

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: P243570

Luminaire Tested: S124RDRP-H1195D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243570
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H1195D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

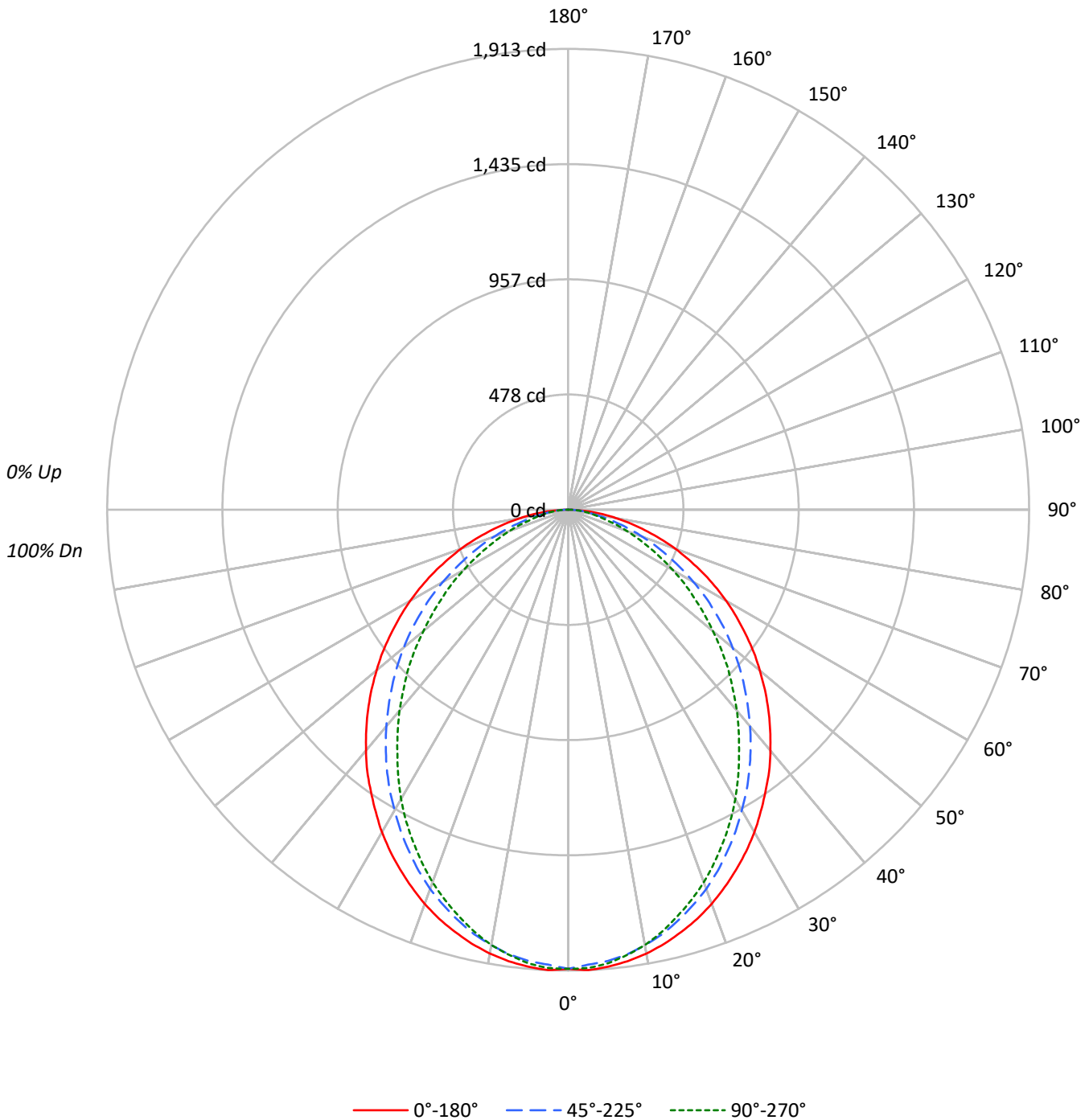
Lumens per Lamp: N/A
Luminaire Lumens: 4494.4 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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

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CATALOG NUMBER: S124RDRP-H1195D835-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	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16942	16942	16942
5°	16994	16780	16869
10°	16886	16568	16568
15°	16698	16245	16090
20°	16473	15847	15567
25°	16169	15341	14928
30°	15867	14784	14235
35°	15492	14241	13417
40°	15146	13628	12633
45°	14764	12979	11812
50°	14356	12313	10854
55°	13907	11553	9897
60°	13479	10677	8903
65°	12900	9646	7780
70°	12283	8517	6762
75°	11354	7102	5509
80°	10371	5544	5042
85°	9179	5303	5018

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14764 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.3	4.0
10°-20°	500.6	11.1
20°-30°	725.9	16.2
30°-40°	827.4	18.4
40°-50°	805.0	17.9
50°-60°	676.2	15.0
60°-70°	471.1	10.5
70°-80°	243.3	5.4
80°-90°	65.8	1.5
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°	1405.7	31.3
0°-40°	2233.1	49.7
0°-60°	3714.3	82.6
0°-90°	4494.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4494.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1906	1906	1906	1906	1906	
5°	1905	1899	1881	1895	1890	181
15°	1814	1800	1765	1762	1748	512
25°	1649	1618	1564	1542	1522	760
35°	1428	1384	1312	1263	1236	894
45°	1174	1118	1032	966	940	906
55°	897	840	746	670	639	804
65°	613	554	459	392	370	607
75°	331	280	207	173	160	352
85°	90	58	52	49	49	103
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1906.0	1906.0	1906.0	1906.0	1906.0
2.5°	1913.0	1907.4	1890.5	1906.0	1904.6
5°	1904.6	1898.9	1880.6	1894.7	1890.5
7.5°	1890.5	1883.5	1862.4	1872.2	1865.2
10°	1870.8	1863.8	1835.6	1842.7	1835.6
12.5°	1845.5	1835.6	1804.7	1806.1	1794.8
15°	1814.5	1800.5	1765.3	1762.5	1748.4
17.5°	1780.8	1762.5	1721.7	1714.7	1699.2
20°	1741.4	1718.9	1675.3	1659.8	1645.7
22.5°	1696.4	1669.7	1621.8	1603.5	1585.3
25°	1648.6	1617.6	1564.2	1541.7	1522.0
27.5°	1599.3	1562.8	1505.1	1476.9	1457.3
30°	1545.9	1503.7	1440.4	1408.0	1386.9
32.5°	1486.8	1444.6	1378.5	1339.1	1312.4
35°	1427.7	1384.1	1312.4	1263.1	1236.4
37.5°	1370.0	1320.8	1243.4	1192.8	1161.9
40°	1305.3	1253.3	1174.5	1116.9	1088.7
42.5°	1240.6	1187.2	1102.8	1042.3	1011.4
45°	1174.5	1118.3	1032.5	966.3	939.6
47.5°	1107.0	1050.7	962.1	893.2	862.3
50°	1038.1	981.8	890.4	814.4	784.9
52.5°	970.6	911.5	820.1	742.7	711.7
55°	897.4	839.7	745.5	669.5	638.6
57.5°	827.1	766.6	675.2	597.8	572.5
60°	758.2	697.7	600.6	526.1	500.8
62.5°	685.0	624.5	528.9	457.2	434.6
65°	613.3	554.2	458.6	392.4	369.9
67.5°	540.1	486.7	393.9	330.6	312.3
70°	472.6	412.1	327.7	272.9	260.2
72.5°	400.9	347.4	265.9	220.8	211.0
75°	330.6	279.9	206.8	173.0	160.4
77.5°	265.9	216.6	156.1	128.0	128.0
80°	202.6	158.9	108.3	101.3	98.5
82.5°	143.5	102.7	80.2	74.6	73.1
85°	90.0	57.7	52.0	49.2	49.2
87.5°	43.6	26.7	26.7	25.3	25.3
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	21.28	22.86	21.65	23.17	23.49	19.39	20.96	19.75	21.28	21.59
	3H	23.10	24.52	23.48	24.84	25.20	20.65	22.07	21.03	22.39	22.76
	4H	23.78	25.12	24.18	25.46	25.84	21.05	22.38	21.44	22.73	23.10
	6H	24.30	25.53	24.71	25.89	26.29	21.32	22.56	21.73	22.92	23.31
	8H	24.47	25.64	24.89	26.03	26.43	21.42	22.60	21.85	22.99	23.39
	12H	24.58	25.71	25.01	26.09	26.52	21.50	22.63	21.93	23.01	23.44
4H	2H	21.64	22.97	22.03	23.32	23.69	20.09	21.42	20.49	21.77	22.15
	3H	23.65	24.76	24.06	25.16	25.56	21.54	22.65	21.95	23.05	23.45
	4H	24.46	25.47	24.89	25.88	26.32	22.02	23.02	22.45	23.43	23.87
	6H	25.11	25.98	25.56	26.42	26.88	22.38	23.26	22.84	23.70	24.16
	8H	25.32	26.14	25.78	26.58	27.05	22.52	23.34	22.98	23.78	24.25
	12H	25.49	26.22	25.97	26.70	27.17	22.64	23.37	23.12	23.85	24.32
8H	4H	24.57	25.39	25.03	25.83	26.30	22.35	23.17	22.81	23.61	24.08
	6H	25.29	25.97	25.79	26.46	26.94	22.80	23.48	23.30	23.97	24.44
	8H	25.57	26.17	26.08	26.68	27.17	23.00	23.60	23.51	24.11	24.60
	12H	25.80	26.33	26.30	26.82	27.39	23.18	23.72	23.69	24.21	24.77
12H	4H	24.56	25.29	25.04	25.77	26.24	22.40	23.13	22.88	23.60	24.07
	6H	25.29	25.90	25.80	26.40	26.89	22.86	23.47	23.38	23.98	24.47
	8H	25.60	26.14	26.11	26.63	27.19	23.11	23.65	23.62	24.14	24.70