

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: P242622

Luminaire Tested: S124DRP-S1195D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242622
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-S1195D935-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

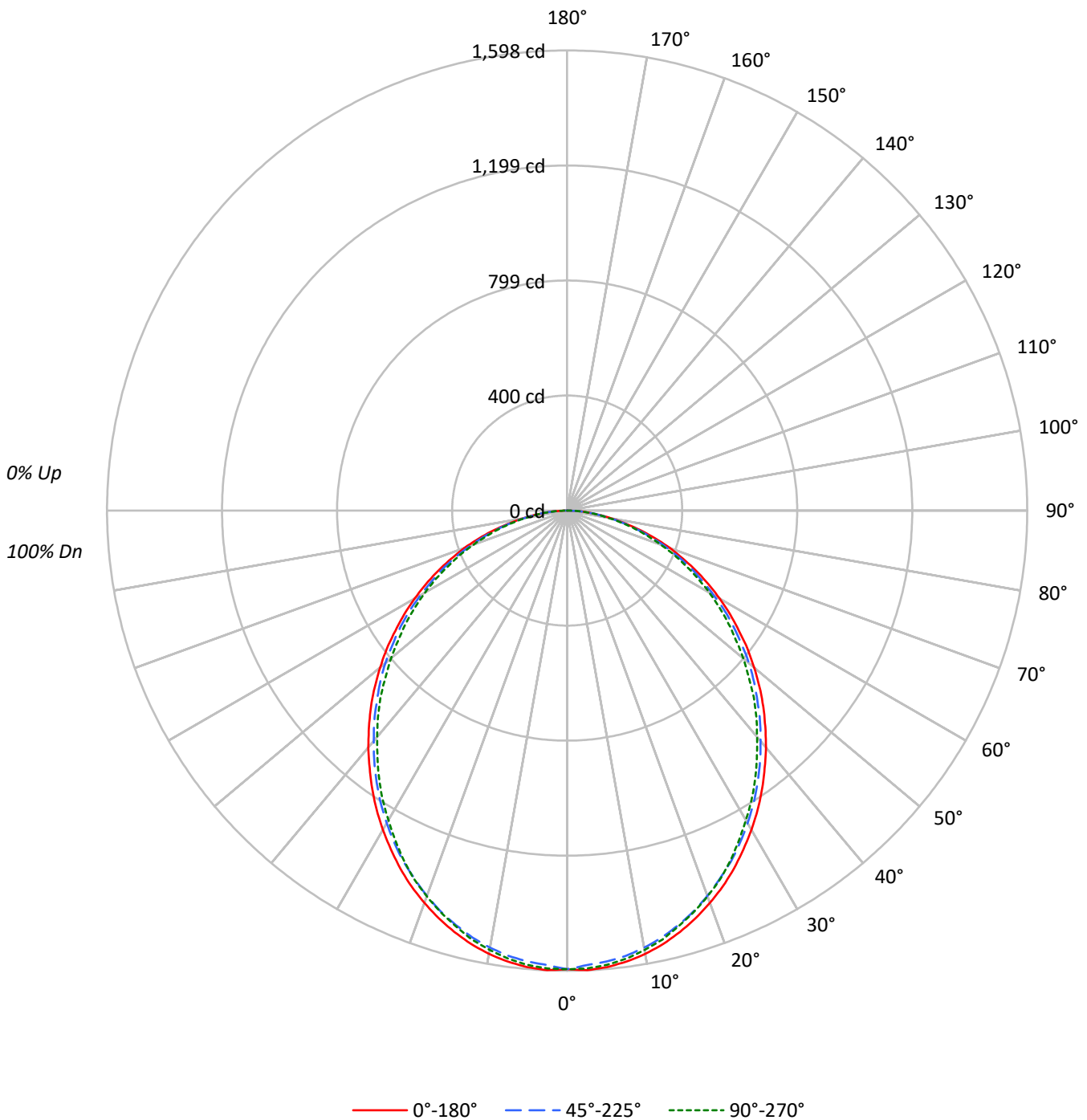
Lumens per Lamp: N/A
Luminaire Lumens: 4087.6 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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

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CATALOG NUMBER: S124DRP-S1195D935-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	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°	14156	14156	14156
5°	14199	14028	14130
10°	14109	13914	13982
15°	13939	13716	13751
20°	13712	13471	13483
25°	13454	13192	13154
30°	13137	12862	12744
35°	12809	12518	12352
40°	12468	12127	11905
45°	12111	11742	11517
50°	11717	11399	11046
55°	11291	10955	10600
60°	10866	10459	10140
65°	10386	9984	9583
70°	9850	9354	8987
75°	9029	8589	8370
80°	8037	7709	7509
85°	7027	6772	6639

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12111 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	3.7
10°-20°	422.9	10.3
20°-30°	622.4	15.2
30°-40°	723.5	17.7
40°-50°	723.4	17.7
50°-60°	632.7	15.5
60°-70°	469.7	11.5
70°-80°	266.5	6.5
80°-90°	76.3	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°	1195.4	29.2
0°-40°	1918.8	46.9
0°-60°	3275.0	80.1
0°-90°	4087.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4087.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1592	1592	1592	1592	1592	
5°	1591	1586	1572	1586	1584	151
15°	1515	1510	1490	1498	1494	427
25°	1372	1363	1345	1346	1341	631
35°	1180	1171	1154	1145	1138	738
45°	963	954	934	920	916	743
55°	729	725	707	692	684	653
65°	494	488	475	462	456	489
75°	263	256	250	245	244	279
85°	69	69	66	66	65	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1592.5	1592.5	1592.5	1592.5	1592.5
2.5°	1597.6	1593.8	1579.8	1592.5	1591.3
5°	1591.3	1586.2	1572.1	1586.2	1583.6
7.5°	1579.8	1574.7	1559.4	1570.8	1569.6
10°	1563.2	1558.1	1541.5	1551.7	1549.1
12.5°	1541.5	1536.4	1518.5	1530.0	1526.2
15°	1514.7	1509.6	1490.5	1498.1	1494.3
17.5°	1484.1	1477.7	1459.8	1464.9	1462.4
20°	1449.6	1443.2	1424.1	1427.9	1425.4
22.5°	1412.6	1403.7	1384.5	1392.2	1387.1
25°	1371.8	1362.8	1345.0	1346.3	1341.2
27.5°	1325.8	1316.9	1300.3	1297.8	1291.4
30°	1279.9	1269.7	1253.1	1248.0	1241.6
32.5°	1231.4	1222.5	1204.6	1198.2	1191.9
35°	1180.4	1171.4	1153.6	1144.6	1138.3
37.5°	1126.8	1119.1	1100.0	1091.0	1082.1
40°	1074.5	1064.2	1045.1	1032.3	1026.0
42.5°	1018.3	1013.2	991.5	976.2	972.4
45°	963.4	954.5	934.1	920.0	916.2
47.5°	906.0	899.6	880.5	865.2	855.0
50°	847.3	842.2	824.3	806.5	798.8
52.5°	789.9	783.5	764.4	749.1	738.8
55°	728.6	724.8	706.9	691.6	684.0
57.5°	671.2	667.4	649.5	634.2	626.6
60°	611.2	604.9	588.3	576.8	570.4
62.5°	552.5	547.4	529.6	519.4	513.0
65°	493.8	487.5	474.7	461.9	455.6
67.5°	433.9	428.8	416.0	403.2	402.0
70°	379.0	370.1	359.9	349.6	345.8
72.5°	320.3	311.4	303.7	296.0	292.2
75°	262.9	256.5	250.1	245.0	243.7
77.5°	206.7	204.2	197.8	196.5	192.7
80°	157.0	153.1	150.6	148.0	146.7
82.5°	108.5	107.2	107.2	105.9	104.6
85°	68.9	68.9	66.4	66.4	65.1
87.5°	33.2	31.9	30.6	30.6	30.6
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	20.51	22.12	20.87	22.43	22.75	20.13	21.74	20.50	22.06	22.37
	3H	22.27	23.73	22.64	24.05	24.41	21.84	23.30	22.22	23.63	23.99
	4H	22.92	24.29	23.32	24.64	25.02	22.49	23.86	22.88	24.21	24.58
	6H	23.40	24.67	23.81	25.03	25.42	22.96	24.23	23.37	24.60	24.99
	8H	23.55	24.76	23.97	25.15	25.55	23.12	24.33	23.54	24.72	25.12
	12H	23.65	24.82	24.08	25.20	25.63	23.23	24.39	23.66	24.77	25.20
4H	2H	21.08	22.45	21.48	22.80	23.17	20.78	22.15	21.18	22.50	22.88
	3H	23.06	24.21	23.47	24.61	25.01	22.71	23.86	23.12	24.25	24.65
	4H	23.84	24.88	24.27	25.29	25.73	23.48	24.52	23.91	24.93	25.37
	6H	24.44	25.35	24.90	25.79	26.25	24.08	24.99	24.53	25.43	25.88
	8H	24.64	25.49	25.10	25.93	26.40	24.28	25.13	24.74	25.58	26.04
	12H	24.79	25.56	25.27	26.03	26.50	24.44	25.20	24.92	25.68	26.15
8H	4H	24.12	24.97	24.58	25.41	25.87	23.79	24.64	24.25	25.09	25.55
	6H	24.84	25.55	25.33	26.03	26.51	24.52	25.23	25.01	25.71	26.19
	8H	25.11	25.74	25.62	26.25	26.74	24.80	25.43	25.31	25.94	26.43
	12H	25.34	25.90	25.84	26.39	26.95	25.03	25.59	25.54	26.08	26.64
12H	4H	24.14	24.91	24.62	25.38	25.85	23.83	24.59	24.31	25.07	25.54
	6H	24.89	25.52	25.40	26.03	26.52	24.58	25.21	25.09	25.72	26.21
	8H	25.22	25.78	25.72	26.27	26.83	24.92	25.48	25.42	25.97	26.53