

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056603

Luminaire Tested: S125R3DR-H850D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056603
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H850D830-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

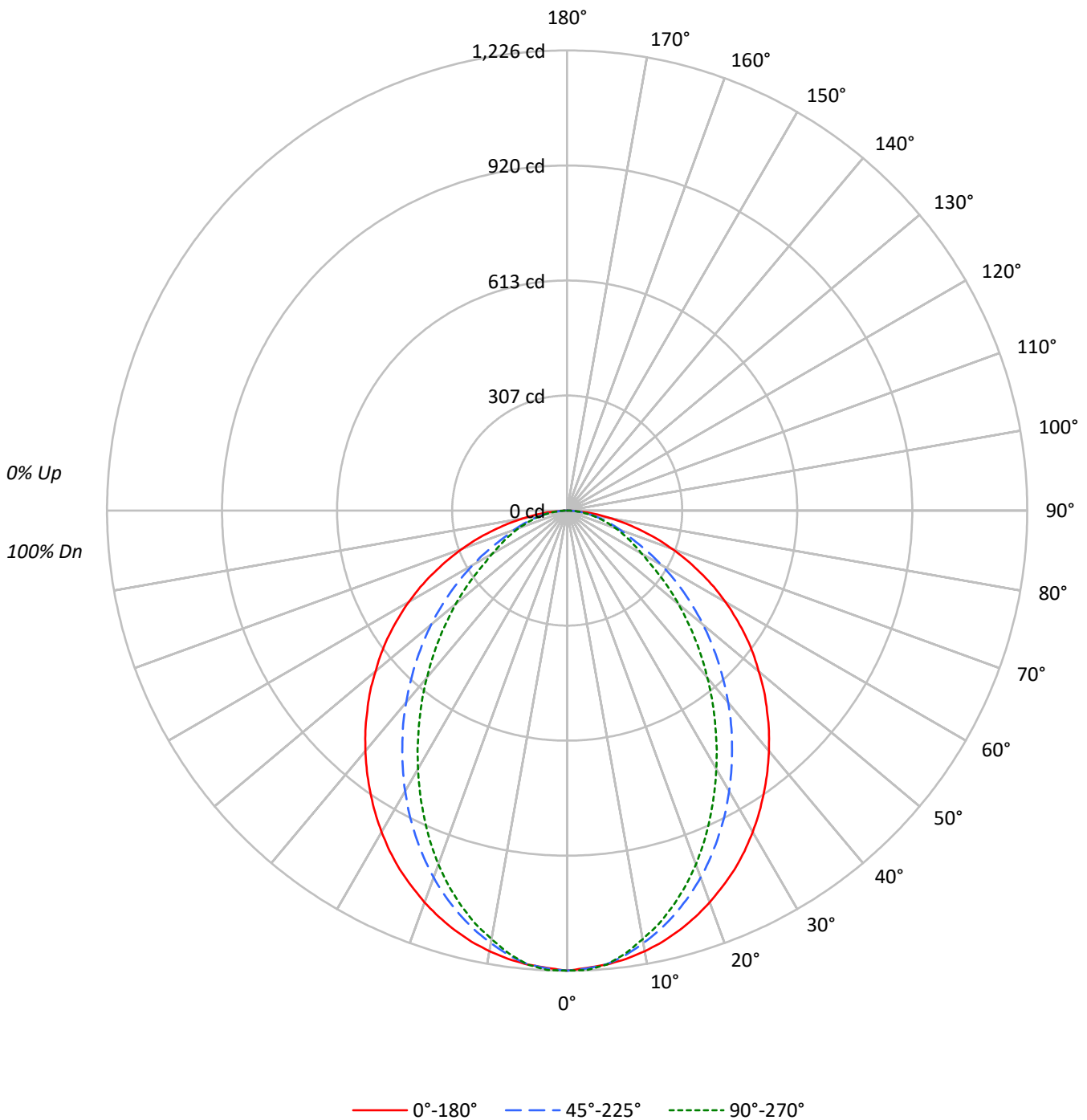
Lumens per Lamp: N/A
Luminaire Lumens: 2598.0 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	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			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75					73				
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65					63				
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57					55				
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50					48				
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45					43				
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40					38				
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36					34				
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33					31				
10	56	43	36	31	55	43	35	30	42	35	30	41	35	30	40	34	30					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8666	8666	8666
5°	8614	8608	8614
10°	8557	8399	8321
15°	8470	8143	7976
20°	8357	7828	7546
25°	8230	7454	7034
30°	8069	7048	6490
35°	7893	6609	5924
40°	7716	6157	5365
45°	7528	5685	4809
50°	7328	5200	4256
55°	7144	4669	3701
60°	6891	4103	3252
65°	6550	3481	3023
70°	6151	3113	2830
75°	5558	2868	2669
80°	4832	2601	2491
85°	3772	2295	2295

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7528 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	4.4
10°-20°	314.9	12.1
20°-30°	444.8	17.1
30°-40°	489.7	18.8
40°-50°	456.8	17.6
50°-60°	364.7	14.0
60°-70°	245.4	9.4
70°-80°	130.7	5.0
80°-90°	36.3	1.4
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°	874.4	33.7
0°-40°	1364.2	52.5
0°-60°	2185.6	84.1
0°-90°	2598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1214	1224	1213	1209	1214	115
15°	1157	1151	1113	1094	1090	326
25°	1055	1023	956	914	902	486
35°	915	861	766	706	686	572
45°	753	682	569	499	481	581
55°	580	492	379	318	300	517
65°	392	306	208	184	181	388
75°	204	135	105	99	98	217
85°	46	32	28	29	28	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1225.8	1225.8	1225.8	1225.8	1225.8
2.5°	1219.4	1229.4	1221.2	1223.1	1224.9
5°	1213.9	1224.0	1213.0	1209.4	1213.9
7.5°	1204.8	1213.0	1194.8	1186.5	1190.2
10°	1192.0	1197.5	1170.1	1159.2	1159.2
12.5°	1176.5	1176.5	1143.7	1128.1	1128.1
15°	1157.3	1151.0	1112.6	1093.5	1089.8
17.5°	1135.4	1123.6	1077.9	1053.3	1048.7
20°	1110.8	1091.6	1040.5	1008.6	1003.1
22.5°	1083.4	1058.8	999.4	960.2	953.8
25°	1055.1	1023.2	955.6	913.6	901.8
27.5°	1023.2	984.8	910.9	863.4	848.8
30°	988.5	944.7	863.4	810.5	795.0
32.5°	952.9	903.6	815.1	758.5	741.1
35°	914.6	860.7	765.8	705.5	686.4
37.5°	876.2	817.8	717.4	654.4	634.3
40°	836.1	772.2	667.2	602.4	581.4
42.5°	795.9	727.4	617.9	552.2	530.3
45°	753.0	681.8	568.6	499.3	481.0
47.5°	711.9	635.3	520.3	452.7	432.6
50°	666.3	586.9	472.8	405.3	387.0
52.5°	624.3	539.4	425.3	362.4	343.2
55°	579.6	492.0	378.8	318.5	300.3
57.5°	533.0	444.5	334.1	277.5	260.1
60°	487.4	397.0	290.2	238.2	230.0
62.5°	440.8	352.3	249.2	209.0	203.5
65°	391.6	305.8	208.1	184.4	180.7
67.5°	345.0	261.0	175.2	161.6	157.9
70°	297.6	216.3	150.6	138.7	136.9
72.5°	251.0	173.4	126.9	118.7	116.8
75°	203.5	135.1	105.0	98.6	97.7
77.5°	159.7	101.3	83.1	80.3	78.5
80°	118.7	75.8	63.9	62.1	61.2
82.5°	81.2	52.0	45.6	45.6	43.8
85°	46.5	31.9	28.3	29.2	28.3
87.5°	17.3	13.7	12.8	13.7	13.7
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	18.79	20.33	19.16	20.64	20.96	15.17	16.71	15.54	17.03	17.34
	3H	20.58	21.96	20.95	22.29	22.65	16.65	18.03	17.03	18.36	18.72
	4H	21.23	22.53	21.63	22.88	23.25	17.24	18.54	17.64	18.89	19.27
	6H	21.71	22.91	22.12	23.27	23.66	17.70	18.90	18.11	19.27	19.66
	8H	21.86	23.00	22.29	23.39	23.79	17.86	19.01	18.29	19.40	19.80
	12H	21.96	23.05	22.39	23.43	23.86	17.98	19.07	18.41	19.45	19.88
4H	2H	18.93	20.22	19.32	20.57	20.95	15.85	17.15	16.25	17.50	17.88
	3H	20.90	21.98	21.31	22.38	22.78	17.53	18.61	17.94	19.01	19.41
	4H	21.64	22.61	22.07	23.03	23.47	18.23	19.20	18.66	19.62	20.06
	6H	22.24	23.08	22.69	23.53	23.98	18.82	19.66	19.27	20.11	20.57
	8H	22.44	23.23	22.90	23.68	24.14	19.02	19.82	19.49	20.26	20.73
	12H	22.59	23.30	23.07	23.78	24.25	19.19	19.89	19.67	20.37	20.84
8H	4H	21.70	22.50	22.17	22.94	23.41	18.59	19.39	19.06	19.83	20.30
	6H	22.36	23.02	22.86	23.51	23.99	19.30	19.95	19.79	20.44	20.92
	8H	22.62	23.21	23.13	23.72	24.20	19.58	20.17	20.09	20.68	21.17
	12H	22.83	23.35	23.33	23.84	24.40	19.82	20.34	20.33	20.84	21.40
12H	4H	21.70	22.41	22.18	22.88	23.35	18.64	19.35	19.12	19.83	20.30
	6H	22.36	22.95	22.87	23.46	23.94	19.37	19.96	19.88	20.47	20.96
	8H	22.65	23.17	23.16	23.66	24.23	19.71	20.23	20.22	20.72	21.29