

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930248

Luminaire Tested: DFN2DS-HX3F0-090DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX3F0-090DS930-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

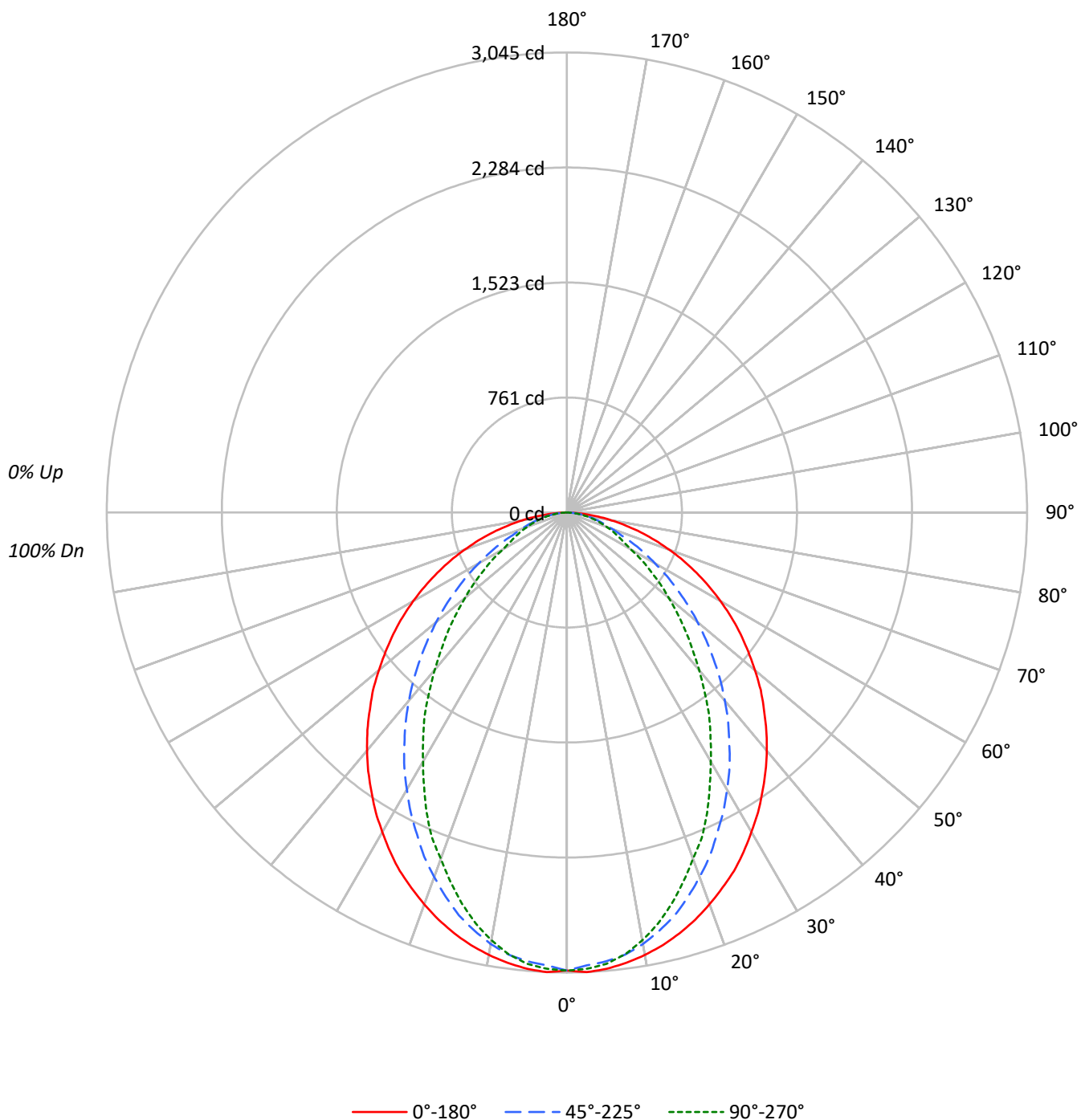
Lumens per Lamp: N/A
Luminaire Lumens: 6234.7 lumens
Efficiency: N/A
Efficacy: 64.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3512	3512	3512
5°	3525	3468	3487
10°	3498	3411	3382
15°	3458	3310	3214
20°	3402	3165	3006
25°	3345	3001	2805
30°	3266	2833	2547
35°	3189	2650	2320
40°	3111	2460	2058
45°	3020	2247	1820
50°	2927	2032	1587
55°	2831	1800	1363
60°	2720	1557	1131
65°	2594	1308	1030
70°	2444	1078	947
75°	2259	982	884
80°	1994	877	806
85°	1566	692	692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3020 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.1	4.6
10°-20°	780.0	12.5
20°-30°	1095.0	17.6
30°-40°	1193.7	19.1
40°-50°	1097.1	17.6
50°-60°	861.6	13.8
60°-70°	560.8	9.0
70°-80°	288.7	4.6
80°-90°	73.7	1.2
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°	2159.1	34.6
0°-40°	3352.8	53.8
0°-60°	5311.5	85.2
0°-90°	6234.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6234.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3032	3032	3032	3032	3032	
5°	3032	3018	2982	3007	2999	287
15°	2883	2853	2760	2708	2680	813
25°	2617	2529	2348	2236	2195	1204
35°	2255	2115	1874	1701	1640	1412
45°	1844	1660	1372	1177	1111	1424
55°	1402	1188	892	727	675	1253
65°	946	724	477	384	376	938
75°	505	313	220	200	198	534
85°	118	60	52	52	52	141
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3031.6	3031.6	3031.6	3031.6	3031.6
2.5°	3045.2	3031.6	3001.2	3028.9	3023.4
5°	3031.6	3017.9	2982.1	3006.8	2998.6
7.5°	3006.8	2990.5	2952.1	2962.9	2949.2
10°	2973.9	2954.7	2900.0	2891.5	2875.2
12.5°	2932.9	2908.2	2833.9	2817.6	2787.3
15°	2883.4	2853.2	2760.0	2707.8	2680.5
17.5°	2825.8	2781.8	2666.5	2606.3	2562.4
20°	2760.0	2705.0	2567.8	2499.4	2438.9
22.5°	2688.7	2625.5	2466.3	2373.1	2332.1
25°	2617.4	2529.4	2348.4	2236.0	2194.7
27.5°	2532.4	2438.9	2238.6	2109.7	2046.5
30°	2441.8	2337.3	2117.9	1978.2	1903.9
32.5°	2353.9	2227.6	2002.9	1838.2	1769.4
35°	2255.3	2115.3	1873.9	1701.1	1640.5
37.5°	2159.2	2008.2	1753.1	1563.7	1495.3
40°	2057.6	1893.2	1626.8	1432.1	1360.8
42.5°	1953.4	1777.9	1500.7	1297.6	1229.2
45°	1843.7	1659.7	1371.8	1176.8	1111.0
47.5°	1739.5	1544.8	1248.4	1053.4	993.2
50°	1624.2	1429.4	1127.6	938.1	880.8
52.5°	1511.6	1305.8	1012.4	831.3	779.2
55°	1401.8	1187.9	891.5	727.1	675.0
57.5°	1289.5	1070.0	784.8	631.1	587.1
60°	1174.2	954.7	672.1	532.4	488.4
62.5°	1061.9	842.4	576.0	444.5	422.7
65°	946.5	724.2	477.3	384.2	375.8
67.5°	836.8	614.4	384.2	337.3	329.2
70°	721.6	507.7	318.2	290.8	279.7
72.5°	611.8	408.6	266.0	244.2	238.7
75°	504.7	312.6	219.5	200.2	197.6
77.5°	397.9	222.1	172.9	161.9	156.3
80°	298.9	159.3	131.5	120.8	120.8
82.5°	208.4	107.1	90.5	85.0	85.0
85°	117.8	60.2	52.1	52.1	52.1
87.5°	43.9	21.8	21.8	19.2	19.2
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	15.60	17.12	15.96	17.43	17.75	11.56	13.08	11.92	13.40	13.71
	3H	17.36	18.73	17.74	19.06	19.42	12.82	14.19	13.20	14.52	14.88
	4H	18.03	19.31	18.43	19.66	20.04	13.33	14.61	13.73	14.96	15.33
	6H	18.52	19.70	18.93	20.07	20.46	13.71	14.89	14.12	15.26	15.65
	8H	18.68	19.81	19.11	20.20	20.60	13.83	14.96	14.26	15.35	15.75
	12H	18.79	19.87	19.22	20.25	20.68	13.91	14.99	14.34	15.37	15.80
4H	2H	15.70	16.98	16.10	17.33	17.71	12.26	13.54	12.65	13.88	14.26
	3H	17.64	18.70	18.05	19.10	19.50	13.70	14.76	14.11	15.16	15.56
	4H	18.39	19.34	18.82	19.76	20.20	14.30	15.25	14.73	15.67	16.11
	6H	18.98	19.81	19.43	20.25	20.71	14.79	15.62	15.24	16.06	16.52
	8H	19.19	19.97	19.65	20.41	20.88	14.95	15.72	15.41	16.17	16.64
	12H	19.34	20.04	19.83	20.52	20.99	15.06	15.76	15.55	16.24	16.71
8H	4H	18.41	19.19	18.87	19.63	20.10	14.65	15.43	15.11	15.87	16.34
	6H	19.05	19.69	19.54	20.18	20.66	15.24	15.88	15.73	16.37	16.85
	8H	19.30	19.87	19.81	20.38	20.87	15.46	16.04	15.97	16.55	17.03
	12H	19.50	20.01	20.01	20.50	21.07	15.64	16.15	16.15	16.64	17.20
12H	4H	18.39	19.09	18.88	19.57	20.04	14.69	15.39	15.18	15.87	16.34
	6H	19.03	19.61	19.54	20.12	20.60	15.30	15.88	15.81	16.39	16.88
	8H	19.31	19.82	19.82	20.31	20.88	15.57	16.08	16.08	16.58	17.14

END OF REPORT