

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: P242694

Luminaire Tested: S124DRP-S795D940-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242694
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-S795D940-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

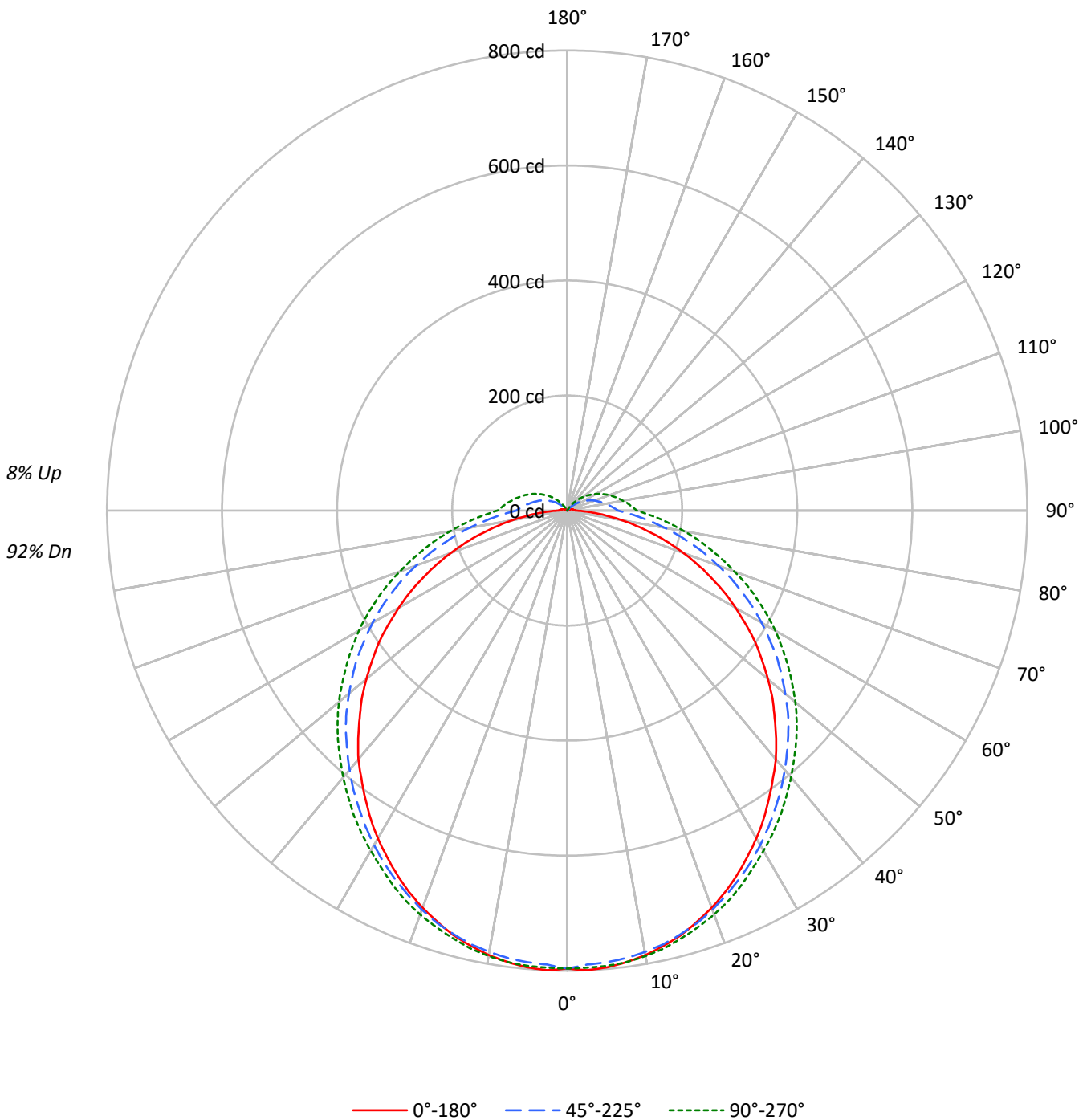
Lumens per Lamp: N/A
Luminaire Lumens: 2714.9 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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: P242694

CATALOG NUMBER: S124DRP-S795D940-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P242694

CATALOG NUMBER: S124DRP-S795D940-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	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°	7078	7078	7078
5°	7100	6911	6928
10°	7056	6791	6780
15°	6992	6653	6609
20°	6897	6502	6444
25°	6789	6333	6261
30°	6672	6167	6075
35°	6539	5995	5912
40°	6434	5832	5741
45°	6277	5680	5593
50°	6144	5507	5437
55°	6007	5342	5254
60°	5793	5133	5086
65°	5557	4908	4880
70°	5274	4650	4641
75°	4877	4366	4420
80°	4435	4087	4197
85°	3872	3823	4044

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6277 cd/sqm



TEST NUMBER: P242694

CATALOG NUMBER: S124DRP-S795D940-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	2.8
10°-20°	216.2	8.0
20°-30°	326.9	12.0
30°-40°	395.4	14.6
40°-50°	418.0	15.4
50°-60°	393.4	14.5
60°-70°	326.5	12.0
70°-80°	229.1	8.4
80°-90°	129.2	4.8
90°-100°	76.9	2.8
100°-110°	56.9	2.1
110°-120°	38.2	1.4
120°-130°	21.5	0.8
130°-140°	9.3	0.3
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	618.5	22.8
0°-40°	1013.9	37.3
0°-60°	1825.4	67.2
0°-90°	2510.2	92.5
90°-120°	172.1	6.3
90°-150°	204.7	7.5
90°-180°	205.0	7.6
0°-180°	2714.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	796	796	796	796	796	
5°	797	794	788	795	794	76
15°	764	765	762	770	770	215
25°	699	704	707	717	718	322
35°	612	622	631	644	646	383
45°	510	527	544	559	564	394
55°	400	418	445	463	468	356
65°	276	305	335	358	365	274
75°	153	186	224	249	257	163
85°	47	85	125	152	160	49
90°	14	50	88	114	121	10
95°	12	41	78	102	110	9
105°	8	26	59	81	88	9
115°	5	13	42	62	68	6
125°	4	3	25	42	47	3
135°	2	2	8	22	28	2
145°	1	0	0	5	9	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: P242694

CATALOG NUMBER: S124DRP-S795D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	796.3	796.3	796.3	796.3	796.3
2.5°	799.9	797.2	790.1	796.3	795.4
5°	797.2	794.5	788.3	795.4	794.5
7.5°	791.8	790.1	784.7	792.7	791.8
10°	784.7	783.8	779.4	787.4	786.5
12.5°	774.9	774.9	772.2	779.4	779.4
15°	764.2	765.1	762.4	770.4	769.5
17.5°	749.9	752.6	751.7	759.7	758.8
20°	734.8	737.4	738.3	747.3	747.3
22.5°	717.8	721.4	723.2	732.1	733.9
25°	699.1	704.5	707.1	716.9	717.8
27.5°	678.6	686.6	690.2	699.1	700.0
30°	658.1	665.2	671.5	681.3	683.0
32.5°	635.8	644.7	651.8	663.4	665.2
35°	611.7	622.4	631.3	643.8	646.5
37.5°	587.6	600.1	610.8	623.3	626.0
40°	564.5	576.0	588.5	601.9	605.5
42.5°	537.7	551.1	566.2	581.4	584.1
45°	510.1	527.0	543.9	559.1	563.6
47.5°	484.2	501.1	520.8	535.9	541.3
50°	455.7	475.3	494.9	512.7	518.1
52.5°	427.1	446.7	469.9	487.8	493.1
55°	399.5	418.2	445.0	462.8	468.1
57.5°	368.3	391.5	417.3	438.7	443.2
60°	338.0	361.1	390.6	411.1	418.2
62.5°	308.5	334.4	363.8	384.3	391.5
65°	276.4	305.0	335.3	357.6	364.7
67.5°	246.1	276.4	308.5	330.8	338.0
70°	214.9	245.2	279.1	303.2	309.4
72.5°	184.6	215.8	252.4	275.5	282.7
75°	153.4	186.4	223.8	248.8	256.8
77.5°	123.9	158.7	198.0	222.9	231.8
80°	97.2	132.9	172.1	198.9	206.0
82.5°	70.4	107.9	147.1	174.8	182.8
85°	47.3	84.7	124.8	151.6	160.5
87.5°	29.4	66.0	105.2	131.1	139.1
90°	14.3	49.9	88.3	114.1	121.3
92.5°	13.4	44.6	82.9	107.9	115.0
95°	11.6	41.0	77.6	101.7	109.7
97.5°	10.7	36.6	73.1	96.3	104.3
100°	9.8	33.0	67.8	91.8	98.1
102.5°	9.8	29.4	63.3	86.5	93.6
105°	8.0	25.9	58.9	81.1	88.3
107.5°	8.0	23.2	54.4	76.7	82.9
110°	7.1	19.6	50.8	71.3	78.5



TEST NUMBER: P242694

CATALOG NUMBER: S124DRP-S795D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	16.9	46.4	66.0	73.1
115°	5.4	13.4	41.9	61.5	67.8
117.5°	5.4	10.7	37.5	56.2	63.3
120°	4.5	7.1	33.0	50.8	58.0
122.5°	4.5	4.5	28.5	46.4	52.6
125°	3.6	2.7	25.0	41.9	47.3
127.5°	3.6	2.7	20.5	36.6	42.8
130°	2.7	1.8	16.1	32.1	37.5
132.5°	2.7	1.8	12.5	27.6	33.0
135°	1.8	1.8	8.0	22.3	27.6
137.5°	1.8	0.9	4.5	17.8	22.3
140°	1.8	0.9	1.8	13.4	17.8
142.5°	0.9	0.9	0.0	9.8	13.4
145°	0.9	0.0	0.0	5.4	8.9
147.5°	0.9	0.0	0.0	0.9	4.5
150°	0.9	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: P242694

CATALOG NUMBER: S124DRP-S795D940-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	16.59	18.12	17.07	18.58	19.08	18.14	19.67	18.62	20.13	20.63
	3H	18.23	19.62	18.72	20.10	20.63	20.45	21.84	20.94	22.31	22.85
	4H	18.80	20.11	19.31	20.61	21.16	21.51	22.83	22.02	23.32	23.87
	6H	19.18	20.40	19.70	20.91	21.48	22.56	23.79	23.09	24.29	24.86
	8H	19.29	20.46	19.82	20.99	21.56	23.08	24.26	23.62	24.79	25.36
	12H	19.35	20.47	19.89	20.99	21.60	23.63	24.76	24.18	25.28	25.89
4H	2H	17.44	18.75	17.95	19.25	19.80	18.64	19.96	19.15	20.45	21.00
	3H	19.32	20.44	19.84	20.97	21.55	21.17	22.29	21.69	22.83	23.40
	4H	20.02	21.05	20.57	21.59	22.20	22.39	23.41	22.93	23.96	24.57
	6H	20.54	21.44	21.10	22.02	22.64	23.62	24.52	24.18	25.09	25.71
	8H	20.70	21.55	21.27	22.12	22.75	24.23	25.08	24.80	25.65	26.28
	12H	20.80	21.57	21.39	22.17	22.81	24.89	25.66	25.48	26.26	26.90
8H	4H	20.60	21.45	21.17	22.02	22.66	22.64	23.49	23.21	24.06	24.70
	6H	21.30	22.01	21.90	22.63	23.27	24.04	24.75	24.64	25.37	26.01
	8H	21.55	22.20	22.16	22.82	23.47	24.78	25.42	25.39	26.05	26.70
	12H	21.74	22.31	22.35	22.92	23.64	25.60	26.18	26.22	26.79	27.51
12H	4H	20.74	21.51	21.33	22.11	22.75	22.66	23.43	23.25	24.03	24.67
	6H	21.51	22.16	22.12	22.78	23.43	24.09	24.73	24.70	25.36	26.01
	8H	21.85	22.42	22.46	23.04	23.75	24.89	25.47	25.51	26.08	26.80