36	36	
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33	33	33	33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30	30	30	30	

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

	0°	45°	90°
0°	5913	5913	5913
5°	5909	5820	5832
10°	5887	5639	5554
15°	5829	5417	5231
20°	5725	5151	4864
25°	5582	4845	4477
30°	5441	4500	4048
35°	5259	4154	3589
40°	5087	3788	3093
45°	4875	3387	2533
50°	4664	2936	2217
55°	4377	2451	2048
60°	3993	2144	1913
65°	3495	1960	1777
70°	2834	1763	1653
75°	2035	1612	1538
80°	1404	1443	1443
85°	1035	1256	1327

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4875 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.8	4.9
10°-20°	216.0	13.3
20°-30°	298.5	18.3
30°-40°	317.9	19.5
40°-50°	279.3	17.2
50°-60°	211.8	13.0
60°-70°	137.5	8.5
70°-80°	68.1	4.2
80°-90°	17.8	1.1
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°	594.3	36.5
0°-40°	912.2	56.1
0°-60°	1403.3	86.3
0°-90°	1626.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1626.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	859	859	859	859	859	
5°	855	853	842	845	844	81
15°	818	799	760	742	734	230
25°	735	695	638	605	589	339
35°	626	568	494	449	427	392
45°	501	431	348	285	260	386
55°	365	293	204	176	171	325
65°	214	159	120	111	109	212
75°	76	67	61	59	58	85
85°	13	15	16	16	17	16
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	858.8	858.8	858.8	858.8	858.8
2.5°	856.9	858.8	851.3	857.8	859.7
5°	855.0	853.2	842.0	844.8	843.8
7.5°	849.4	845.7	827.1	825.2	821.5
10°	842.0	832.7	806.5	800.0	794.4
12.5°	831.7	816.8	785.1	772.0	765.5
15°	817.7	799.1	759.9	742.2	733.8
17.5°	800.9	774.8	733.8	709.6	700.2
20°	781.4	750.6	703.0	675.1	663.9
22.5°	759.9	723.6	670.4	640.6	628.5
25°	734.7	694.7	637.8	605.1	589.3
27.5°	709.6	664.8	603.3	566.9	550.1
30°	684.4	633.1	566.0	526.8	509.1
32.5°	657.4	600.5	531.5	488.6	468.1
35°	625.7	567.8	494.2	449.4	427.0
37.5°	594.9	533.3	457.8	407.5	386.0
40°	566.0	500.7	421.5	366.4	344.1
42.5°	533.3	466.2	385.1	327.3	302.1
45°	500.7	430.8	347.8	285.3	260.1
47.5°	466.2	397.2	308.6	247.1	230.3
50°	435.4	362.7	274.1	218.2	207.0
52.5°	400.0	329.1	238.7	195.8	188.3
55°	364.6	292.8	204.2	176.2	170.6
57.5°	328.2	260.1	177.2	159.4	153.8
60°	290.0	226.6	155.7	141.7	138.9
62.5°	251.8	192.1	137.1	126.8	123.1
65°	214.5	159.4	120.3	111.0	109.1
67.5°	176.2	129.6	103.5	97.0	96.0
70°	140.8	105.4	87.6	83.9	82.1
72.5°	108.2	83.9	73.7	70.9	69.9
75°	76.5	67.1	60.6	58.7	57.8
77.5°	51.3	51.3	48.5	46.6	47.6
80°	35.4	37.3	36.4	36.4	36.4
82.5°	23.3	25.2	26.1	26.1	26.1
85°	13.1	14.9	15.9	15.9	16.8
87.5°	4.7	5.6	6.5	7.5	7.5
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	16.73	18.22	17.09	18.53	18.85	12.97	14.46	13.33	14.77	15.09
	3H	18.04	19.37	18.42	19.70	20.06	14.55	15.89	14.93	16.22	16.58
	4H	18.41	19.66	18.81	20.01	20.39	15.15	16.41	15.55	16.76	17.13
	6H	18.58	19.74	19.00	20.11	20.50	15.63	16.78	16.04	17.15	17.54
	8H	18.62	19.72	19.05	20.11	20.51	15.79	16.89	16.21	17.28	17.68
	12H	18.63	19.69	19.06	20.07	20.50	15.90	16.95	16.33	17.33	17.76
4H	2H	16.84	18.09	17.24	18.44	18.82	13.63	14.88	14.03	15.23	15.61
	3H	18.33	19.36	18.74	19.76	20.17	15.41	16.45	15.82	16.85	17.25
	4H	18.80	19.73	19.23	20.15	20.59	16.13	17.06	16.56	17.48	17.92
	6H	19.09	19.90	19.55	20.34	20.80	16.72	17.53	17.18	17.97	18.43
	8H	19.16	19.91	19.62	20.36	20.83	16.92	17.68	17.39	18.13	18.59
	12H	19.20	19.87	19.68	20.35	20.82	17.08	17.75	17.56	18.23	18.70
8H	4H	18.88	19.64	19.35	20.09	20.55	16.44	17.20	16.90	17.64	18.11
	6H	19.25	19.87	19.75	20.36	20.84	17.15	17.77	17.65	18.26	18.74
	8H	19.36	19.92	19.88	20.44	20.92	17.43	17.99	17.94	18.50	18.99
	12H	19.45	19.95	19.96	20.44	21.00	17.66	18.15	18.17	18.64	19.21
12H	4H	18.88	19.55	19.36	20.03	20.50	16.47	17.14	16.95	17.62	18.09
	6H	19.25	19.81	19.77	20.32	20.81	17.20	17.76	17.71	18.27	18.76
	8H	19.41	19.91	19.92	20.40	20.96	17.54	18.03	18.05	18.52	19.09