

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: P242713

Luminaire Tested: S124RDRP-S795D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242713  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S795D840-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

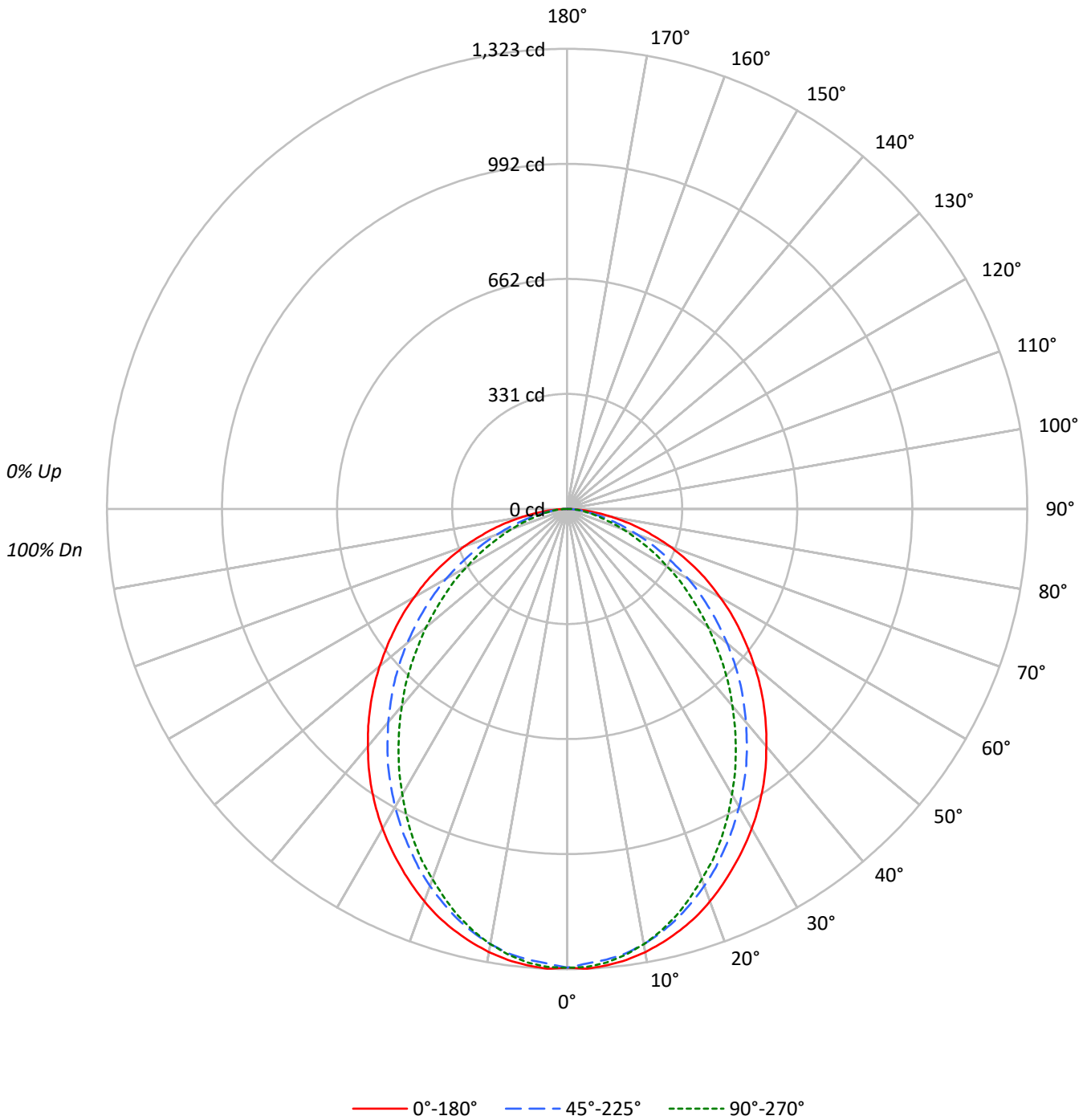
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3047.4 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
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	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	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54					54			
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47					47			
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41					41			
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37					37			
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33					33			
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27					27			

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

	0°	45°	90°
0°	11724	11724	11724
5°	11751	11606	11678
10°	11676	11467	11467
15°	11543	11226	11142
20°	11358	10910	10709
25°	11123	10539	10271
30°	10894	10148	9723
35°	10641	9742	9173
40°	10335	9281	8577
45°	10054	8823	7972
50°	9734	8296	7332
55°	9390	7747	6636
60°	9013	7145	5925
65°	8666	6394	5225
70°	8163	5564	4436
75°	7525	4612	3606
80°	6568	3517	3307
85°	5558	3192	2988

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10054 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.0	4.1
10°-20°	345.8	11.3
20°-30°	499.2	16.4
30°-40°	565.8	18.6
40°-50°	546.3	17.9
50°-60°	454.2	14.9
60°-70°	313.5	10.3
70°-80°	158.4	5.2
80°-90°	40.2	1.3
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°	969.1	31.8
0°-40°	1534.9	50.4
0°-60°	2535.3	83.2
0°-90°	3047.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3047.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1317	1313	1301	1311	1309	125
15°	1254	1245	1220	1218	1211	353
25°	1134	1116	1074	1057	1047	523
35°	981	948	898	863	845	613
45°	800	762	702	652	634	617
55°	606	566	500	447	428	542
65°	412	369	304	260	248	407
75°	219	182	134	111	105	231
85°	54	34	31	29	29	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1318.9	1318.9	1318.9	1318.9	1318.9
2.5°	1322.9	1318.9	1307.8	1318.9	1317.9
5°	1316.9	1312.8	1300.7	1310.8	1308.8
7.5°	1307.8	1303.7	1288.6	1295.7	1292.6
10°	1293.6	1288.6	1270.4	1274.4	1270.4
12.5°	1275.5	1269.4	1247.2	1249.2	1243.1
15°	1254.3	1245.2	1219.9	1217.9	1210.8
17.5°	1230.0	1216.9	1187.6	1182.6	1172.5
20°	1200.7	1187.6	1153.3	1145.2	1132.1
22.5°	1168.4	1153.3	1115.9	1102.8	1092.7
25°	1134.1	1115.9	1074.5	1057.3	1047.2
27.5°	1098.7	1076.5	1033.1	1012.9	998.8
30°	1061.4	1036.1	988.7	963.4	947.3
32.5°	1022.0	992.7	943.2	912.9	897.8
35°	980.6	948.3	897.8	863.4	845.3
37.5°	937.2	903.8	848.3	810.9	792.7
40°	890.7	857.4	799.8	757.4	739.2
42.5°	846.3	810.9	750.3	706.9	687.7
45°	799.8	762.4	701.9	652.4	634.2
47.5°	752.3	714.0	651.4	599.9	579.7
50°	703.9	664.5	599.9	549.4	530.2
52.5°	654.4	616.0	549.4	497.9	477.7
55°	605.9	565.5	499.9	447.4	428.2
57.5°	558.5	516.0	451.4	397.9	383.7
60°	507.0	466.6	401.9	349.4	333.3
62.5°	460.5	418.1	351.4	304.0	291.9
65°	412.0	368.6	304.0	260.5	248.4
67.5°	361.5	320.1	259.5	221.2	207.0
70°	314.1	271.7	214.1	180.8	170.7
72.5°	263.6	226.2	172.7	145.4	136.3
75°	219.1	181.8	134.3	111.1	105.0
77.5°	172.7	140.4	100.0	83.8	81.8
80°	128.3	99.0	68.7	65.6	64.6
82.5°	89.9	63.6	49.5	47.5	46.5
85°	54.5	34.3	31.3	29.3	29.3
87.5°	23.2	15.1	14.1	13.1	14.1
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	19.89	21.46	20.26	21.78	22.09	17.93	19.49	18.29	19.81	20.12
	3H	21.67	23.07	22.04	23.40	23.76	19.18	20.59	19.56	20.92	21.28
	4H	22.33	23.65	22.73	24.00	24.38	19.56	20.88	19.96	21.23	21.61
	6H	22.80	24.03	23.21	24.39	24.78	19.82	21.04	20.23	21.41	21.80
	8H	22.95	24.12	23.38	24.51	24.91	19.91	21.08	20.34	21.47	21.87
	12H	23.05	24.17	23.48	24.55	24.98	19.98	21.09	20.41	21.47	21.90
4H	2H	20.23	21.56	20.63	21.90	22.28	18.62	19.94	19.02	20.29	20.67
	3H	22.20	23.30	22.61	23.70	24.10	20.06	21.16	20.47	21.56	21.96
	4H	22.98	23.97	23.41	24.39	24.83	20.51	21.50	20.94	21.92	22.35
	6H	23.58	24.44	24.03	24.88	25.34	20.86	21.72	21.31	22.16	22.62
	8H	23.77	24.58	24.23	25.02	25.49	20.98	21.79	21.45	22.24	22.70
	12H	23.91	24.63	24.39	25.11	25.58	21.08	21.81	21.56	22.28	22.75
8H	4H	23.08	23.88	23.54	24.33	24.79	20.82	21.63	21.29	22.08	22.54
	6H	23.75	24.42	24.24	24.91	25.38	21.25	21.92	21.75	22.41	22.89
	8H	23.99	24.59	24.50	25.10	25.59	21.43	22.03	21.95	22.54	23.03
	12H	24.18	24.72	24.69	25.21	25.77	21.59	22.12	22.10	22.61	23.18
12H	4H	23.07	23.79	23.55	24.27	24.74	20.86	21.59	21.34	22.06	22.53
	6H	23.74	24.34	24.25	24.85	25.33	21.31	21.91	21.82	22.42	22.90
	8H	24.02	24.55	24.53	25.04	25.60	21.54	22.07	22.05	22.56	23.12