

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: P243473

Luminaire Tested: S124DRP-H350D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H350D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

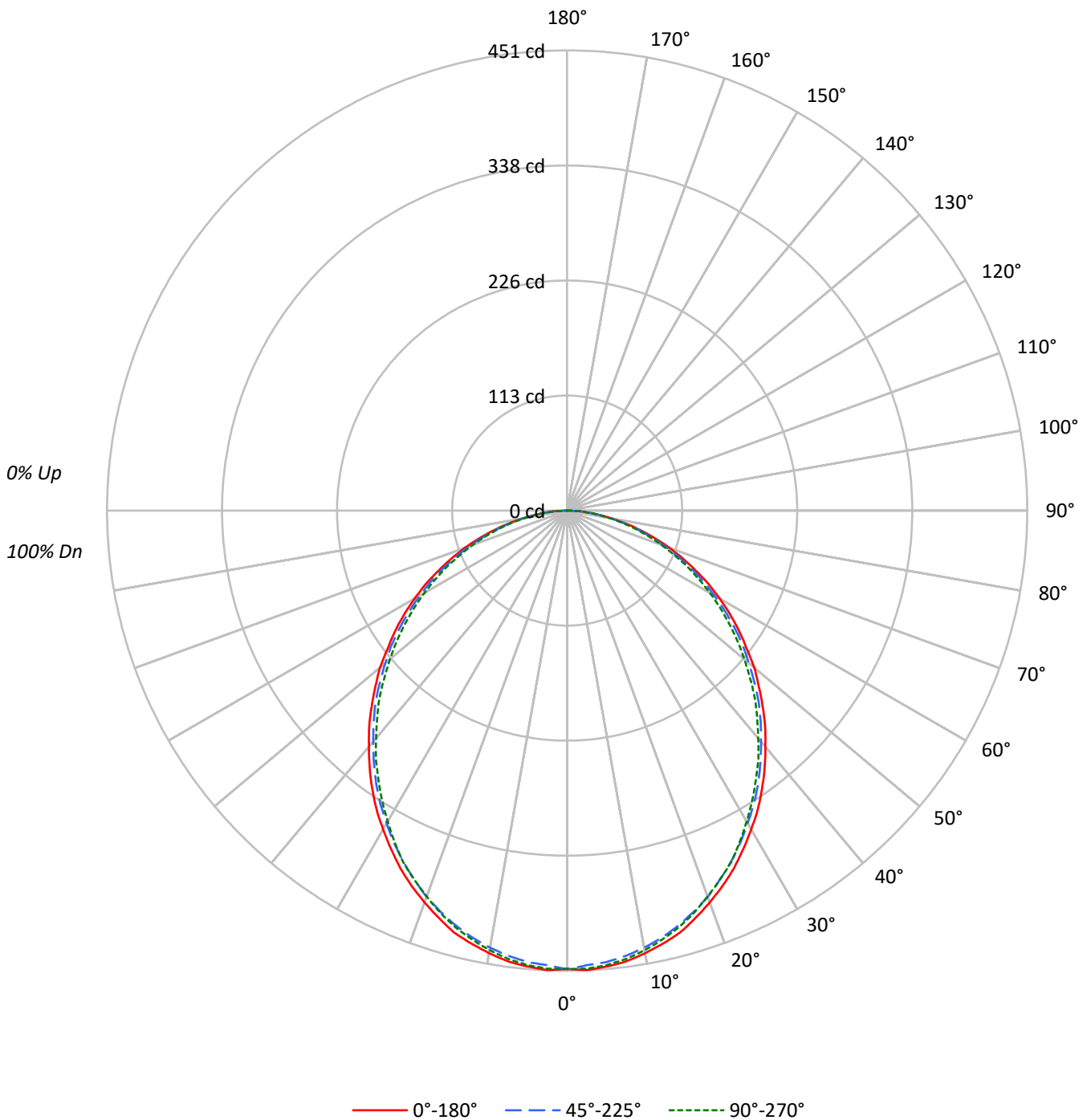
Lumens per Lamp: N/A
Luminaire Lumens: 1156.5 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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

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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	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	46	41	52	46	41	39				39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35				35
8	61	48	39	34	60	47	39	33	46	38	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	27	39	32	27	38	32	27	37	31	27	25				25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3994	3994	3994
5°	4002	3963	3989
10°	3976	3926	3950
15°	3940	3875	3892
20°	3866	3810	3807
25°	3794	3725	3729
30°	3703	3632	3610
35°	3614	3542	3498
40°	3508	3431	3380
45°	3405	3336	3272
50°	3311	3215	3134
55°	3189	3104	3008
60°	3067	2964	2873
65°	2921	2823	2730
70°	2765	2641	2555
75°	2548	2449	2373
80°	2247	2206	2150
85°	1979	1979	1938

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.4	3.7
10°-20°	119.4	10.3
20°-30°	175.9	15.2
30°-40°	204.6	17.7
40°-50°	204.7	17.7
50°-60°	179.0	15.5
60°-70°	133.0	11.5
70°-80°	75.8	6.6
80°-90°	21.8	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°	337.7	29.2
0°-40°	542.3	46.9
0°-60°	926.0	80.1
0°-90°	1156.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1156.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	449	449	449	449	449	
5°	448	448	444	447	447	43
15°	428	426	421	424	423	120
25°	387	385	380	381	380	178
35°	333	330	326	324	322	208
45°	271	270	265	261	260	209
55°	206	204	200	196	194	184
65°	139	138	134	131	130	138
75°	74	73	71	70	69	79
85°	19	19	19	19	19	22
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	449.3	449.3	449.3	449.3	449.3
2.5°	450.7	449.6	446.0	449.6	449.3
5°	448.5	447.8	444.1	447.4	447.1
7.5°	445.6	444.1	440.1	443.4	443.1
10°	440.5	439.4	435.0	438.3	437.6
12.5°	434.6	433.5	428.8	431.4	430.6
15°	428.1	425.9	421.1	423.7	422.9
17.5°	418.6	417.1	412.3	414.5	413.4
20°	408.7	406.9	402.8	403.2	402.5
22.5°	398.1	396.3	391.5	393.0	391.5
25°	386.8	384.9	379.8	380.9	380.2
27.5°	374.0	372.1	367.4	367.7	366.3
30°	360.8	358.6	353.9	353.5	351.7
32.5°	347.6	345.4	340.7	339.2	337.4
35°	333.0	330.1	326.4	323.5	322.4
37.5°	318.0	316.6	311.1	309.3	307.8
40°	302.3	300.9	295.7	293.2	291.3
42.5°	287.3	285.5	280.7	277.1	275.6
45°	270.9	269.8	265.4	261.4	260.3
47.5°	254.8	254.4	248.9	244.9	243.1
50°	239.4	237.2	232.5	228.8	226.6
52.5°	221.5	221.2	217.1	212.4	210.6
55°	205.8	204.3	200.3	195.9	194.1
57.5°	189.4	188.6	183.5	179.9	178.0
60°	172.5	171.1	166.7	163.4	161.6
62.5°	156.5	154.6	150.6	147.3	145.5
65°	138.9	137.8	134.2	131.2	129.8
67.5°	122.5	121.0	117.3	114.8	113.3
70°	106.4	104.2	101.6	99.4	98.3
72.5°	90.3	88.5	86.3	84.8	83.3
75°	74.2	72.7	71.3	69.8	69.1
77.5°	58.9	57.4	56.7	56.3	55.6
80°	43.9	43.1	43.1	42.8	42.0
82.5°	31.1	30.3	30.3	30.3	30.0
85°	19.4	19.0	19.4	18.6	19.0
87.5°	9.1	9.1	9.5	9.1	9.5
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	16.11	17.72	16.47	18.04	18.35	15.76	17.38	16.13	17.69	18.01
	3H	17.86	19.32	18.24	19.65	20.01	17.47	18.93	17.85	19.26	19.62
	4H	18.52	19.89	18.92	20.24	20.62	18.12	19.50	18.52	19.84	20.22
	6H	18.99	20.27	19.41	20.63	21.02	18.61	19.88	19.02	20.25	20.64
	8H	19.15	20.36	19.57	20.75	21.15	18.77	19.99	19.20	20.38	20.78
	12H	19.25	20.42	19.68	20.80	21.23	18.88	20.05	19.31	20.43	20.86
4H	2H	16.68	18.06	17.08	18.40	18.78	16.41	17.78	16.80	18.13	18.50
	3H	18.66	19.81	19.07	20.20	20.60	18.34	19.49	18.75	19.89	20.29
	4H	19.44	20.48	19.87	20.90	21.33	19.11	20.15	19.54	20.57	21.00
	6H	20.04	20.95	20.50	21.39	21.85	19.73	20.64	20.18	21.08	21.54
	8H	20.24	21.09	20.70	21.54	22.00	19.94	20.79	20.40	21.23	21.70
	12H	20.39	21.16	20.87	21.63	22.10	20.10	20.86	20.58	21.34	21.81
8H	4H	19.72	20.58	20.18	21.02	21.48	19.43	20.28	19.89	20.73	21.19
	6H	20.44	21.15	20.94	21.64	22.11	20.18	20.88	20.67	21.37	21.85
	8H	20.72	21.35	21.22	21.86	22.34	20.46	21.10	20.97	21.60	22.09
	12H	20.94	21.50	21.45	21.99	22.56	20.69	21.26	21.20	21.75	22.31
12H	4H	19.75	20.52	20.23	20.99	21.46	19.47	20.23	19.95	20.71	21.18
	6H	20.49	21.13	21.00	21.64	22.12	20.23	20.87	20.74	21.38	21.86
	8H	20.82	21.39	21.33	21.88	22.44	20.58	21.14	21.09	21.63	22.19