

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: P243130

Luminaire Tested: S122DRP-H485D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243130  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-H485D930-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

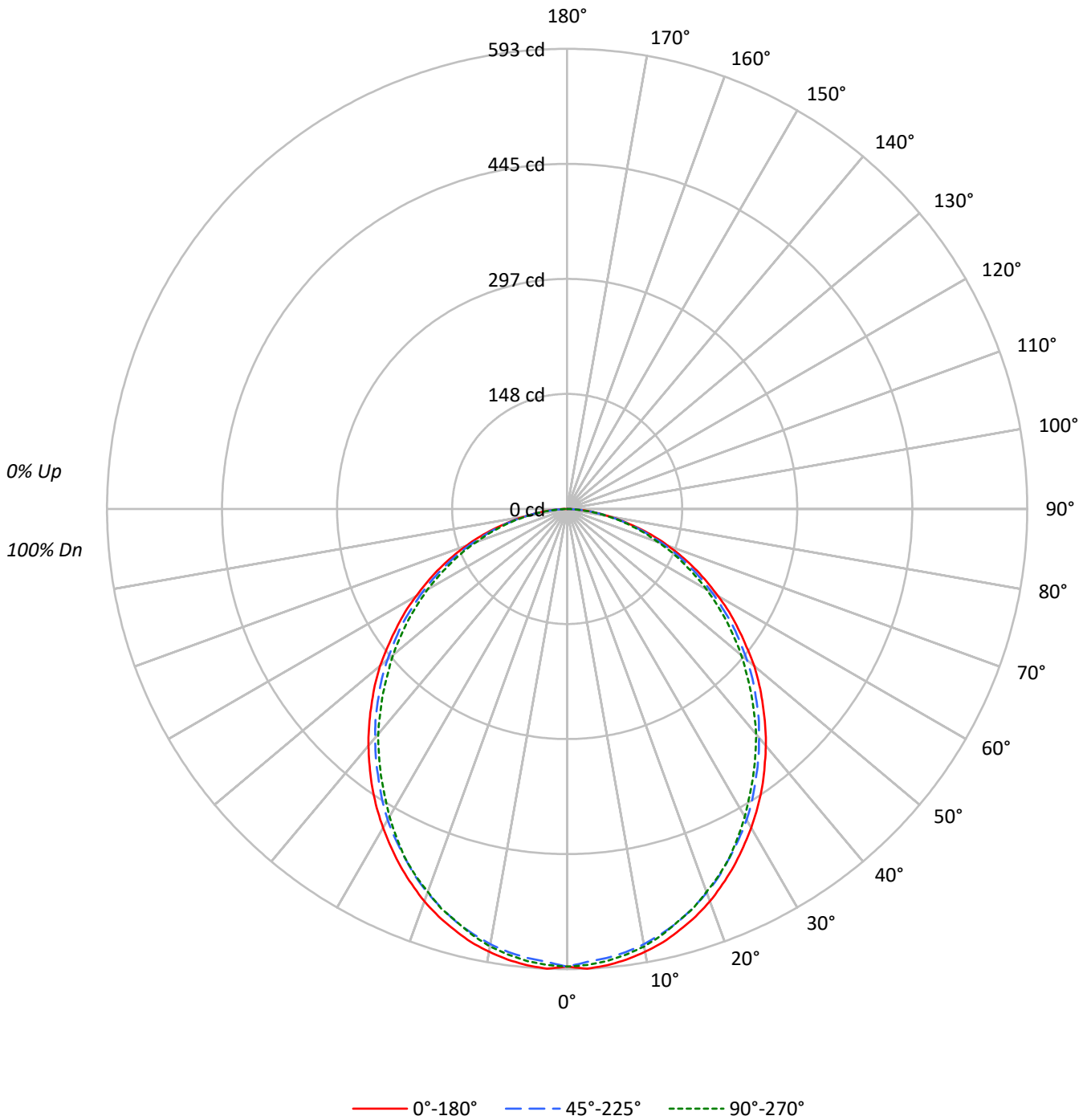
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1500.7 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

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

	0°	45°	90°
0°	11232	11232	11232
5°	11287	11109	11184
10°	11206	11017	11071
15°	11073	10869	10858
20°	10907	10666	10644
25°	10681	10418	10408
30°	10436	10175	10067
35°	10187	9859	9731
40°	9906	9568	9421
45°	9606	9269	9035
50°	9325	8955	8682
55°	8936	8628	8302
60°	8552	8221	7909
65°	8180	7788	7446
70°	7691	7296	6934
75°	6999	6719	6403
80°	6077	5901	5660
85°	5223	4633	4284

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9606 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.5	3.7
10°-20°	156.3	10.4
20°-30°	229.8	15.3
30°-40°	266.8	17.8
40°-50°	266.5	17.8
50°-60°	232.1	15.5
60°-70°	171.6	11.4
70°-80°	96.8	6.4
80°-90°	25.2	1.7
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°	441.6	29.4
0°-40°	708.5	47.2
0°-60°	1207.1	80.4
0°-90°	1500.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1500.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	590	588	581	586	585	56
15°	562	559	551	553	551	158
25°	508	504	496	495	495	234
35°	438	433	424	420	418	274
45°	357	353	344	339	335	275
55°	269	267	260	253	250	241
65°	182	179	173	167	165	179
75°	95	95	91	88	87	101
85°	24	23	21	20	20	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	589.7	589.7	589.7	589.7	589.7
2.5°	593.0	590.3	584.3	589.2	588.1
5°	590.3	587.6	581.0	585.9	584.9
7.5°	585.9	583.2	576.2	581.0	579.4
10°	579.4	576.2	569.6	572.9	572.4
12.5°	571.8	568.5	560.9	563.7	562.6
15°	561.5	558.8	551.2	553.3	550.6
17.5°	550.6	546.3	539.2	541.4	539.7
20°	538.1	533.8	526.2	527.2	525.1
22.5°	523.4	519.1	512.0	512.0	510.9
25°	508.2	503.9	495.7	495.2	495.2
27.5°	491.4	487.6	479.4	477.8	476.7
30°	474.5	471.3	462.6	459.3	457.7
32.5°	456.6	452.2	444.1	440.3	437.6
35°	438.1	433.2	424.0	420.2	418.5
37.5°	418.0	413.1	404.9	401.7	398.4
40°	398.4	394.1	384.8	379.9	378.9
42.5°	377.8	373.4	365.3	359.8	356.6
45°	356.6	352.8	344.1	338.6	335.4
47.5°	335.9	331.6	324.0	317.4	313.1
50°	314.7	310.4	302.2	294.6	293.0
52.5°	291.3	288.6	280.5	273.4	271.2
55°	269.1	266.9	259.8	252.7	250.0
57.5°	247.9	245.1	237.0	231.6	228.3
60°	224.5	222.9	215.8	209.8	207.6
62.5°	202.7	200.6	194.6	188.6	185.9
65°	181.5	178.8	172.8	167.4	165.2
67.5°	159.8	157.1	152.2	147.8	145.7
70°	138.1	135.9	131.0	127.2	124.5
72.5°	116.9	114.7	110.3	106.5	106.0
75°	95.1	94.6	91.3	88.1	87.0
77.5°	75.0	74.5	72.3	70.7	69.6
80°	55.4	55.4	53.8	52.2	51.6
82.5°	38.0	38.6	37.0	35.9	35.9
85°	23.9	22.8	21.2	20.1	19.6
87.5°	9.8	8.2	7.6	6.0	5.4
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	19.69	21.30	20.05	21.61	21.93	19.26	20.87	19.63	21.19	21.50
	3H	21.44	22.90	21.82	23.22	23.58	20.96	22.42	21.34	22.74	23.10
	4H	22.09	23.46	22.49	23.80	24.18	21.59	22.96	21.99	23.30	23.68
	6H	22.55	23.81	22.96	24.18	24.57	22.05	23.32	22.46	23.68	24.07
	8H	22.68	23.89	23.11	24.28	24.68	22.19	23.40	22.61	23.79	24.19
	12H	22.78	23.94	23.21	24.32	24.75	22.27	23.43	22.70	23.81	24.24
4H	2H	20.25	21.62	20.65	21.96	22.34	19.91	21.28	20.31	21.62	22.00
	3H	22.22	23.37	22.63	23.77	24.17	21.82	22.97	22.23	23.37	23.77
	4H	23.00	24.04	23.43	24.45	24.89	22.57	23.61	23.00	24.02	24.46
	6H	23.59	24.49	24.04	24.93	25.39	23.15	24.06	23.61	24.50	24.96
	8H	23.77	24.62	24.23	25.06	25.53	23.34	24.18	23.80	24.63	25.09
	12H	23.91	24.67	24.39	25.14	25.61	23.45	24.21	23.93	24.69	25.16
8H	4H	23.27	24.12	23.74	24.56	25.03	22.89	23.74	23.35	24.18	24.65
	6H	23.98	24.68	24.47	25.17	25.64	23.59	24.29	24.08	24.78	25.26
	8H	24.23	24.86	24.74	25.37	25.85	23.84	24.47	24.35	24.98	25.46
	12H	24.43	24.99	24.94	25.48	26.04	24.02	24.57	24.52	25.06	25.62
12H	4H	23.30	24.06	23.78	24.53	25.00	22.93	23.69	23.41	24.16	24.63
	6H	24.02	24.65	24.53	25.16	25.64	23.64	24.28	24.15	24.78	25.27
	8H	24.33	24.88	24.83	25.37	25.93	23.95	24.51	24.46	25.00	25.56