

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: P242610

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242610
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S795D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

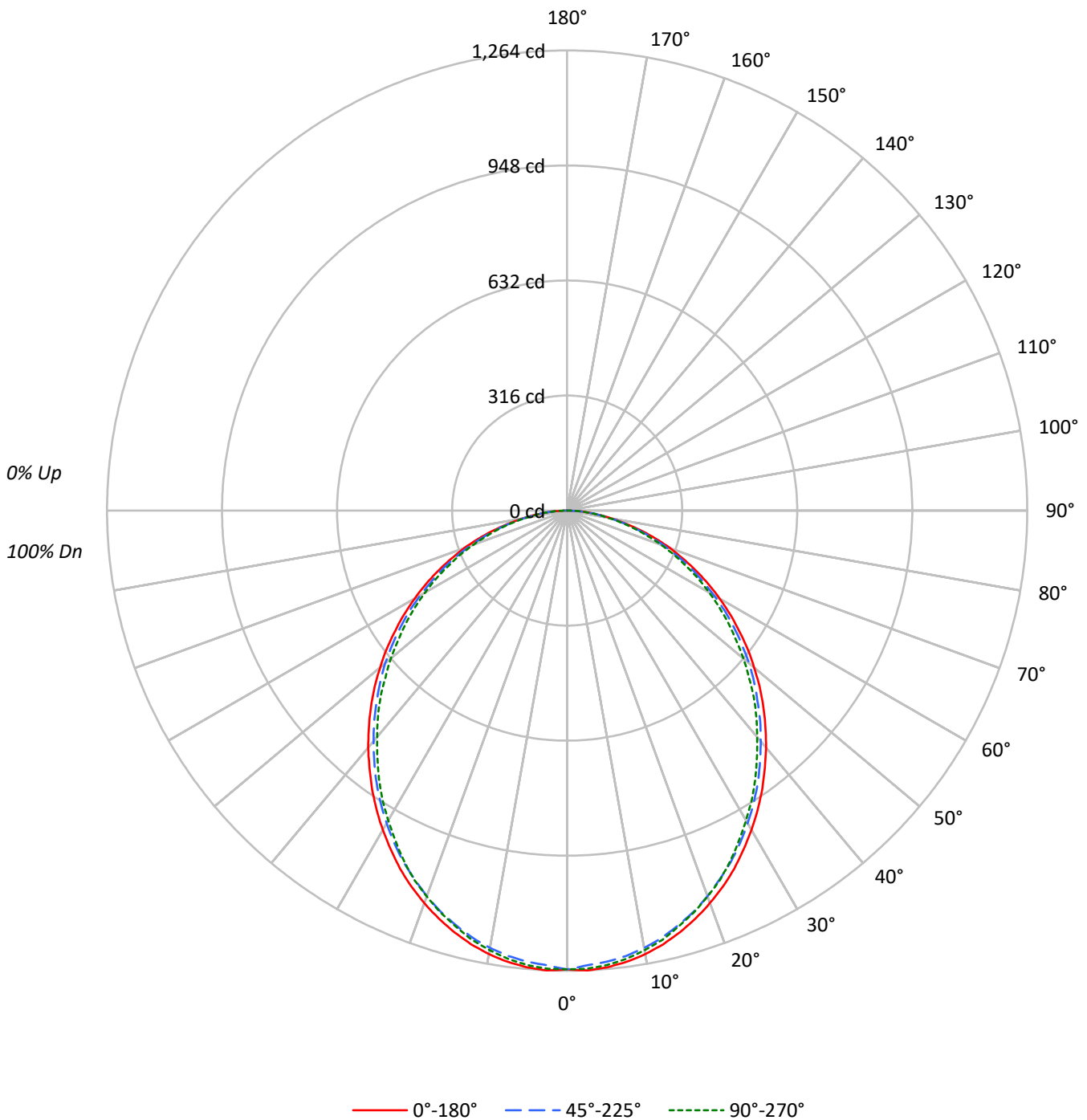
Lumens per Lamp: N/A
Luminaire Lumens: 3234.8 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.2
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

TEST NUMBER: P242610

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

Luminous Intensity Polar Plot





TEST NUMBER: P242610

CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-F-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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84													84															
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70													70															
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60													60															
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51													51															
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44													44															
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39													39															
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35													35															
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31													31															
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28													28															
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25													25															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11203	11203	11203
5°	11237	11102	11182
10°	11166	11011	11066
15°	11031	10854	10883
20°	10852	10661	10670
25°	10647	10439	10410
30°	10396	10179	10085
35°	10136	9906	9775
40°	9867	9597	9421
45°	9584	9292	9115
50°	9274	9022	8742
55°	8936	8671	8389
60°	8599	8276	8025
65°	8220	7902	7582
70°	7794	7402	7113
75°	7144	6797	6625
80°	6358	6102	5943
85°	5558	5354	5252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9584 cd/sqm



TEST NUMBER: P242610

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.8	3.7
10°-20°	334.7	10.3
20°-30°	492.5	15.2
30°-40°	572.6	17.7
40°-50°	572.5	17.7
50°-60°	500.7	15.5
60°-70°	371.7	11.5
70°-80°	210.9	6.5
80°-90°	60.4	1.9
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°	946.0	29.2
0°-40°	1518.6	46.9
0°-60°	2591.8	80.1
0°-90°	3234.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3234.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1259	1255	1244	1255	1253	119
15°	1199	1195	1180	1186	1183	338
25°	1086	1078	1064	1065	1061	500
35°	934	927	913	906	901	584
45°	762	755	739	728	725	588
55°	577	574	560	547	541	517
65°	391	386	376	366	360	387
75°	208	203	198	194	193	221
85°	54	54	52	52	52	62
90°	0	0	0	0	0	



TEST NUMBER: P242610

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.3	1260.3	1260.3	1260.3	1260.3
2.5°	1264.4	1261.3	1250.2	1260.3	1259.3
5°	1259.3	1255.3	1244.2	1255.3	1253.2
7.5°	1250.2	1246.2	1234.1	1243.1	1242.1
10°	1237.1	1233.0	1219.9	1228.0	1226.0
12.5°	1219.9	1215.9	1201.7	1210.8	1207.8
15°	1198.7	1194.7	1179.5	1185.6	1182.6
17.5°	1174.5	1169.4	1155.3	1159.3	1157.3
20°	1147.2	1142.2	1127.0	1130.0	1128.0
22.5°	1117.9	1110.9	1095.7	1101.8	1097.7
25°	1085.6	1078.5	1064.4	1065.4	1061.4
27.5°	1049.3	1042.2	1029.1	1027.0	1022.0
30°	1012.9	1004.8	991.7	987.6	982.6
32.5°	974.5	967.5	953.3	948.3	943.2
35°	934.1	927.1	912.9	905.9	900.8
37.5°	891.7	885.7	870.5	863.4	856.4
40°	850.3	842.2	827.1	817.0	811.9
42.5°	805.9	801.8	784.7	772.5	769.5
45°	762.4	755.4	739.2	728.1	725.1
47.5°	717.0	712.0	696.8	684.7	676.6
50°	670.6	666.5	652.4	638.2	632.2
52.5°	625.1	620.1	604.9	592.8	584.7
55°	576.6	573.6	559.5	547.3	541.3
57.5°	531.2	528.2	514.0	501.9	495.8
60°	483.7	478.7	465.5	456.5	451.4
62.5°	437.3	433.2	419.1	411.0	406.0
65°	390.8	385.8	375.7	365.6	360.5
67.5°	343.4	339.3	329.2	319.1	318.1
70°	299.9	292.9	284.8	276.7	273.7
72.5°	253.5	246.4	240.3	234.3	231.3
75°	208.0	203.0	197.9	193.9	192.9
77.5°	163.6	161.6	156.5	155.5	152.5
80°	124.2	121.2	119.2	117.1	116.1
82.5°	85.8	84.8	84.8	83.8	82.8
85°	54.5	54.5	52.5	52.5	51.5
87.5°	26.3	25.2	24.2	24.2	24.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242610
 CATALOG NUMBER: S124DRP-S795D840-X4F0-XX-UDD-F-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	19.69	21.31	20.06	21.62	21.94	19.32	20.93	19.68	21.25	21.56
	3H	21.45	22.91	21.83	23.24	23.60	21.03	22.49	21.41	22.81	23.17
	4H	22.11	23.48	22.51	23.83	24.21	21.67	23.05	22.07	23.39	23.77
	6H	22.58	23.86	22.99	24.22	24.61	22.15	23.42	22.56	23.79	24.18
	8H	22.73	23.95	23.16	24.34	24.74	22.31	23.52	22.73	23.91	24.31
	12H	22.84	24.00	23.27	24.38	24.81	22.42	23.58	22.85	23.96	24.39
4H	2H	20.26	21.64	20.66	21.99	22.36	19.97	21.34	20.36	21.69	22.06
	3H	22.24	23.39	22.65	23.79	24.19	21.89	23.04	22.30	23.44	23.84
	4H	23.03	24.07	23.46	24.48	24.92	22.66	23.70	23.09	24.12	24.55
	6H	23.63	24.54	24.08	24.98	25.44	23.27	24.17	23.72	24.61	25.07
	8H	23.83	24.68	24.29	25.12	25.59	23.47	24.32	23.93	24.76	25.23
	12H	23.98	24.74	24.46	25.22	25.69	23.62	24.39	24.10	24.86	25.33
8H	4H	23.30	24.15	23.76	24.60	25.06	22.98	23.83	23.44	24.27	24.74
	6H	24.03	24.73	24.52	25.22	25.70	23.71	24.41	24.20	24.90	25.38
	8H	24.30	24.93	24.81	25.44	25.92	23.99	24.62	24.50	25.13	25.61
	12H	24.52	25.09	25.03	25.58	26.14	24.22	24.78	24.72	25.27	25.83
12H	4H	23.33	24.09	23.81	24.57	25.04	23.02	23.78	23.50	24.26	24.73
	6H	24.07	24.71	24.58	25.22	25.70	23.76	24.40	24.27	24.91	25.39
	8H	24.40	24.96	24.91	25.45	26.01	24.11	24.67	24.61	25.16	25.72