

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: P242679

Luminaire Tested: S124DRP-S795D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242679  
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-S795D840-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

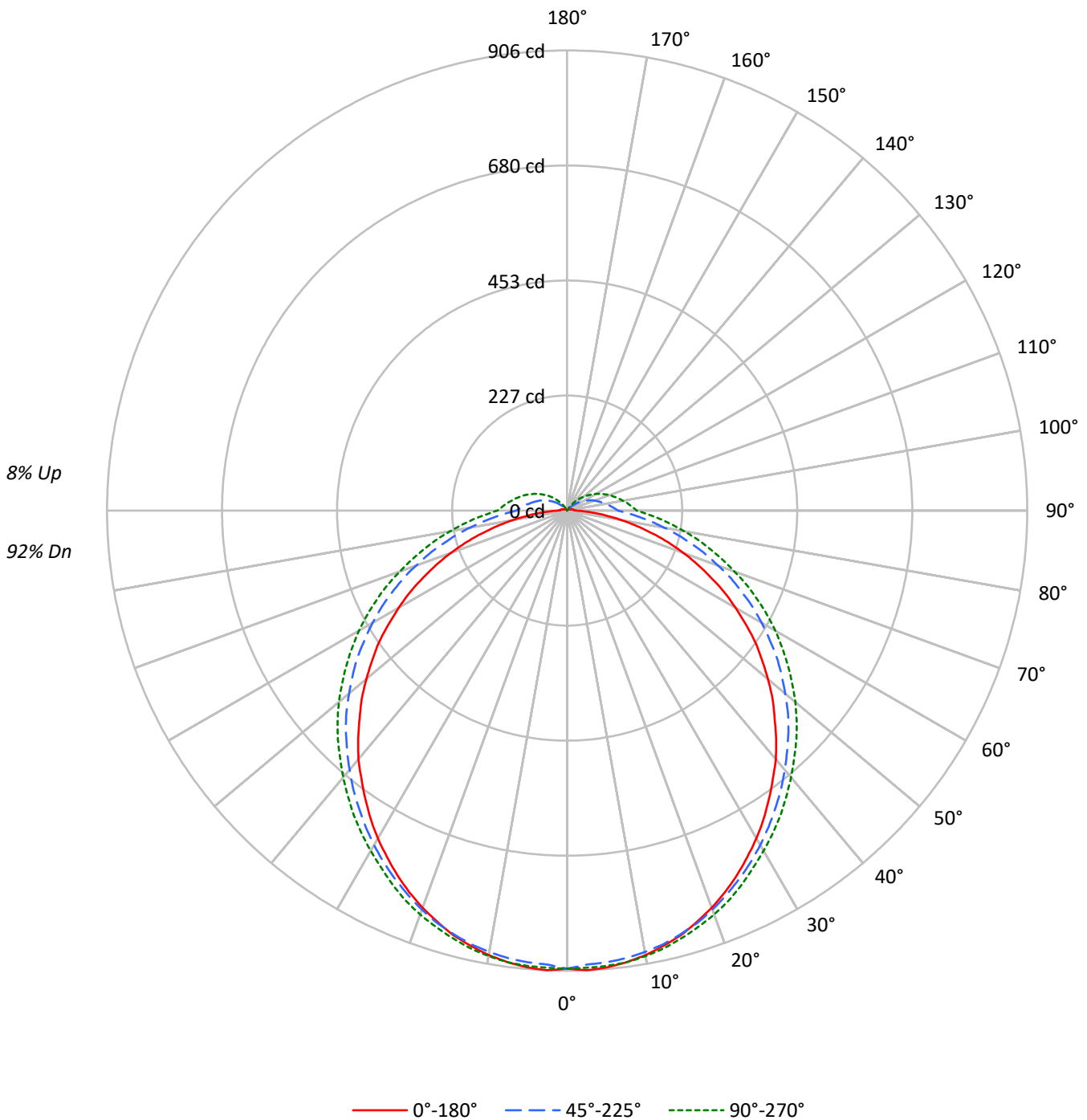
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3074.6 lumens  
Efficiency: N/A  
Efficacy: 116.5 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): 26.4  
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

TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

**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°	8016	8016	8016
5°	8040	7826	7846
10°	7991	7690	7678
15°	7919	7534	7485
20°	7810	7364	7297
25°	7688	7173	7091
30°	7556	6983	6881
35°	7406	6790	6695
40°	7286	6605	6502
45°	7108	6433	6334
50°	6957	6237	6157
55°	6802	6049	5951
60°	6559	5812	5759
65°	6295	5558	5526
70°	5973	5267	5256
75°	5522	4945	5006
80°	5023	4628	4754
85°	4380	4332	4581

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7108 cd/sqm



TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.4	2.8
10°-20°	244.8	8.0
20°-30°	370.2	12.0
30°-40°	447.8	14.6
40°-50°	473.4	15.4
50°-60°	445.6	14.5
60°-70°	369.7	12.0
70°-80°	259.5	8.4
80°-90°	146.3	4.8
90°-100°	87.1	2.8
100°-110°	64.5	2.1
110°-120°	43.3	1.4
120°-130°	24.4	0.8
130°-140°	10.5	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	700.4	22.8
0°-40°	1148.3	37.3
0°-60°	2067.3	67.2
0°-90°	2842.8	92.5
90°-120°	194.9	6.3
90°-150°	231.8	7.5
90°-180°	232.0	7.5
0°-180°	3074.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	903	900	893	901	900	86
15°	866	866	863	872	872	244
25°	792	798	801	812	813	365
35°	693	705	715	729	732	434
45°	578	597	616	633	638	446
55°	452	474	504	524	530	403
65°	313	345	380	405	413	310
75°	174	211	254	282	291	185
85°	54	96	141	172	182	56
90°	16	57	100	129	137	11
95°	13	46	88	115	124	10
105°	9	29	67	92	100	10
115°	6	15	48	70	77	6
125°	4	3	28	48	54	4
135°	2	2	9	25	31	2
145°	1	0	0	6	10	1
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

TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	901.8	901.8	901.8	901.8	901.8
2.5°	905.8	902.8	894.7	901.8	900.8
5°	902.8	899.8	892.7	900.8	899.8
7.5°	896.8	894.7	888.7	897.8	896.8
10°	888.7	887.7	882.6	891.7	890.7
12.5°	877.6	877.6	874.5	882.6	882.6
15°	865.5	866.5	863.4	872.5	871.5
17.5°	849.3	852.3	851.3	860.4	859.4
20°	832.1	835.2	836.2	846.3	846.3
22.5°	812.9	817.0	819.0	829.1	831.1
25°	791.7	797.8	800.8	811.9	812.9
27.5°	768.5	777.6	781.6	791.7	792.7
30°	745.3	753.4	760.4	771.5	773.6
32.5°	720.0	730.1	738.2	751.3	753.4
35°	692.8	704.9	715.0	729.1	732.2
37.5°	665.5	679.6	691.8	705.9	708.9
40°	639.2	652.4	666.5	681.7	685.7
42.5°	608.9	624.1	641.3	658.4	661.5
45°	577.6	596.8	616.0	633.2	638.2
47.5°	548.4	567.5	589.8	606.9	613.0
50°	516.0	538.3	560.5	580.7	586.7
52.5°	483.7	505.9	532.2	552.4	558.5
55°	452.4	473.6	503.9	524.1	530.2
57.5°	417.1	443.3	472.6	496.9	501.9
60°	382.7	409.0	442.3	465.5	473.6
62.5°	349.4	378.7	412.0	435.3	443.3
65°	313.1	345.4	379.7	405.0	413.0
67.5°	278.7	313.1	349.4	374.7	382.7
70°	243.4	277.7	316.1	343.4	350.4
72.5°	209.0	244.4	285.8	312.0	320.1
75°	173.7	211.1	253.5	281.8	290.8
77.5°	140.4	179.8	224.2	252.5	262.6
80°	110.1	150.5	194.9	225.2	233.3
82.5°	79.8	122.2	166.6	197.9	207.0
85°	53.5	95.9	141.4	171.7	181.8
87.5°	33.3	74.7	119.2	148.5	157.5
90°	16.2	56.6	100.0	129.3	137.3
92.5°	15.1	50.5	93.9	122.2	130.3
95°	13.1	46.5	87.9	115.1	124.2
97.5°	12.1	41.4	82.8	109.1	118.2
100°	11.1	37.4	76.7	104.0	111.1
102.5°	11.1	33.3	71.7	98.0	106.0
105°	9.1	29.3	66.7	91.9	100.0
107.5°	9.1	26.3	61.6	86.8	93.9
110°	8.1	22.2	57.6	80.8	88.9



TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	19.2	52.5	74.7	82.8
115°	6.1	15.1	47.5	69.7	76.7
117.5°	6.1	12.1	42.4	63.6	71.7
120°	5.0	8.1	37.4	57.6	65.6
122.5°	5.0	5.0	32.3	52.5	59.6
125°	4.0	3.0	28.3	47.5	53.5
127.5°	4.0	3.0	23.2	41.4	48.5
130°	3.0	2.0	18.2	36.4	42.4
132.5°	3.0	2.0	14.1	31.3	37.4
135°	2.0	2.0	9.1	25.2	31.3
137.5°	2.0	1.0	5.0	20.2	25.2
140°	2.0	1.0	2.0	15.1	20.2
142.5°	1.0	1.0	0.0	11.1	15.1
145°	1.0	0.0	0.0	6.1	10.1
147.5°	1.0	0.0	0.0	1.0	5.0
150°	1.0	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

TEST NUMBER: P242679

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-D-W

**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	17.02	18.55	17.50	19.01	19.51	18.58	20.10	19.05	20.57	21.06
	3H	18.66	20.05	19.15	20.53	21.07	20.88	22.27	21.37	22.75	23.28
	4H	19.23	20.55	19.74	21.04	21.59	21.94	23.26	22.45	23.75	24.30
	6H	19.61	20.84	20.14	21.34	21.91	23.00	24.22	23.52	24.73	25.29
	8H	19.72	20.89	20.25	21.42	21.99	23.51	24.69	24.05	25.22	25.79
	12H	19.78	20.90	20.32	21.43	22.03	24.07	25.19	24.61	25.72	26.32
4H	2H	17.87	19.19	18.38	19.68	20.23	19.08	20.39	19.59	20.88	21.44
	3H	19.75	20.87	20.27	21.41	21.98	21.60	22.72	22.13	23.26	23.83
	4H	20.46	21.48	21.00	22.03	22.63	22.82	23.85	23.37	24.39	25.00
	6H	20.97	21.88	21.54	22.45	23.07	24.05	24.95	24.62	25.53	26.15
	8H	21.13	21.98	21.70	22.55	23.18	24.66	25.51	25.23	26.08	26.72
	12H	21.23	22.00	21.82	22.60	23.24	25.32	26.09	25.92	26.69	27.33
8H	4H	21.04	21.88	21.60	22.46	23.09	23.08	23.92	23.65	24.50	25.13
	6H	21.73	22.45	22.33	23.06	23.70	24.47	25.19	25.07	25.80	26.44
	8H	21.98	22.63	22.60	23.25	23.90	25.21	25.86	25.82	26.48	27.13
	12H	22.17	22.74	22.78	23.36	24.07	26.03	26.61	26.65	27.22	27.94
12H	4H	21.17	21.94	21.76	22.54	23.18	23.09	23.86	23.68	24.46	25.10
	6H	21.94	22.59	22.56	23.21	23.86	24.52	25.17	25.13	25.79	26.44
	8H	22.28	22.86	22.90	23.47	24.19	25.33	25.90	25.94	26.52	27.23