

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: P242620

Luminaire Tested: S124DRP-S795D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242620
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-S795D935-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

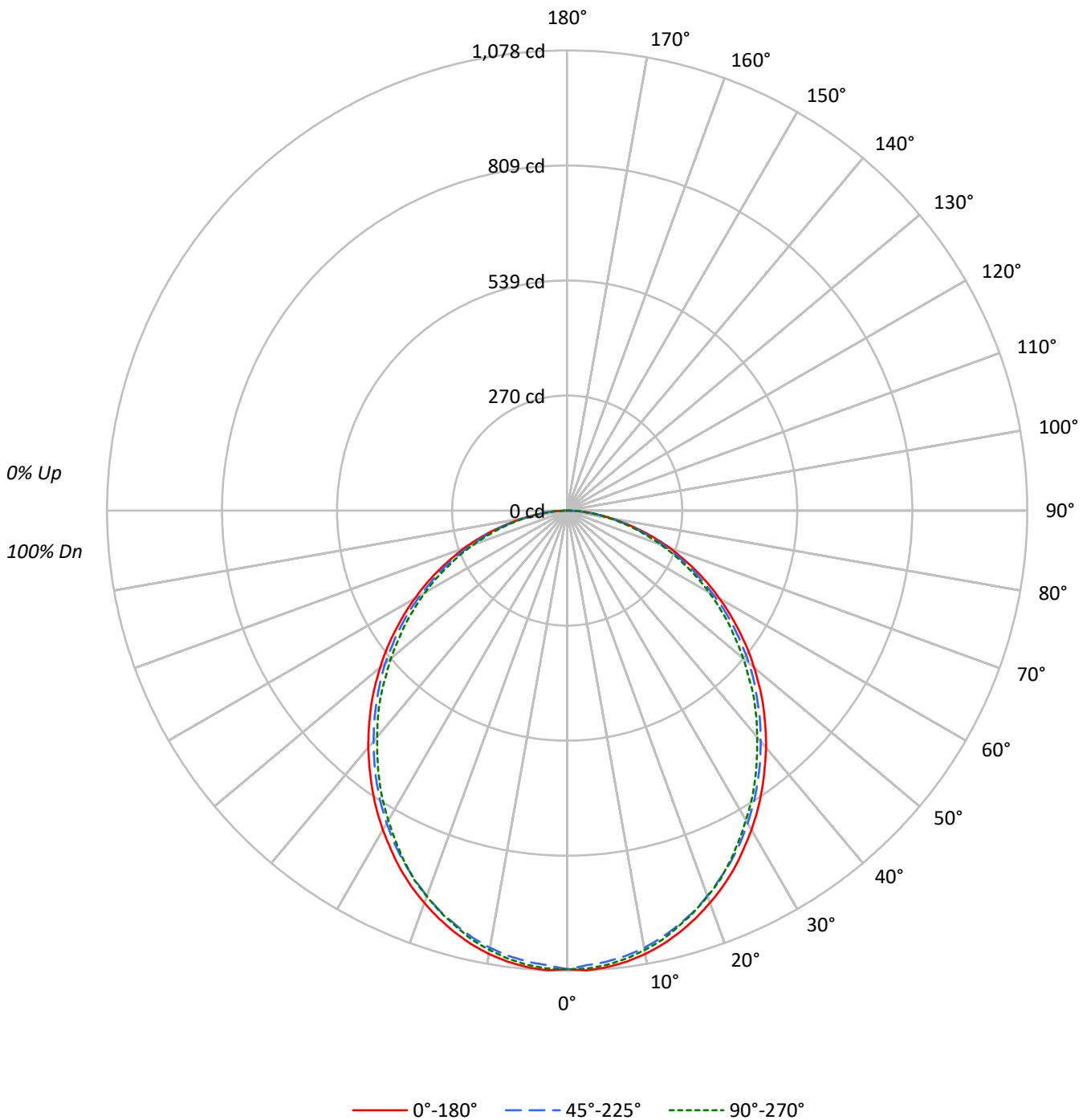
Lumens per Lamp: N/A
Luminaire Lumens: 2758.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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: P242620

CATALOG NUMBER: S124DRP-S795D935-X4F0-XX-UDD-F-W

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	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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	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	52	40	33	28	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9551	9551	9551
5°	9580	9465	9534
10°	9520	9388	9435
15°	9405	9254	9278
20°	9252	9090	9097
25°	9078	8901	8875
30°	8864	8678	8599
35°	8642	8446	8334
40°	8413	8183	8032
45°	8172	7923	7771
50°	7906	7692	7454
55°	7618	7392	7152
60°	7332	7056	6843
65°	7008	6737	6466
70°	6645	6310	6063
75°	6093	5797	5650
80°	5421	5201	5068
85°	4742	4569	4477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8172 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.7
10°-20°	285.3	10.3
20°-30°	419.9	15.2
30°-40°	488.2	17.7
40°-50°	488.1	17.7
50°-60°	426.9	15.5
60°-70°	316.9	11.5
70°-80°	179.8	6.5
80°-90°	51.5	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°	806.6	29.2
0°-40°	1294.7	46.9
0°-60°	2209.7	80.1
0°-90°	2758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2758.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1074	1074	1074	1074	1074	
5°	1074	1070	1061	1070	1068	102
15°	1022	1019	1006	1011	1008	288
25°	926	920	908	908	905	426
35°	796	790	778	772	768	498
45°	650	644	630	621	618	501
55°	492	489	477	467	462	440
65°	333	329	320	312	307	330
75°	177	173	169	165	164	188
85°	46	46	45	45	44	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1074.5	1074.5	1074.5	1074.5	1074.5
2.5°	1078.0	1075.4	1065.9	1074.5	1073.7
5°	1073.7	1070.2	1060.8	1070.2	1068.5
7.5°	1065.9	1062.5	1052.1	1059.9	1059.0
10°	1054.7	1051.3	1040.1	1047.0	1045.3
12.5°	1040.1	1036.6	1024.6	1032.3	1029.8
15°	1022.0	1018.6	1005.6	1010.8	1008.2
17.5°	1001.3	997.0	985.0	988.4	986.7
20°	978.1	973.8	960.9	963.5	961.7
22.5°	953.1	947.1	934.2	939.4	935.9
25°	925.6	919.5	907.5	908.4	904.9
27.5°	894.6	888.6	877.4	875.6	871.3
30°	863.6	856.7	845.5	842.1	837.8
32.5°	830.9	824.8	812.8	808.5	804.2
35°	796.4	790.4	778.3	772.3	768.0
37.5°	760.3	755.1	742.2	736.2	730.1
40°	725.0	718.1	705.2	696.6	692.2
42.5°	687.1	683.6	669.0	658.7	656.1
45°	650.1	644.0	630.3	620.8	618.2
47.5°	611.3	607.0	594.1	583.8	576.9
50°	571.7	568.3	556.2	544.2	539.0
52.5°	533.0	528.7	515.7	505.4	498.5
55°	491.6	489.0	477.0	466.7	461.5
57.5°	452.9	450.3	438.2	427.9	422.8
60°	412.4	408.1	396.9	389.2	384.9
62.5°	372.8	369.4	357.3	350.4	346.1
65°	333.2	328.9	320.3	311.7	307.4
67.5°	292.7	289.3	280.7	272.1	271.2
70°	255.7	249.7	242.8	235.9	233.3
72.5°	216.1	210.1	204.9	199.8	197.2
75°	177.4	173.1	168.8	165.3	164.5
77.5°	139.5	137.8	133.5	132.6	130.0
80°	105.9	103.3	101.6	99.9	99.0
82.5°	73.2	72.3	72.3	71.5	70.6
85°	46.5	46.5	44.8	44.8	43.9
87.5°	22.4	21.5	20.7	20.7	20.7
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	19.14	20.75	19.50	21.07	21.38	18.76	20.38	19.13	20.69	21.01
	3H	20.90	22.36	21.28	22.68	23.04	20.48	21.93	20.85	22.26	22.62
	4H	21.55	22.93	21.95	23.27	23.65	21.12	22.49	21.52	22.84	23.22
	6H	22.03	23.30	22.44	23.67	24.06	21.60	22.87	22.01	23.23	23.62
	8H	22.18	23.39	22.60	23.78	24.18	21.75	22.97	22.18	23.36	23.76
	12H	22.28	23.45	22.71	23.83	24.26	21.86	23.03	22.29	23.41	23.84
4H	2H	19.71	21.08	20.11	21.43	21.81	19.41	20.79	19.81	21.13	21.51
	3H	21.69	22.84	22.10	23.24	23.64	21.34	22.49	21.75	22.89	23.29
	4H	22.47	23.51	22.90	23.93	24.36	22.11	23.15	22.54	23.56	24.00
	6H	23.08	23.99	23.53	24.43	24.88	22.71	23.62	23.17	24.06	24.52
	8H	23.27	24.12	23.73	24.57	25.03	22.92	23.77	23.38	24.21	24.67
	12H	23.43	24.19	23.91	24.67	25.13	23.07	23.84	23.55	24.31	24.78
8H	4H	22.75	23.60	23.21	24.04	24.51	22.43	23.28	22.89	23.72	24.19
	6H	23.47	24.18	23.96	24.67	25.14	23.15	23.86	23.65	24.35	24.82
	8H	23.74	24.38	24.25	24.88	25.37	23.43	24.07	23.94	24.57	25.06
	12H	23.97	24.53	24.48	25.02	25.58	23.66	24.23	24.17	24.72	25.28
12H	4H	22.78	23.54	23.26	24.02	24.49	22.46	23.23	22.94	23.70	24.17
	6H	23.52	24.16	24.03	24.66	25.15	23.21	23.85	23.72	24.35	24.84
	8H	23.85	24.41	24.35	24.90	25.46	23.55	24.11	24.06	24.60	25.16