

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: P243745

Luminaire Tested: S125RDRP-H850D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243745
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-66)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-H850D840-X4F0-XX-UDD-F-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

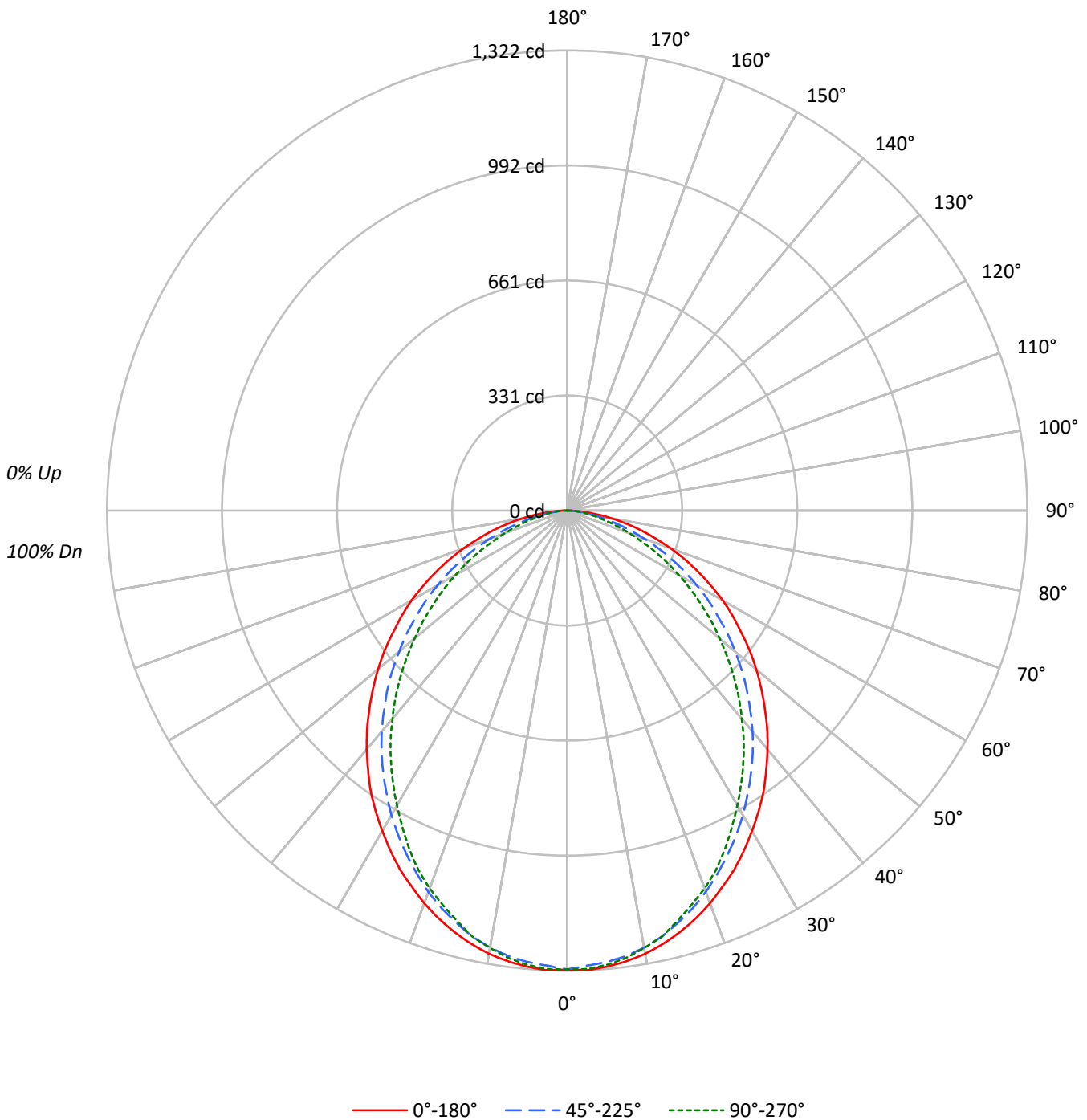
Lumens per Lamp: N/A
Luminaire Lumens: 3150.7 lumens
Efficiency: N/A
Efficacy: 133.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.12 / 1.26
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	99	96	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	63	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	43	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	32
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9369	9369	9369
5°	9384	9290	9344
10°	9329	9200	9207
15°	9220	9026	8984
20°	9078	8814	8736
25°	8917	8555	8415
30°	8721	8287	8025
35°	8541	7993	7657
40°	8310	7690	7243
45°	8074	7344	6814
50°	7841	6965	6328
55°	7560	6543	5819
60°	7332	6112	5268
65°	6978	5597	4662
70°	6583	4898	3977
75°	6058	4092	3238
80°	5325	3164	2665
85°	4534	2618	2463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8074 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.1	3.9
10°-20°	347.8	11.0
20°-30°	506.0	16.1
30°-40°	579.5	18.4
40°-50°	567.1	18.0
50°-60°	478.8	15.2
60°-70°	335.2	10.6
70°-80°	170.2	5.4
80°-90°	41.9	1.3
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°	978.0	31.0
0°-40°	1557.5	49.4
0°-60°	2603.4	82.6
0°-90°	3150.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3150.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1318	1318	1318	1318	1318	
5°	1315	1312	1302	1311	1310	125
15°	1253	1248	1227	1226	1221	353
25°	1137	1124	1091	1080	1073	523
35°	984	961	921	894	882	615
45°	803	777	731	692	678	620
55°	610	584	528	486	470	547
65°	415	383	333	291	277	411
75°	221	193	149	124	118	233
85°	56	36	32	30	30	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1318.2	1318.2	1318.2	1318.2	1318.2
2.5°	1321.9	1319.1	1308.7	1318.2	1318.2
5°	1315.3	1312.5	1302.1	1310.6	1309.7
7.5°	1305.9	1303.1	1290.8	1299.3	1296.5
10°	1292.7	1288.9	1274.8	1279.5	1275.7
12.5°	1274.8	1271.0	1254.0	1255.9	1254.0
15°	1253.1	1248.4	1226.7	1225.8	1221.0
17.5°	1228.6	1222.0	1198.4	1195.6	1188.0
20°	1200.3	1191.8	1165.4	1159.8	1155.0
22.5°	1168.2	1159.8	1128.6	1120.2	1117.3
25°	1137.1	1123.9	1090.9	1079.6	1073.0
27.5°	1100.4	1085.3	1051.3	1036.2	1024.9
30°	1062.6	1045.7	1009.8	990.0	977.8
32.5°	1024.0	1004.2	965.5	941.0	930.6
35°	984.4	960.8	921.2	893.9	882.5
37.5°	939.1	915.5	875.9	843.9	833.5
40°	895.7	871.2	828.8	793.9	780.7
42.5°	850.5	825.0	778.8	742.1	730.7
45°	803.3	776.9	730.7	692.1	677.9
47.5°	756.2	729.8	681.7	643.1	625.1
50°	709.1	680.8	629.9	590.2	572.3
52.5°	661.9	630.8	580.8	538.4	522.4
55°	610.1	583.6	528.0	485.6	469.6
57.5°	563.8	534.6	481.8	438.4	420.5
60°	515.8	483.7	430.0	387.5	370.6
62.5°	464.8	432.8	380.9	338.5	323.4
65°	414.9	382.8	332.8	291.4	277.2
67.5°	364.9	334.7	284.8	246.1	230.1
70°	316.8	285.7	235.7	200.8	191.4
72.5°	265.9	241.4	191.4	160.3	152.7
75°	220.6	193.3	149.0	124.5	117.9
77.5°	174.4	148.0	110.3	93.3	87.7
80°	130.1	107.5	77.3	66.9	65.1
82.5°	89.6	67.9	50.9	49.0	48.1
85°	55.6	35.8	32.1	30.2	30.2
87.5°	23.6	15.1	15.1	14.1	15.1
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	19.20	20.78	19.56	21.09	21.41	17.69	19.27	18.05	19.58	19.89
	3H	20.96	22.38	21.34	22.71	23.07	18.97	20.39	19.35	20.72	21.08
	4H	21.62	22.95	22.02	23.30	23.68	19.36	20.69	19.75	21.04	21.42
	6H	22.09	23.32	22.50	23.69	24.08	19.59	20.83	20.00	21.19	21.58
	8H	22.23	23.41	22.66	23.80	24.20	19.67	20.85	20.09	21.23	21.63
	12H	22.33	23.46	22.76	23.84	24.27	19.72	20.85	20.15	21.23	21.66
4H	2H	19.60	20.93	20.00	21.28	21.66	18.37	19.71	18.77	20.06	20.43
	3H	21.56	22.67	21.97	23.07	23.47	19.84	20.95	20.25	21.35	21.75
	4H	22.34	23.34	22.77	23.76	24.20	20.30	21.31	20.74	21.72	22.16
	6H	22.93	23.81	23.39	24.25	24.71	20.62	21.50	21.08	21.94	22.39
	8H	23.12	23.94	23.58	24.38	24.85	20.73	21.54	21.19	21.99	22.45
	12H	23.26	23.99	23.74	24.46	24.93	20.81	21.54	21.29	22.02	22.49
8H	4H	22.46	23.28	22.92	23.72	24.19	20.61	21.43	21.07	21.87	22.34
	6H	23.14	23.81	23.63	24.30	24.78	21.01	21.68	21.50	22.17	22.65
	8H	23.37	23.98	23.89	24.49	24.98	21.16	21.77	21.67	22.27	22.76
	12H	23.56	24.10	24.07	24.59	25.15	21.30	21.83	21.81	22.32	22.89
12H	4H	22.45	23.19	22.94	23.66	24.13	20.65	21.38	21.13	21.86	22.33
	6H	23.13	23.74	23.64	24.24	24.73	21.06	21.66	21.57	22.17	22.66
	8H	23.41	23.94	23.91	24.43	25.00	21.26	21.79	21.76	22.28	22.85