

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: P242688

Luminaire Tested: S124DRP-S575D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242688  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S575D935-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

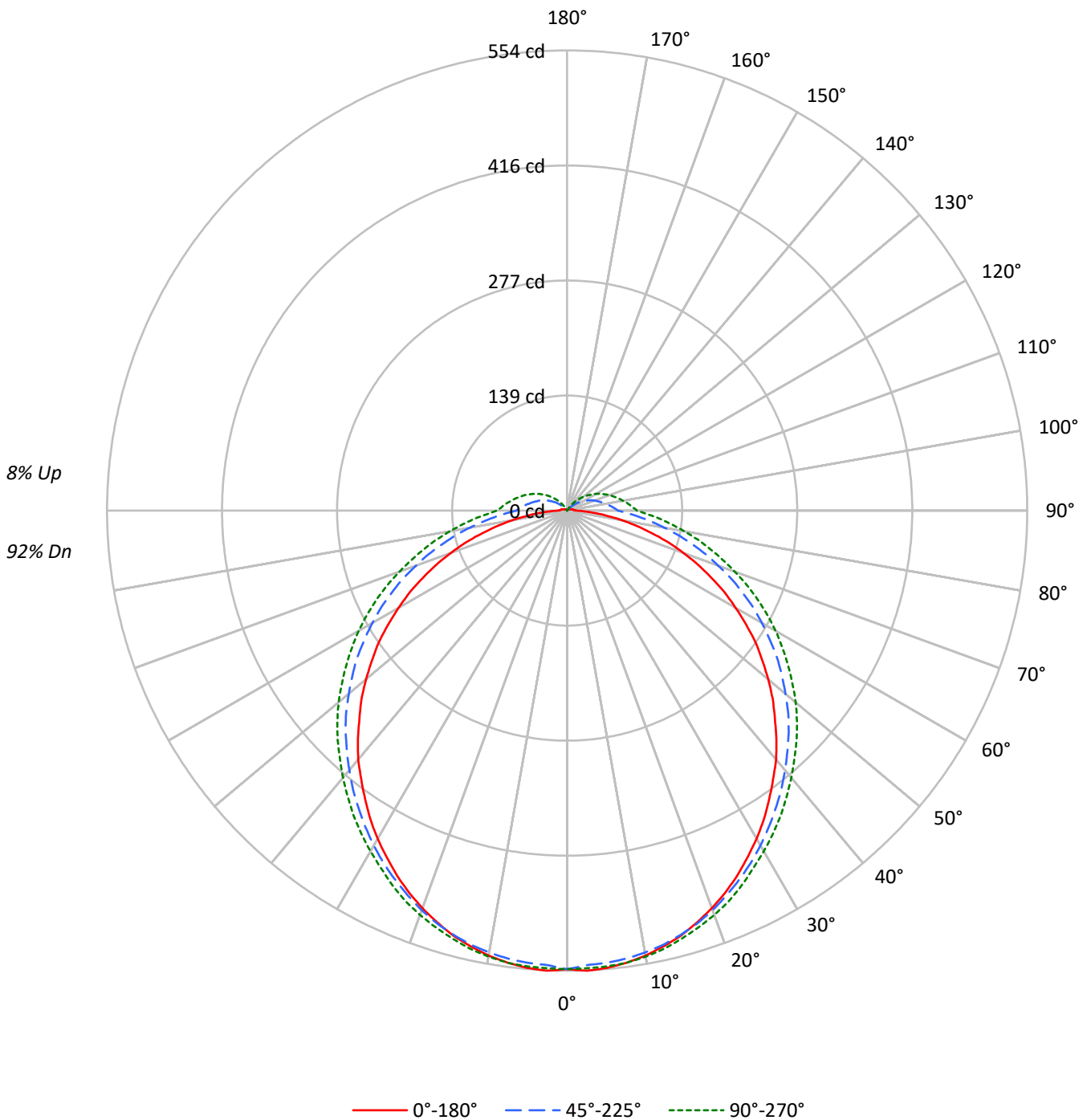
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1882.2 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

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

	0°	45°	90°
0°	4908	4908	4908
5°	4922	4791	4803
10°	4892	4708	4701
15°	4848	4613	4582
20°	4781	4508	4467
25°	4707	4391	4342
30°	4625	4275	4213
35°	4534	4157	4098
40°	4460	4043	3981
45°	4351	3938	3877
50°	4259	3818	3769
55°	4165	3703	3643
60°	4016	3558	3525
65°	3852	3403	3384
70°	3656	3224	3217
75°	3380	3028	3064
80°	3075	2833	2910
85°	2685	2653	2804

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4351 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.3	2.8
10°-20°	149.9	8.0
20°-30°	226.6	12.0
30°-40°	274.2	14.6
40°-50°	289.8	15.4
50°-60°	272.8	14.5
60°-70°	226.3	12.0
70°-80°	158.8	8.4
80°-90°	89.5	4.8
90°-100°	53.3	2.8
100°-110°	39.5	2.1
110°-120°	26.5	1.4
120°-130°	14.9	0.8
130°-140°	6.5	0.3
140°-150°	1.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	428.8	22.8
0°-40°	703.0	37.3
0°-60°	1265.6	67.2
0°-90°	1740.3	92.5
90°-120°	119.3	6.3
90°-150°	141.9	7.5
90°-180°	142.0	7.5
0°-180°	1882.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	552	552	552	552	552	
5°	553	551	546	552	551	52
15°	530	530	529	534	534	149
25°	485	488	490	497	498	223
35°	424	432	438	446	448	266
45°	354	365	377	388	391	273
55°	277	290	308	321	325	247
65°	192	211	232	248	253	190
75°	106	129	155	172	178	113
85°	33	59	87	105	111	34
90°	10	35	61	79	84	7
95°	8	28	54	70	76	6
105°	6	18	41	56	61	6
115°	4	9	29	43	47	4
125°	2	2	17	29	33	2
135°	1	1	6	16	19	1
145°	1	0	0	4	6	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	552.1	552.1	552.1	552.1	552.1
2.5°	554.5	552.7	547.7	552.1	551.5
5°	552.7	550.8	546.5	551.5	550.8
7.5°	549.0	547.7	544.0	549.6	549.0
10°	544.0	543.4	540.3	545.9	545.3
12.5°	537.2	537.2	535.4	540.3	540.3
15°	529.8	530.4	528.6	534.1	533.5
17.5°	519.9	521.8	521.2	526.7	526.1
20°	509.4	511.3	511.9	518.1	518.1
22.5°	497.7	500.1	501.4	507.6	508.8
25°	484.7	488.4	490.2	497.0	497.7
27.5°	470.5	476.0	478.5	484.7	485.3
30°	456.2	461.2	465.5	472.3	473.6
32.5°	440.8	447.0	451.9	460.0	461.2
35°	424.1	431.5	437.7	446.4	448.2
37.5°	407.4	416.1	423.5	432.1	434.0
40°	391.3	399.4	408.0	417.3	419.8
42.5°	372.8	382.1	392.6	403.1	404.9
45°	353.6	365.4	377.1	387.6	390.7
47.5°	335.7	347.4	361.0	371.6	375.3
50°	315.9	329.5	343.1	355.5	359.2
52.5°	296.1	309.7	325.8	338.2	341.9
55°	277.0	289.9	308.5	320.9	324.6
57.5°	255.3	271.4	289.3	304.2	307.3
60°	234.3	250.4	270.8	285.0	289.9
62.5°	213.9	231.8	252.2	266.5	271.4
65°	191.6	211.4	232.5	247.9	252.9
67.5°	170.6	191.6	213.9	229.4	234.3
70°	149.0	170.0	193.5	210.2	214.5
72.5°	128.0	149.6	175.0	191.0	196.0
75°	106.3	129.2	155.2	172.5	178.0
77.5°	85.9	110.0	137.2	154.6	160.7
80°	67.4	92.1	119.3	137.9	142.8
82.5°	48.8	74.8	102.0	121.2	126.7
85°	32.8	58.7	86.6	105.1	111.3
87.5°	20.4	45.7	72.9	90.9	96.4
90°	9.9	34.6	61.2	79.1	84.1
92.5°	9.3	30.9	57.5	74.8	79.8
95°	8.0	28.4	53.8	70.5	76.0
97.5°	7.4	25.3	50.7	66.8	72.3
100°	6.8	22.9	47.0	63.7	68.0
102.5°	6.8	20.4	43.9	60.0	64.9
105°	5.6	17.9	40.8	56.3	61.2
107.5°	5.6	16.1	37.7	53.2	57.5
110°	4.9	13.6	35.2	49.5	54.4



TEST NUMBER: P242688

CATALOG NUMBER: S124DRP-S575D935-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.3	11.7	32.1	45.7	50.7
115°	3.7	9.3	29.1	42.7	47.0
117.5°	3.7	7.4	26.0	38.9	43.9
120°	3.1	4.9	22.9	35.2	40.2
122.5°	3.1	3.1	19.8	32.1	36.5
125°	2.5	1.9	17.3	29.1	32.8
127.5°	2.5	1.9	14.2	25.3	29.7
130°	1.9	1.2	11.1	22.3	26.0
132.5°	1.9	1.2	8.7	19.2	22.9
135°	1.2	1.2	5.6	15.5	19.2
137.5°	1.2	0.6	3.1	12.4	15.5
140°	1.2	0.6	1.2	9.3	12.4
142.5°	0.6	0.6	0.0	6.8	9.3
145°	0.6	0.0	0.0	3.7	6.2
147.5°	0.6	0.0	0.0	0.6	3.1
150°	0.6	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	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	15.32	16.84	15.80	17.31	17.81	16.87	18.40	17.35	18.86	19.36
	3H	16.96	18.35	17.45	18.82	19.36	19.18	20.57	19.67	21.04	21.58
	4H	17.52	18.84	18.03	19.33	19.88	20.24	21.55	20.75	22.05	22.60
	6H	17.91	19.13	18.43	19.64	20.20	21.29	22.52	21.81	23.02	23.59
	8H	18.01	19.19	18.55	19.72	20.29	21.81	22.98	22.35	23.51	24.09
	12H	18.07	19.20	18.62	19.72	20.33	22.36	23.49	22.90	24.01	24.61
4H	2H	16.17	17.48	16.68	17.97	18.53	17.37	18.69	17.88	19.18	19.73
	3H	18.05	19.17	18.57	19.70	20.28	19.90	21.02	20.42	21.55	22.13
	4H	18.75	19.77	19.29	20.32	20.93	21.12	22.14	21.66	22.69	23.29
	6H	19.27	20.17	19.83	20.74	21.36	22.35	23.25	22.91	23.82	24.44
	8H	19.42	20.27	19.99	20.84	21.48	22.96	23.81	23.53	24.38	25.01
	12H	19.52	20.29	20.12	20.89	21.53	23.62	24.39	24.21	24.99	25.63
8H	4H	19.33	20.18	19.90	20.75	21.38	21.37	22.22	21.94	22.79	23.42
	6H	20.02	20.74	20.62	21.35	21.99	22.76	23.48	23.37	24.10	24.73
	8H	20.28	20.92	20.89	21.55	22.20	23.50	24.15	24.12	24.78	25.43
	12H	20.46	21.04	21.08	21.65	22.37	24.33	24.91	24.95	25.52	26.24
12H	4H	19.47	20.24	20.06	20.84	21.47	21.39	22.16	21.98	22.76	23.40
	6H	20.24	20.88	20.85	21.51	22.16	22.81	23.46	23.43	24.09	24.74
	8H	20.57	21.15	21.19	21.76	22.48	23.62	24.20	24.24	24.81	25.53