

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: P930136

Luminaire Tested: DFN2DS-HX3F0-030DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930136
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-HX3F0-030DS850-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

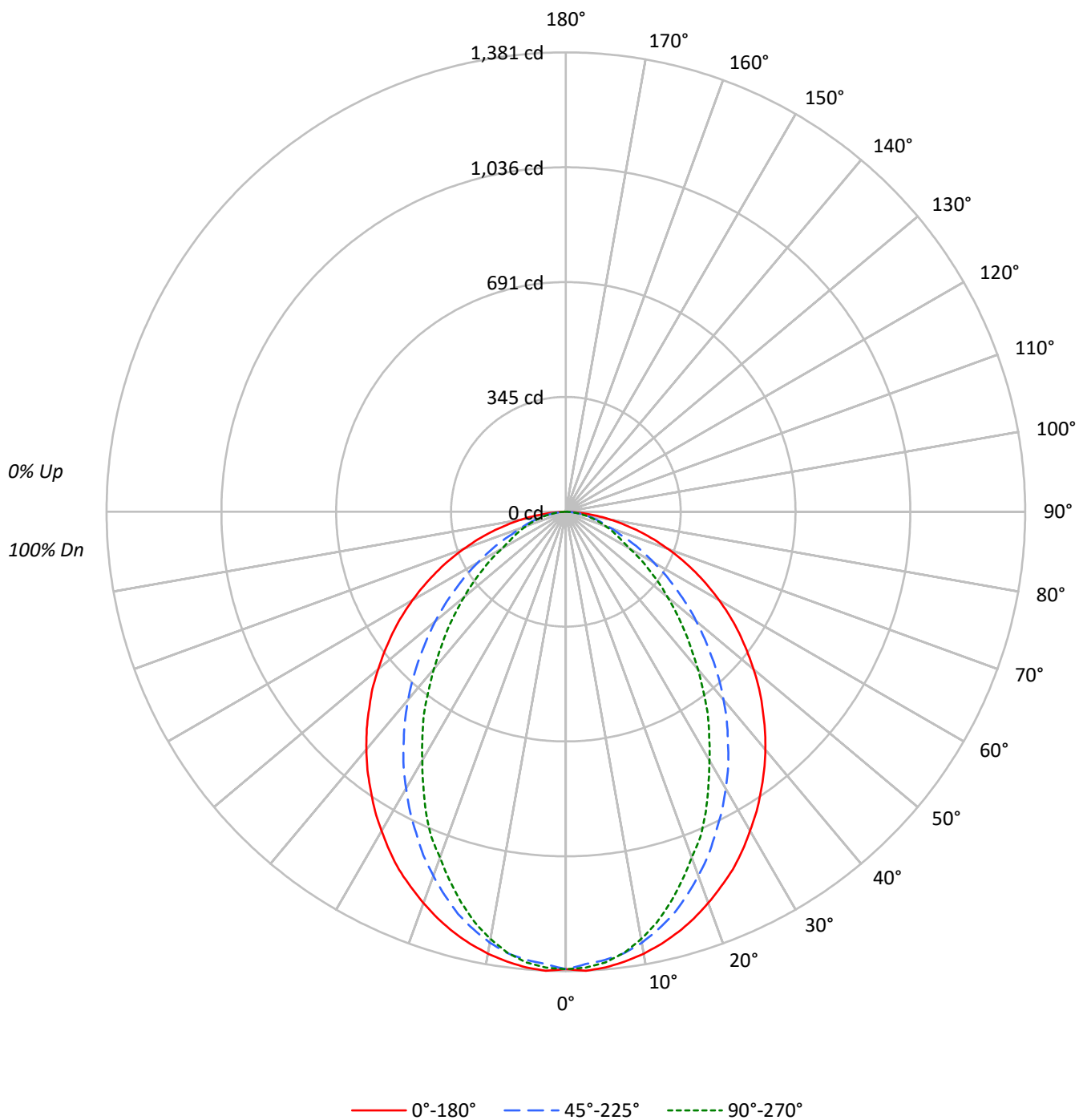
Lumens per Lamp: N/A
Luminaire Lumens: 2827.9 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
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°	1593	1593	1593
5°	1599	1573	1581
10°	1587	1547	1534
15°	1568	1501	1458
20°	1543	1436	1364
25°	1517	1361	1272
30°	1481	1285	1155
35°	1446	1202	1052
40°	1411	1116	933
45°	1370	1019	825
50°	1328	922	720
55°	1284	816	618
60°	1234	706	513
65°	1177	593	467
70°	1108	489	430
75°	1024	446	401
80°	905	398	366
85°	711	314	314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1370 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	4.6
10°-20°	353.8	12.5
20°-30°	496.7	17.6
30°-40°	541.4	19.1
40°-50°	497.6	17.6
50°-60°	390.8	13.8
60°-70°	254.4	9.0
70°-80°	130.9	4.6
80°-90°	33.4	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°	979.3	34.6
0°-40°	1520.7	53.8
0°-60°	2409.2	85.2
0°-90°	2827.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2827.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1375	1369	1353	1364	1360	130
15°	1308	1294	1252	1228	1216	369
25°	1187	1147	1065	1014	995	546
35°	1023	959	850	772	744	640
45°	836	753	622	534	504	646
55°	636	539	404	330	306	568
65°	429	328	216	174	170	426
75°	229	142	100	91	90	242
85°	54	27	24	24	24	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1375.0	1375.0	1375.0	1375.0	1375.0
2.5°	1381.3	1375.0	1361.3	1373.8	1371.4
5°	1375.0	1368.8	1352.6	1363.8	1360.1
7.5°	1363.8	1356.4	1339.0	1343.9	1337.7
10°	1348.9	1340.2	1315.4	1311.5	1304.2
12.5°	1330.2	1319.0	1285.4	1278.0	1264.3
15°	1307.8	1294.1	1251.8	1228.2	1215.8
17.5°	1281.7	1261.8	1209.5	1182.2	1162.2
20°	1251.8	1226.9	1164.7	1133.7	1106.2
22.5°	1219.6	1190.8	1118.6	1076.4	1057.8
25°	1187.2	1147.3	1065.2	1014.2	995.4
27.5°	1148.6	1106.2	1015.4	957.0	928.2
30°	1107.6	1060.2	960.6	897.3	863.6
32.5°	1067.6	1010.4	908.5	833.7	802.6
35°	1022.9	959.4	849.9	771.5	744.1
37.5°	979.4	910.8	795.2	709.2	678.3
40°	933.3	858.7	737.9	649.5	617.3
42.5°	886.0	806.5	680.7	588.5	557.5
45°	836.3	752.8	622.3	533.8	503.9
47.5°	788.9	700.7	566.3	477.8	450.5
50°	736.7	648.3	511.5	425.5	399.5
52.5°	685.6	592.3	459.2	377.1	353.4
55°	635.8	538.8	404.3	329.8	306.2
57.5°	584.9	485.3	356.0	286.2	266.3
60°	532.5	433.1	304.9	241.4	221.6
62.5°	481.6	382.1	261.3	201.6	191.7
65°	429.3	328.5	216.5	174.2	170.5
67.5°	379.6	278.7	174.2	153.0	149.3
70°	327.3	230.2	144.3	131.9	126.9
72.5°	277.5	185.3	120.7	110.8	108.2
75°	228.9	141.8	99.6	90.8	89.6
77.5°	180.4	100.7	78.4	73.4	70.9
80°	135.6	72.2	59.7	54.8	54.8
82.5°	94.5	48.6	41.0	38.6	38.6
85°	53.5	27.3	23.6	23.6	23.6
87.5°	20.0	9.9	9.9	8.8	8.8
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	12.85	14.37	13.22	14.69	15.00	8.81	10.33	9.18	10.65	10.96
	3H	14.62	15.98	14.99	16.31	16.67	10.08	11.44	10.46	11.77	12.13
	4H	15.28	16.56	15.68	16.91	17.29	10.58	11.86	10.98	12.21	12.59
	6H	15.77	16.96	16.18	17.32	17.71	10.96	12.14	11.37	12.51	12.90
	8H	15.94	17.06	16.36	17.45	17.85	11.08	12.21	11.51	12.60	13.00
	12H	16.04	17.12	16.47	17.50	17.93	11.17	12.24	11.60	12.63	13.06
4H	2H	12.96	14.24	13.36	14.59	14.96	9.51	10.79	9.91	11.14	11.52
	3H	14.89	15.95	15.30	16.35	16.75	10.95	12.01	11.36	12.41	12.81
	4H	15.64	16.59	16.07	17.01	17.45	11.55	12.51	11.98	12.92	13.36
	6H	16.23	17.06	16.69	17.50	17.96	12.04	12.87	12.50	13.31	13.77
	8H	16.44	17.22	16.91	17.67	18.13	12.20	12.98	12.66	13.42	13.89
	12H	16.60	17.29	17.08	17.77	18.24	12.32	13.01	12.80	13.49	13.96
8H	4H	15.66	16.44	16.13	16.88	17.35	11.90	12.68	12.37	13.13	13.59
	6H	16.30	16.94	16.80	17.43	17.91	12.49	13.13	12.99	13.62	14.10
	8H	16.55	17.13	17.06	17.64	18.12	12.71	13.29	13.23	13.80	14.29
	12H	16.75	17.26	17.26	17.76	18.32	12.89	13.40	13.40	13.89	14.46
12H	4H	15.65	16.34	16.13	16.82	17.29	11.95	12.64	12.43	13.12	13.59
	6H	16.28	16.86	16.79	17.37	17.86	12.55	13.13	13.07	13.64	14.13
	8H	16.57	17.07	17.07	17.57	18.13	12.83	13.34	13.34	13.83	14.39