

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: P243587

Luminaire Tested: S124RDRP-H575D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243587
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-H575D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

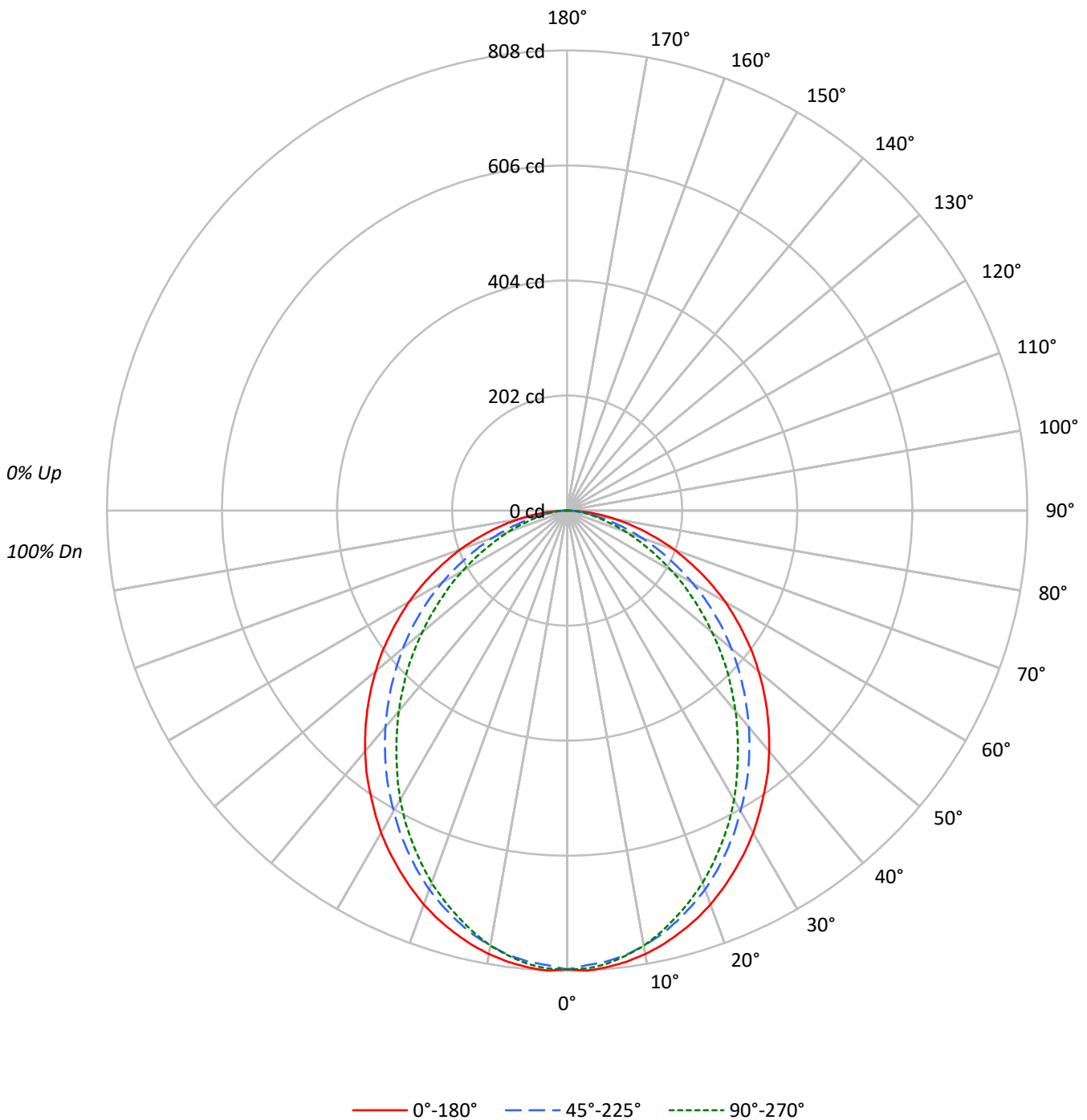
Lumens per Lamp: N/A
Luminaire Lumens: 1899.5 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	0	
RCR																						
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102	100	
1	109	105	101	97	107	103	99	96		98	95	93		95	92	90		91	89	87	85	
2	100	92	86	80	97	90	84	79		87	82	78		84	79	76		81	77	74	72	
3	92	82	74	68	89	80	73	67		77	71	66		74	69	65		72	67	64	61	
4	84	73	64	58	82	71	64	57		69	62	57		67	61	56		64	59	55	53	
5	78	65	57	50	76	64	56	50		62	55	49		60	54	49		58	53	48	46	
6	72	59	50	44	70	58	50	44		56	49	44		55	48	43		53	47	43	41	
7	67	54	45	39	65	53	45	39		51	44	39		50	43	39		49	43	38	36	
8	62	49	41	35	61	49	41	35		47	40	35		46	39	35		45	39	34	33	
9	58	45	37	32	57	45	37	32		44	37	32		42	36	31		41	36	31	30	
10	55	42	34	29	54	41	34	29		40	34	29		39	33	29		39	33	29	27	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7160	7160	7160
5°	7182	7092	7129
10°	7137	7002	7002
15°	7057	6866	6800
20°	6962	6697	6579
25°	6833	6484	6308
30°	6705	6249	6017
35°	6548	6019	5671
40°	6402	5760	5339
45°	6240	5486	4992
50°	6067	5204	4587
55°	5878	4883	4183
60°	5696	4512	3762
65°	5452	4076	3287
70°	5190	3600	2859
75°	4798	3002	2329
80°	4382	2344	2129
85°	3876	2244	2121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6240 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	4.0
10°-20°	211.6	11.1
20°-30°	306.8	16.2
30°-40°	349.7	18.4
40°-50°	340.2	17.9
50°-60°	285.8	15.0
60°-70°	199.1	10.5
70°-80°	102.8	5.4
80°-90°	27.8	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°	594.1	31.3
0°-40°	943.8	49.7
0°-60°	1569.8	82.6
0°-90°	1899.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1899.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	805	803	795	801	799	76
15°	767	761	746	745	739	216
25°	697	684	661	652	643	321
35°	603	585	555	534	523	378
45°	496	473	436	408	397	383
55°	379	355	315	283	270	340
65°	259	234	194	166	156	257
75°	140	118	87	73	68	149
85°	38	24	22	21	21	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	805.5	805.5	805.5	805.5	805.5
2.5°	808.5	806.1	799.0	805.5	804.9
5°	804.9	802.6	794.8	800.8	799.0
7.5°	799.0	796.0	787.1	791.3	788.3
10°	790.7	787.7	775.8	778.8	775.8
12.5°	780.0	775.8	762.7	763.3	758.6
15°	766.9	760.9	746.1	744.9	738.9
17.5°	752.6	744.9	727.7	724.7	718.1
20°	736.0	726.5	708.0	701.5	695.5
22.5°	717.0	705.7	685.4	677.7	670.0
25°	696.7	683.7	661.1	651.6	643.2
27.5°	675.9	660.5	636.1	624.2	615.9
30°	653.3	635.5	608.8	595.1	586.2
32.5°	628.4	610.5	582.6	566.0	554.7
35°	603.4	585.0	554.7	533.8	522.6
37.5°	579.0	558.2	525.5	504.1	491.0
40°	551.7	529.7	496.4	472.0	460.1
42.5°	524.3	501.7	466.1	440.5	427.4
45°	496.4	472.6	436.4	408.4	397.1
47.5°	467.9	444.1	406.6	377.5	364.4
50°	438.7	415.0	376.3	344.2	331.7
52.5°	410.2	385.2	346.6	313.9	300.8
55°	379.3	354.9	315.1	283.0	269.9
57.5°	349.6	324.0	285.4	252.7	242.0
60°	320.4	294.9	253.8	222.3	211.6
62.5°	289.5	264.0	223.5	193.2	183.7
65°	259.2	234.2	193.8	165.9	156.3
67.5°	228.3	205.7	166.5	139.7	132.0
70°	199.7	174.2	138.5	115.3	110.0
72.5°	169.4	146.8	112.4	93.3	89.2
75°	139.7	118.3	87.4	73.1	67.8
77.5°	112.4	91.6	66.0	54.1	54.1
80°	85.6	67.2	45.8	42.8	41.6
82.5°	60.6	43.4	33.9	31.5	30.9
85°	38.0	24.4	22.0	20.8	20.8
87.5°	18.4	11.3	11.3	10.7	10.7
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	18.29	19.87	18.66	20.18	20.49	16.39	17.97	16.76	18.28	18.60
	3H	20.11	21.52	20.48	21.85	22.21	17.66	19.08	18.03	19.40	19.76
	4H	20.79	22.12	21.19	22.47	22.85	18.05	19.39	18.45	19.73	20.11
	6H	21.30	22.54	21.72	22.90	23.29	18.33	19.56	18.74	19.93	20.32
	8H	21.47	22.65	21.90	23.04	23.44	18.43	19.61	18.86	20.00	20.40
	12H	21.59	22.72	22.02	23.10	23.53	18.51	19.64	18.94	20.02	20.45
4H	2H	18.64	19.98	19.04	20.32	20.70	17.10	18.43	17.50	18.78	19.16
	3H	20.66	21.77	21.07	22.17	22.57	18.55	19.66	18.96	20.06	20.46
	4H	21.47	22.47	21.90	22.89	23.32	19.03	20.03	19.46	20.44	20.88
	6H	22.11	22.99	22.57	23.43	23.89	19.39	20.26	19.85	20.71	21.16
	8H	22.33	23.15	22.79	23.59	24.06	19.53	20.34	19.99	20.79	21.25
	12H	22.50	23.23	22.98	23.70	24.17	19.65	20.38	20.13	20.85	21.32
8H	4H	21.58	22.39	22.04	22.84	23.30	19.36	20.17	19.82	20.62	21.08
	6H	22.30	22.98	22.80	23.47	23.94	19.81	20.49	20.30	20.98	21.45
	8H	22.58	23.18	23.09	23.69	24.18	20.00	20.61	20.51	21.12	21.61
	12H	22.80	23.34	23.31	23.83	24.39	20.19	20.72	20.69	21.21	21.78
12H	4H	21.57	22.30	22.05	22.78	23.25	19.40	20.14	19.88	20.61	21.08
	6H	22.30	22.90	22.81	23.41	23.90	19.87	20.48	20.38	20.99	21.47
	8H	22.61	23.15	23.12	23.64	24.20	20.12	20.66	20.63	21.15	21.71